



Avoiding Great Power War Project

Belfer Center for Science and International Affairs Harvard Kennedy School 79 JFK Street Cambridge, MA 02138

www.belfercenter.org

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The Great Economic Rivalry: China vs the U.S.

Graham Allison Nathalie Kiersznowski Charlotte Fitzek

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China by the Numbers

		1980	2020
	GDP	\$420 billion	\$14.6 trillion
(\$) (**)	GDP per capita	\$430	\$10,400
	Urban population	19.4%	61.4%
ĵĝĝ	Life expectancy at birth	66.8	76.9

World Bank, GDP & GDP per capita in 2015 Constant USD

For the first time since the U.S. overtook Great Britain in the 1870s to become the leading economy in the world, the U.S. now faces an economic rival that is as large, and by some measures, larger than it is. This chapter examines China's record of closing the gap with the U.S. in most economic races, and even overtaking it in some. Our analysis focuses on four pillars of economic power: GDP, trade, business and investment, and finance. GDP creates the substructure of power in relations among nations. While the race is not always to the swift, nor the battle to the strong, nations with larger GDPs have historically exercised greater power in international relations. As Adam Smith taught us, trade enriches both seller and buyer, creating a larger pie for everyone. But it also creates webs of asymmetrical interdependence that advantage some over others. Investments by businesses in manufacturing reflect their judgments about where they can produce the best product at the lowest price. While no one denies that these choices have consequences for the relative manufacturing strength of one nation over another, that is not the business of

¹ GDP (MER) figures in the chart are in constant 2015 USD. GDP and urban population data are through December 31, 2020. Life expectancy is through December 31, 2019.

businesses. Financial firms are rewarded for earning the highest returns at the lowest risk for their clients – without regard to the impact this has on the growth of some nations' economies at the expense of others.

Having reviewed the evidence about the relative performance of China and the U.S. over the past generation, we report eight bottom lines up front:

- China's sustained "miracle economic growth" over the
 past four decades at an average rate four times that of
 the U.S. has redefined the global economic order.
- When measured by the traditional yardstick market exchange rate since 2000, China's GDP has soared from \$1.2 trillion to \$17.7 trillion. On the current trajectory, it will overtake the U.S. within a decade. By the yardstick both the CIA and the IMF judge to be the best metric for comparing national economies purchasing power parity China has already surpassed the U.S. to become the world's largest economy.²
- China has displaced the U.S. to become the manufacturing workshop of the world.
- China has overtaken the U.S. to become the No. 1 **trading partner** of most nations in the world.
- China has established itself as the most essential link in the world's critical global supply chains.
- China has replaced the U.S. as the primary engine of global economic growth. Since the 2008 financial crisis, one-third of all growth in the world's GDP has occurred in just one country: China.
- In 2020, China supplanted the U.S. as the home to **the largest number of the most valuable global companies** on Fortune's Global 500 for the first time. It has also rivaled the U.S. as the leading country in attracting foreign investment and is neck and neck with the U.S. in gross R&D investments.

We recognize that this claim provokes an emotional response from some readers who insist that it simply cannot be true. For doubters, we suggest they pause for a two-minute fact check by visiting the CIA World Factbook. https://www.cia.gov/the-world-factbook/field/real-gdp-purchasing-power-parity/country-comparison/

• On the other hand, the dollar remains the world's dominant reserve currency, accounting for 60% of foreign exchange reserves. While Beijing's aspirations and progress deserve careful attention, America retains its lead in several key arenas: the dollar remains the preferred currency for cross-border transactions, U.S. equity markets remain the world's largest, and the U.S. retains a significant lead in venture capital investments. Moreover, as the society that attracts the most talented inventors and entrepreneurs in the world and gives them the freedom and opportunity to realize their dreams, the U.S. remains unrivaled.

I. A Rising China

In 1940, U.S. Senator Kenneth Wherry declared: "We will lift Shanghai up and up, ever up, until it is just like Kansas City."

TODAY



The dramatic shift in the global balance of power created by **the meteoric rise of China has no precedent in world history**. In Singapore's founder Lee Kuan Yew's succinct summary: "It is not possible to pretend that this is just another big player. *This is the biggest player in the history of the world*." 3

Two decades ago, members of Congress were debating whether a poor, "developing country"—as China was classified at the time—should be allowed to join the World Trade Organization (WTO). China's GDP was less than one-tenth of what it is today, and more than 460 million of its citizens still lived below the abject poverty line of \$2 a day. Since then, when measured by the traditional GDP yardstick – market exchange rate – China's economy has ascended from 10% of America's in 2000 to 78% in 2021. Indeed, when measured by the yardstick that both the IMF and CIA judge to be the best metric for comparing national economies – purchasing power parity – China's economy is already 15% larger than America's.

³ Graham Allison, Robert D. Blackwill, and Ali Wyne, Lee Kuan Yew: The Grand Master's Insights on China, the United States, and the World (Cambridge, MA: MIT Press, 2013), pp 42.

⁴ C. Textor, "Number of rural residents living below the poverty line in China from 2000 to 2018 (in millions)*," *Statista*, 1/9/2020, https://www.statista.com/statistics/866620/number-of-rural-residents-living-in-poverty-in-china/.

^{5 &}quot;GDP (Current \$US) -China, United States" World Bank Group, https://data.worldbank.org/indicator/NY.GDP.
MKTP.CD?locations=US-CN "Gross Domestic Product, Fourth Quarter and Year 2021 (Advance Estimate)," Bureau of Economic Affairs, January 27, 2022. https://www.bea.gov/news/2022/gross-domestic-product-fourth-quarter-and-vear-2021-advance-estimate.

⁶ World Economic Outlook Database," International Monetary Fund, April 2021, https://www.imf.org/en/Publications/WEO/weo-database/2021/April; "Real GDP - Purchasing Power Parity," CIA World Factbook, January 26, 2022. https://www.cia.gov/the-world-factbook/field/real-gdp-purchasing-power-parity/country-comparison.

The impact of this rise is being felt in every dimension of every relationship. Not only has it transformed relations between the U.S. and China; it has also redefined relations between each of them and everyone else. Consider trade: when China entered the WTO in 2001, the number one trading partner for most nations was the United States. Today, the world's predominant trading partner is China. In 2010, China became the number one manufacturing nation. Today, China accounts for one-third of global manufacturing value added, while the U.S. share has dropped to under one-fifth.⁷

Perhaps the most surprising fact for Americans who have not kept track of recent developments is that **China has displaced the U.S. to become the primary engine of global growth**. Since the Great Recession of 2008, approximately one-third of all growth in the world's GDP has occurred in just one country: China.⁸ Thus when nations around the world assess their prospective growth in the year ahead, the first economy they think about is China. In sum, in the past two decades, **China has joined the U.S. and the EU as the third backbone of the global economy**.

What this means for global geopolitics is profound. At the end of World War II and for the decade that followed, the U.S. accounted for roughly half of global GDP. From this position of dominance, the U.S. took the lead in creating the IMF, the World Bank, the Bretton Woods monetary system, the GATT trading system, and the rest of what became the global economic order. When establishing alliances like NATO, CENTO, and SEATO, the U.S. could cover the costs without thinking about burden-sharing. But by the end of the Cold War in 1991, America's share of global GDP had shrunk to one-fifth. Today it stands at one-sixth. As the graphic on the following page illustrates, China's rise has created a new world economic order.

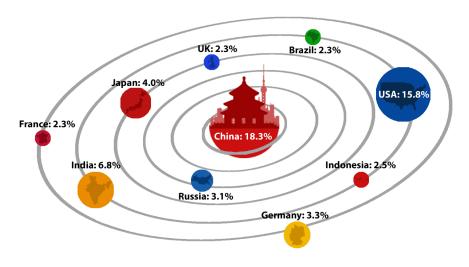
^{7 &}quot;Country Profile," UN Statistics Division, December 2019, Accessed Feb 1, 2022, https://unstats.un.org/unsd/snaama/CountryProfile.

⁸ Tao Wang, Ning Zhang, William Deng, Jennifer Zhong, Aaron Luo, Katharine Jiang, "China Economic Perspectives: The Case for China," UBS, August 31, 2020.

^{9 &}quot;World Economic Outlook Database," International Monetary Fund, April 2021, https://www.imf.org/en/Publications/WEO/weo-database/2021/April.; Graham Allison, "The U.S.-China Strategic Competition: Clues from History," Belfer Center, February 2020. https://www.belfercenter.org/publication/us-china-strategic-competition-clues-history

China's New World Economic Order

% of Global Gross Domestic Production (PPP, Intl\$), 2020



Source: World Bank¹⁰

Lee Kuan Yew foresaw a 21st century in which the balance of economic power would be as important as the balance of military power. 11 Leaders' mandates to govern increasingly depend on their ability to deliver improvements in their citizens' economic well-being. (Thus the recurring refrain from U.S. allies and friends who say: do not try to make us choose between our relationship with the U.S., which is essential for our security, and our relationship with China, which is essential for our prosperity.) It is not surprising, therefore, that China has chosen commerce as its preferred instrument for advancing its interests in the world. As Robert Blackwill and Jennifer Harris' *War by Other Means* argues persuasively, China is "the world's leading practitioner of geoeconomics." 12 It has demonstrated mastery in orchestrating all instruments of economic power to coerce target states, even when the international system is on their side. Of course, as Australia's defiance in banning Chinese telecommunications giant Huawei from its 5G

[&]quot;GDP, PPP (current international)," World Bank. Accessed February 1, 2022. https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD.

¹¹ Graham Allison, Destined for War: Can America and China Escape Thucydides's Trap?, Houghton Mifflin Harcourt, 2017. 20.

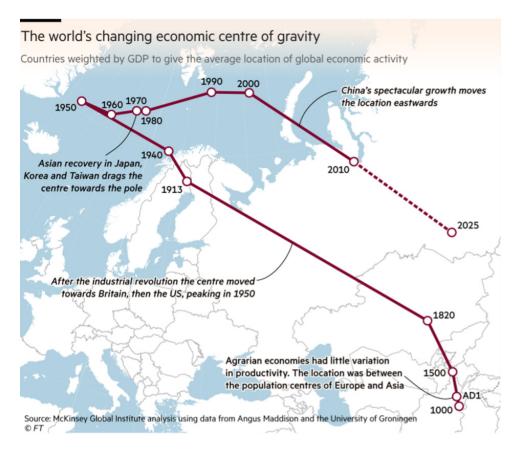
¹² Robert Blackwill and Jennifer Harris, War by Other Means: Geoeconomics and Statecraft (Cambridge, MA: Harvard University Press, 2016), 11.

network shows, Chinese coercion can be counterproductive.¹³ Nonetheless, countries dependent on China's supply chains for key imports and Chinese markets to sell their exports are increasingly wary of the risk that when they say no to China, it can delay the former and block the latter.

Australia has faced severe Chinese sanctions for demanding an independent investigation into the origins of the coronavirus pandemic and for banning Huawei from its 5G network. Despite harsh sanctions, Australia has not reversed either decision. Kirsty Needham, "Australia cancels Belt and Road deals; China warns of further damage to ties," Reuters, April 21, 2021, https://www.reuters.com/world/china/australia-cancels-victoria-states-belt-road-deals-with-china-2021-04-21/

II. Trendlines in the 21st Century

Gross Domestic Product



Source: The Financial Times, 6/25/2021

The graphic created by the *Financial Times* above offers a historical perspective on how China's economic growth has shifted the global economic center of gravity. Two millennia ago, Asia was home to the world's largest economies. With the industrial revolution, the economic center of gravity moved to Europe, and then towards the U.S. Today, it is shifting back to a China-led Asia—creating a powerful gravitational pull on all other economies.

Market Exchange Rate

Traditionally, economists have used a metric called MER (market exchange rate) to calculate GDP. In this calculation, the U.S. economy is taken as the baseline—reflecting America's dominant role in the global economy when this method was developed in the years after World War II. For other nations, this method adds up all goods and services produced by their economy in their own currency and converts that total into U.S. dollars at the current "market exchange rate," thus deriving their GDP.

Using this metric, in what the IMF describes as "the biggest and longest-run economic boom in history," China's economy has grown ten-fold during the past two decades, from \$1.2 trillion in 2000 to \$17.7 trillion in 2021. ¹⁴ During this period, China has posted real growth rates at an average of 8.7% a year – 10.3% in the first decade, and 7.2% in the second. ¹⁵ As a result, every four years since the financial crisis of 2008, China has added roughly an economy the size of India to its GDP. By comparison, U.S. GDP grew from \$10.3 trillion in 2000 to \$24.0 trillion by 2021, with real GDP growth averaging just 2% annually during these first two decades. ¹⁶

As the U.S. ascended after the Civil War to rival and eventually surpass Great Britain, America's economic growth rate averaged 4%. Between 1860 and 1914, the U.S. grew from an economy half that of Britain's at mid-century, to equality in the 1870s, to twice Britain's size by 1914. For the **past four decades, China's economic growth** has averaged nearly 10% a year. According to the Rule of 72, to calculate how long it takes for an economy to double in size, one only has to divide 72 by its annual growth rate. For the past four decades, the Chinese economy has doubled almost every seven years. 18

¹⁴ Figures are in current USD.

For many years, China skeptics have argued that China's growth numbers cannot be trusted. After considering the issue, the consensus judgement among the IMF, World Bank, CIA, Federal Reserve, and leading banks and publications is that China's growth numbers are sufficiently realistic; "Can China's reported growth be trusted?" The Economist, October 17, 2021.

[&]quot;World Economic Outlook Database," International Monetary Fund, January 2022, https://www.imf.org/en/Publications/WEO/Issues/2022/01/25/world-economic-outlook-update-january-2022. For constant dollar GDP, see The World Bank data portal, which lists U.S. GDP growing from \$12.62 trillion (constant 2010 US\$) in 2000 to \$18.3 trillion by 2019, while Chinese GDP grew from \$2.232 trillion to \$11.52 trillion during the same time period. https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?end=2019&locations=CN-US&start=2000.

¹⁷ Graham Allison, Destined for War, 7, 213.

¹⁸ Graham Allison, Destined for War, 7.

This growth has also shrunk the gap between America's and China's GDP per capita. At the beginning of the century, Americans' annual incomes were 36 times those of Chinese: \$36,000 vs \$1,000. By 2020, while U.S. GDP per capita nearly doubled to \$63,000, China's multiplied ten-fold to \$10,000. While that leaves it well behind neighbors like South Korea (\$31,000) and Japan (\$40,000), it is now well ahead of others including India (\$2,000), Indonesia (\$4,000), and Vietnam (\$3,500). Most of this income growth, however, has come among those who live in China's coastal cities, while incomes in rural inland provinces remain closer to those in India.

To meet Xi Jinping's ambitions of achieving "socialist modernization" by 2035 and becoming a "fully developed, rich, and powerful nation" by the 100th birthday of the PRC in 2049, China will have to maintain high levels of growth for many years to come. ²¹ Its leaders seek to build on what is already an unprecedented "anti-poverty miracle." In 1978, nine out of every ten Chinese struggled to survive on less than \$2 per day – the World Bank's "extreme poverty line." Today that number is approximately zero. Indeed, in 2004 U.S. Trade Representative Robert Zoellick celebrated China's contribution to the UN Millennium Development Goal to reduce by half the number of people living in extreme poverty. In what he called the "greatest leap to overcome poverty in history," he reported that "between 1981 and 2004, China succeeded in lifting more than half a billion people out of extreme poverty." ²²

Four decades of miracle growth may have created a greater increase in human well-being for more individuals than previously occurred in the more than 4,000 years of China's history.²³ As of 2019, more than 400 million Chinese have joined what the World Bank

¹⁹ It is worth noting that, if measured by PPP (more on this below), China's GDP per capita is already a quarter of

For comparison, if measuring by PPP, China's GDP per capita is \$17,200, India's \$6,500, Indonesia's \$12,200, Japan's \$42,200, South Korea's \$44,600, Vietnam's \$10,900, and America's, \$63,400. "World Economic Outlook Database," International Monetary Fund, April 2021, https://www.imf.org/en/Publications/WEO/weo-database/2021/April.

²¹ Graham Allison, "What Xi Jinping Wants," The Atlantic, May 31, 2017, https://www.theatlantic.com/international/archive/2017/05/what-china-wants/528561/; "CPC sets targets through 2035 to basically achieve China's socialist modernization," Xinhua, December 19, 2020, https://www.macaubusiness.com/cpc-sets-targets-through-2035-to-basically-achieve-chinas-socialist-modernization/

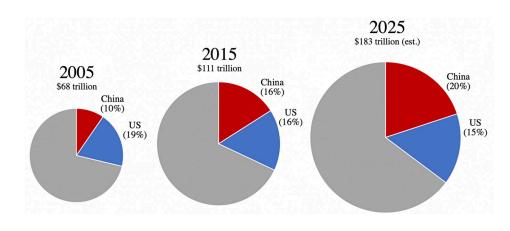
²² Graham Allison, "China's anti-poverty drive has lessons for all," China Daily, August 11, 2018, http://www.chinadaily.com.cn/a/201808/11/WS5b6e33cfa310add14f38532c.html.

²³ Graham Allison, "China's anti-poverty drive has lessons for all," China Daily, August 11, 2018, http://www.chinadaily.com.cn/a/201808/11/WS5b6e33cfa310add14f38532c.html.

classifies as "middle class."²⁴ Indeed, an extraordinary number have become millionaires and billionaires. By some counts, China has now surpassed the United States as the country with the most billionaires, adding a new billionaire every week.²⁵

Purchasing Power Parity

Share of Global GDP (PPP): US and China



Source: IMF October 2021 WEO Database

As anyone who has gone to one of the 3,700 McDonalds in China knows, 6 RMB—which is how much you get if you exchange \$1 for Chinese currency at current rates—buys you much more there than you get in the U.S.²⁶ To make this point easier to understand, The Economist Magazine created the "Big Mac Index."²⁷ As this index shows, if a consumer takes the \$5.65 necessary to buy a Big Mac in the U.S., exchanges the dollars for RMB at the current exchange rate, and

^{24 &}quot;Forecast 2025: China Adjusts Course," Macro Polo, October 2020. https://macropolo.org/wp-content/uploads/2020/10/china2025-final.pdf.

²⁵ In 2020, the <u>Hurun Global Rich List</u> reported China as having more billionaires than the US (1058 vs 696), while <u>Forbes Billionaire List</u> reported the US as having more billionaires than China (724 vs 626). Yet both Hurun and Forbes reported that China gained over 230 new billionaires in 2020, an average of 4.4 new billionaires a week. Giacomo Tognini, "The Countries With The Most Billionaires 2021," Forbes, April 5, 2021, https://www.forbes.com/sites/giacomotognini/2021/04/06/the-countries-with-the-most-billionaires-2021/?sh=5a37116379b2; Hurun Report, "Hurun Global Rich List," March 2, 2021, https://www.hurun.net/en-US/Info/Detail?num=LWAS8B997XUP.

^{26 &}quot;Number of McDonald's restaurants in Asia Pacific and Middle East in 2020, by country," Statista, February 2021, https://www.statista.com/statistics/256049/mcdonalds-restaurants-in-the-emea-region/; "Burgernomics: The Big Mac index," The Economist, The Economist, January 12, 2022, https://www.economist.com/big-mac-index.

^{27 &}quot;Burgernomics: The Big Mac index," The Economist, The Economist, January 12, 2022, https://www.economist.com/big-mac-index.

goes to a McDonalds in Beijing, she can get not 1 but 1 ½ Big Macs there. When buying most products, from burgers and smartphones to missiles and naval bases, the Chinese get more bang for each buck.²⁸

Recognizing this reality, over the past decade, the CIA and the IMF have concluded that there is a better yardstick than MER for comparing national economies: purchasing power parity (PPP). PPP compares national economies in terms of how much each nation can buy with its own currency at the prices items sell for in its market.

Explaining its decision to switch from MER to PPP in its annual assessment of national economies, the CIA noted that "GDP at the official exchange rate substantially understates the actual level of China's output vis-a-vis the rest of the world." Thus, in its view, PPP "provides the best available starting point for comparisons of economic strength and wellbeing between economies." The IMF adds that "market rates are more volatile and using them can produce quite large swings in aggregate measures of growth even when growth rates in individual countries are stable." 30

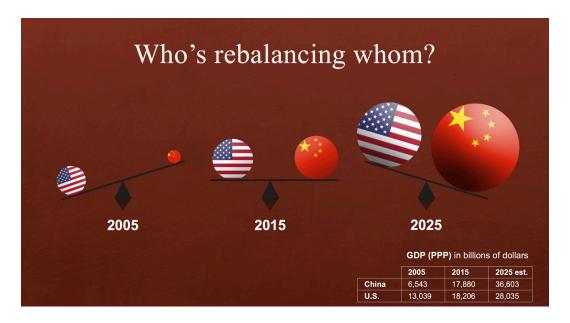
Using PPP, we can compare the relative weight of the American and Chinese economies as if they were two competitors on opposite ends of a seesaw. The conclusion is as obvious as it is painful. When measured by PPP, in 2000, China's economy was 36% the size of the United States'. In 2020, the IMF found it was 115% the size of the U.S. economy, or one-seventh larger. While Presidents Obama, Trump, and now Biden have talked about a historic "pivot" to Asia, the seesaw has shifted to the point that both of America's feet are dangling entirely off the ground.

Graham Allison, "China Is Now the World's Largest Economy. We Shouldn't Be Shocked," The National Interest, October 15, 2020, https://nationalinterest.org/feature/china-now-world%E2%80%99s-largest-economy-we-shouldn%E2%80%99t-be-shocked-170719; "The Big Mac index," The Economist, January 12, 2021, https://www.economist.com/big-mac-index.

²⁹ Graham Allison, "China Is Now the World's Largest Economy. We Shouldn't Be Shocked," The National Interest, October 15, 2020, https://nationalinterest.org/feature/china-now-world%E2%80%99s-largest-economy-we-shouldn%E2%80%99t-be-shocked-170719;

³⁰ Tim Callen, "Purchasing Power Parity: Weights Matter," International Monetary Fund, February 24, 2020, https://www.imf.org/external/pubs/ft/fandd/basics/ppp.htm.

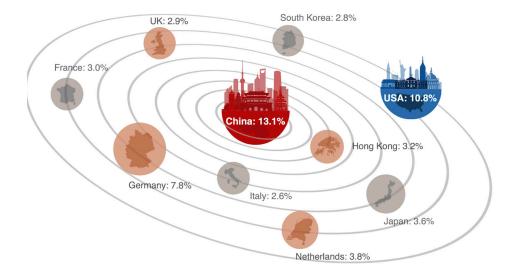
^{31 &}quot;World Economic Outlook Database," International Monetary Fund, April 2021, https://www.imf.org/en/Publications/WEO/weo-database/2021/April.



Source: IMF, October 2021 WEO Database

If this were simply a contest for bragging rights, picking a measuring rod that allows Americans to feel better about themselves has a certain logic. But in the real world, a nation's GDP is the foundation of its global power. And while GDP does not translate automatically into economic or military strength, if history is our guide, nations with larger GDPs exercise proportionally greater influence in shaping international affairs.

Trade



Share of Global Merchandise Trade (2020)

Source: WTO Data, Adapted from UBS

Global Trade

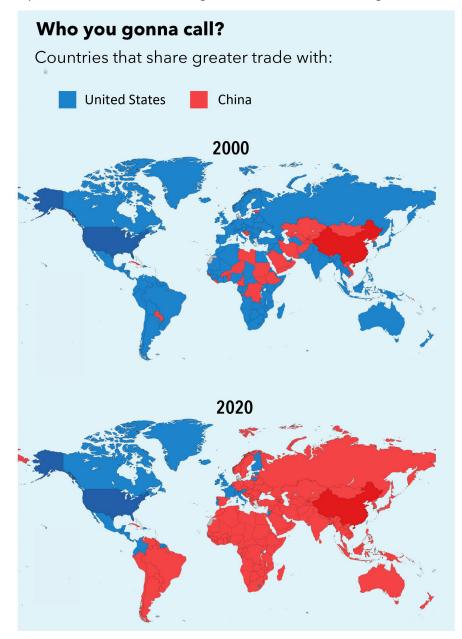
When this century began, China was knocking on the door of the WTO and the U.S. was the leading trading partner of most major economies. Today, China has overtaken the U.S. to become the largest trading partner for nearly every major nation.³² Illustrated by the graphic on the following page, by 2018, 130 countries traded more with China than they did with the U.S., and more than two-thirds of those countries traded more than twice as much with China.³³ With the launch of the Regional Comprehensive Economic Partnership (RCEP) in January, China has also now surpassed the U.S. as the leader of the world's largest free trade block.

As Xi Jinping explained last April, China's strategy in thickening trading relationships is not just to spur its own economic growth. It is to increase other nations' reliance on China. China's goal – in Xi's words – is to tighten "international production chains' dependence on China, forming a powerful countermeasure and deterrent capability against foreigners who

While China is the largest trading partner of most nations, major economies continue to export more to the U.S. than to China and import more from China than the U.S. "Country Snapshots" World Bank, https://wits.worldbank.grg/countrysnapshot/en/.

³³ Alyssa Leng, Roland Rajah, "Global trade through a US-China lens," The Interpreter, December 18, 2019, https://www.lowyinstitute.org/the-interpreter/chart-week-global-trade-through-us-china-lens.

would artificially cut off supply to China."³⁴ Xi's strategy is working—not only with others but with the U.S. In 2021, purchases of products from China accounted for nearly half of America's \$1 trillion trade deficit.³⁵ Today, the U.S. is the world's largest debtor; China is the largest creditor.³⁶



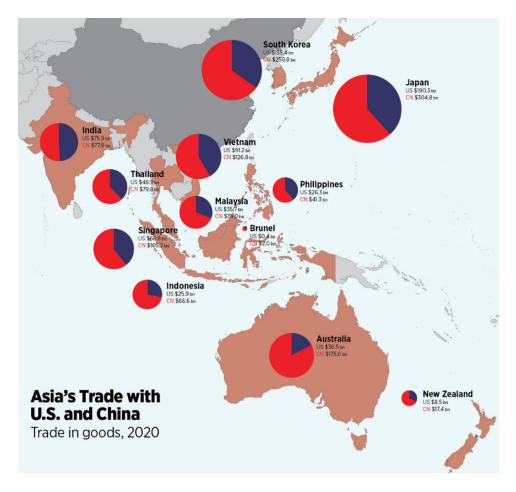
Source: The Economist, 7/17/2021

³⁴ Xi Jinping, Etcetera Language Group, Inc. (trans.), "Certain Major Issues for Our National Medium- to Long-Term Economic and Social Development Strategy," Center for Security and Emerging Technology, November 10, 2020, https://cset.georgetown.edu/wp-content/uploads/t0235_Qiushi_Xi_economy_EN-1.pdf.

³⁵ Figure only refers to trade in goods. U.S. trade deficit in goods and services in 2021 was \$860 billion. "Trade in Goods with China," United States Census Burea. Accssed February 14, 2022. https://www.census.gov/foreign-trade/balance/c5700.html. "U.S. International Trade in Goods and Services (FT900)," United States Census Burea. Accssed February 14, 2022. https://www.census.gov/foreign-trade/Press-Release/current_press_release/index.html

³⁶ China and Hong Kong recordered a combined Net International Investment Position (NIIP) of \$4.3 trillion in 2021. In contrast, Japan recordered a NIIP of \$3.4 trillion. https://data.imf.org/regular.aspx?key=62805745

In Lee Kuan Yew's apt analysis: "China is sucking the Southeast Asian countries into its economic system because of its vast market and growing purchasing power. Japan and South Korea will inevitably be sucked in as well. It just absorbs countries without having to use force...China's growing economic sway will be very difficult to fight." That great sucking dynamic has now reached most of the major economies in the world. In sum: in the Chinese version of the Golden Rule, **He who has the gold, rules.** 37



Source: IMF DOTS

In strengthening its hand within the existing world trading system and creating new agreements and blocs, China has also trumped the U.S.

In the post-World War II world, the U.S. was the leader in promoting free trade, establishing the GATT, NAFTA, WTO, and more. The U.S. also took the lead in designing the Trans-Pacific Partnership. But because of domestic political opposition, it has been unable to join the

³⁷ Graham Allison, Robert D. Blackwill, and Ali Wyne, Lee Kuan Yew: The Grand Master's Insights on China, the United States, and the World (Cambridge, MA: MIT Press, 2013), 6–7.

agreement. Japan then picked up the baton, and by 2018 the 11 members of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) established new trade rules. At the same time, China enlisted most major Asian economies in establishing the Regional Comprehensive Economic Partnership (RCEP).³⁸ RCEP creates a trading bloc that includes China, Japan, South Korea, Australia, New Zealand and the 10 members of ASEAN, covering 2.2 billion people.³⁹ This new bloc is now the largest in the world. It encompasses nearly one-third of global GDP and is projected to add \$500 billion to world trade by 2030.⁴⁰ Moreover, while the US remains paralyzed by political divisions that leave it stuck on the sidelines, China has now applied to join the CPTPP.⁴¹

To thicken its relations with the EU, China also took the lead in negotiating the EU-China Comprehensive Agreement on Investment to facilitate reciprocal foreign direct investment that was signed last December. If ratified by the European Parliament, China will have succeeded in establishing a framework of rules-based FDI and market access that advantage Chinese and Europeans companies over others. In addition, China's multi-trillion dollar Belt and Road Initiative is following in the footsteps of the original Silk Road, building transportation and communication infrastructure across both land and sea that strengthens its hand across Central Asia and Europe.

RCEP's 15 members are Australia, Brunei, Cambodia, China, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, New Zealand, the Philippines, Singapore, Thailand, and Vietnam. India was an original participant, but withdrew its membership in November 2019.

³⁹ Shotaro Tani, "India's absence looms over 'progress' on RCEP Asian trade deal," Nikkei Asia, August 27, 2020, https://asia.nikkei.com/Economy/Trade/India-s-absence-looms-over-progress-on-RCEP-Asian-trade-deal.

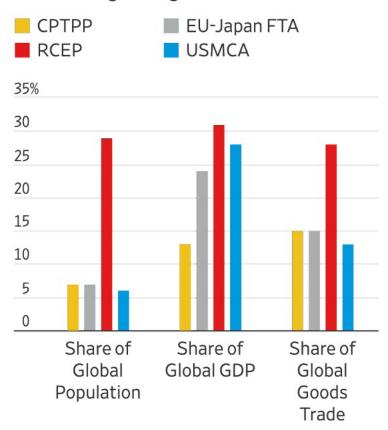
⁴⁰ Peter Petri, "RCEP: A new trade agreement that will shape global economics and politics," Brookings Institution, November 16, 2020, https://www.brookings.edu/blog/order-from-chaos/2020/11/16/rcep-a-new-trade-agreement-that-will-shape-global-economics-and-politics/.

⁴¹ Mireya Solis, "China moves to join the CPTPP, but don't expect a fast pass," Brookings Institution, September 23, 2021, https://www.brookings.edu/blog/order-from-chaos/2021/09/23/china-moves-to-join-the-cptpp-but-dont-expect-a-fast-pass/.

^{42 &}quot;EU and China reach agreement in principle on investment," European Comission. December 30, 2020. https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2541

Ratification of the deal is now uncertain. China and the EU agreed on the deal in December 2020 after seven years of negotiations, but China's imposition of sanctions on EU politicians led the European Parliament to freeze the deal until Beijing lifts its sanctions. Yen Lee, "EU-China investment deal is still possible – but not before 2023, analyst says," CNBC, June 15, 2021, https://www.cnbc.com/2021/06/15/eu-china-investment-deal-still-possible-but-not-before-2023-analyst.html.

World's Largest Regional Trade Pact



Source: Congressional Research Services⁴⁴

Geoeconomics requires not only economic heft but also the skill to wield economic instruments effectively. Here **China has developed a unique mastery of the use of harder edges of "soft power."** When parties are slow to recognize reality (as China sees it) or determined to resist, China uses all the instruments of economic power—buying, selling, sanctioning, investing, bribing, and stealing as needed—until they comply. The textbook case was China's decision to block vital mineral exports to Japan. A Chinese fishing boat operating in Japanese waters collided with two Japanese Coast Guard vessels and Japan detained the boat's captain. In response, the Chinese government blocked all exports of rare earth minerals to Japan, ingredients critical to the manufacturing of hybrid

⁴⁴ Yuka Hayashi, "U.S. on Sidelines as China and Other Asia-Pacific Nations Launch Trade Pact," Wall Street Journal, January 1, 2022. https://www.wsj.com/articles/u-s-on-sidelines-as-china-and-other-asia-pacific-nations-launch-trade-pact-11641038401

⁴⁵ Graham T. Allison, Destined for War, 21.

cars, green energy, missiles, and more.⁴⁶ At the time, there was nowhere else to turn: China accounted for 97% of the world's supply of refined rare earths. To no one's surprise, Japan quickly released the captain.

A more recent example involves South Korea, which angered China in 2016 with its decision to participate in the U.S.-led Terminal High Altitude Area Defense (THAAD) missile defense program on the Korean peninsula. China responded by disrupting the Chinese commercial operations of Lotte, a Korean retail conglomerate – which had donated land for THAAD's use – and tourist arrivals from China dropped by 50% in 2017. South Korea capitulated in October 2017 when it announced the "three Nos": no additional THAAD batteries, no participation in any US regional missile defense system, and no trilateral alliance with the US and Japan. China restored relations the following day.

Private firms have been even quicker to bend to China's will. From suspending broadcasts of NBA games over players' support of protestors in Hong Kong, to limiting raw material exports to Lockheed Martin for supplying missiles to Taiwan, China is swift to punish firms that cross its red lines. The latest target of Beijing's censure was Tesla, whose Shanghai factory produced half of the company's vehicles last year – the majority of which were bought by Chinese consumers, Tesla's second largest market. When Chinese authorities raised concerns about the possibility of Tesla vehicles sending data on Chinese citizens back to the U.S., Tesla quickly announced its plan to build a new data center in China where "all data from the sales of vehicles in the China market would be stored domestically." 48

As these cases suggest, China has made significant progress in becoming the "indispensable link" in most firms' global supply chains. And despite American political rhetoric about "decoupling" and "reshoring," while the COVID-19 pandemic led to a 5% drop in global trade in goods,

⁴⁶ Graham Allison, Kevin Klyman, Karina Barbesino, and Hugo Yen. "The Great Tech Rivarly: China vs the U.S." Harvard Belfer Center, December 2021. Keith Bradsher, "Amid Tension, China Blocks Vital Exports to Japan." The New York Times, September 22, 2010, https://www.nytimes.com/2010/09/23/business/global/23rare.html

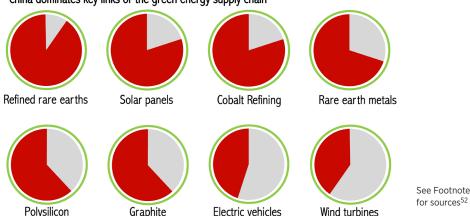
⁴⁷ Ben German, "Taking stock of the global electric vehicle race," Axios. February 2, 2022. https://www.axios.com/taking-stock-global-ev-race-c2a2df42-3453-4fcf-ae30-964499371ca4.html

⁴⁸ China's recent data regulations on automakers have also impacted the operations of Volkswagen, Nissan, and more. Dashveenjit Kaur, "China tightens smart vehicle regulations for Tesla and others." TechWire, August 26, 2021. https://techwireasia.com/2021/08/china-tightens-smart-vehicle-data-regulation-for-tesla-and-others/

China's share of that trade increased. ⁴⁹ An instructive example that has largely gone unrecognized was spotlighted by an oped in October provocatively titled: "Will America's Green future be Red?" ⁵⁰ As the U.S. and Europe make further commitments to reduce greenhouse gas emissions to meet what they identify as an "existential threat" to the globe, the key initiatives they are taking to meet those commitments significantly deepen their dependence on China. The brute fact is that China is the major producer of almost everything green: 80% of the world's solar panels, 40% of the world's wind turbines, and 90% of the refined rare earths that are essential for the batteries that power EVs. ⁵¹

Today's Green Energy is Red

China dominates key links of the green energy supply chain



- The deficit in goods traded between the U.S. and China rose by 14.5% in 2021 to \$355 billion. "MONTHLY U.S. INTERNATIONAL TRADE IN GOODS AND SERVICES, DECEMBER 2021," United States Census Bureau, February 8, 2022. https://www.census.gov/foreign-trade/Press-Release/current_press_release/ft900.pdf "World Economic Outlook: Managing Divergent Recoveries," IMF, April 2021, https://www.imf.org/en/Publications/WEO/ Issues/2021/03/23/world-economic-outlook-april-2021, 141; WTO, "Merchandise Trade Values, WTO, Accessed February 1, 2022, https://data.wto.org/.
- Graham Allison, "Will America's Green Future Be Red?" Boston Globe, October 29, 2021. https://www.bostonglobe.com/2021/10/29/opinion/will-americas-green-future-be-red/
- Joan Fitzgerald, "The Case for Taking Back Solar." The American Prospect, March 24, 2021. https://prospect. org/environment/climate-of-opportunity/case-for-taking-back-solar/ Sarah Ladislaw and Nikos Tsafos, "Beijing Is Winning the Clean Energy Race," Foreign Policy, October 2, 2020, https://foreignpolicy.com/2020/10/02/china-clean-energy-technology-winning-sell/; "Vestas Still Rules Turbine Market, But Challengers Are Closing In," BloombergNEF, February 18, 2020, https://about.bnef.com/blog/vestas-still-rules-turbine-market-but-challengers-are-closing-in/; Alistair MacDonald, "U.S. Faces Uphill Climb to Rival China's Rare-Earth Magnet Industry," Wall Street Journal, April 11, 2021, https://www.wsj.com/articles/u-s-faces-uphill-climb-to-rival-chinas-rare-earth-magnet-industry-11618133603.
- Sarah Ladislaw and Nikos Tsafos, "Beijing Is Winning the Clean Energy Race," Foreign Policy, October 2, 2020, https://foreignpolicy.com/2020/10/02/china-clean-energy-technology-winning-sell/. "Vestas Still Rules Turbine Market, But Challengers Are Closing In," BloombergNEF, February 18, 2020, https://about.bnef.com/blog/vestasstill-rules-turbine-market-but-challengers-are-closing-in/. 125 "Renewable Capacity Statistics 2021," International Renewable Energy Agency, 2021, Meghan O'Sullivan, Indra Overland, and David Sandalow, "The Geopolitics of Renewable Energy," HKS Faculty Research Working Paper Series RWP17-027, June 2017, https://www.hks.harvard. edu/publications/geopolitics-renewable-energy; Daniel Yergin, The New Map: Energy, Climate, and the Clash of Nations; "China Dominates the Global Lithium Battery Market," Institute for Energy Research, September 9, 2020, https://www.instituteforenergyresearch.org/renewable/china-dominates-the-global-lithium-batterymarket/; Alistair MacDonald, "U.S. Faces Uphill Climb to Rival China's Rare-Earth Magnet Industry," Wall Street Journal, April 11, 2021, https://www.wsj.com/articles/u-s-faces-uphill-climb-to-rival-chinas-rare-earth-magnetindustry-11618133603; Ben Foldy and Rebecca Elliot, "Shift to Electric Vehicles Spurs Bid to Make More Batteries in U.S.," Wall Street Journal, January 26, 2021, https://www.wsj.com/articles/u-s-mounts-a-charge-to-take-onchinathe-king-of-electric-vehicle-batteries-11611658235; Teague Egan, "Beating China at the lithium game - Can the US Secure Supplies to Meet Its Renewables Targets?" Utility Dive, February 18, 2020, https://www.utilitydive. com/news/beating-china-at-the-lithium-game-can-the-us-secure-supplies-to-meet-its/572307/

Highlighting his administration's climate agenda at the Ford Rouge Electric Vehicle Center in Michigan, President Joe Biden declared: "The future of the auto industry is electric. There's no turning back." Ford has pledged to convert nearly half its fleet into EVs over the next 10 years, while GM has announced that it will only sell zero-emissions vehicles by 2035. Nonetheless, as Biden went on to acknowledge: "right now, China is leading in this race." And while North American automakers are projected to build 1.4 million EVs annually by 2028, China produced and consumed 3.3 million EVs last year and is projected to produce over 8 million by 2028.

China also controls the majority of raw materials for batteries, the heart of electric vehicles.⁵⁷ EVs are essentially a battery wrapped in a metal body. China accounts for 50% of global production of chemical lithium, 60% of polysilicon, 70% of rare earth metals, 80% of cobalt refining, and 90% of rare earths refining—all central to battery production.⁵⁸ Some in the U.S. have recognized this dependence and are now calling for America to develop alternative supply chains. ⁵⁹ But finding additional deposits of minerals, opening new mines, and building refineries to meet U.S. and EU demands will simply not happen in what the US and European

⁵³ Kathryn Watson, "Biden drives electric vehicle and touts it as the "future of the auto industry"" CBS News, May 18, 2021, https://www.cbsnews.com/news/biden-ford-electric-car-plant-michigan-watch-live-stream-today-05-18-2021/.

⁵⁴ Hilary McQuilkin, Meghna Chakrabarti, "America's Electric Vehicle Future," WBUR On Point, June 17, 2021, https://www.wbur.org/onpoint/2021/06/17/america-vehicles-electric-ford-cars.

⁵⁵ Kathryn Watson, "Biden drives electric vehicle and touts it as the "future of the auto industry"" CBS News, May 18, 2021, https://www.cbsnews.com/news/biden-ford-electric-car-plant-michigan-watch-live-stream-today-05-18-2021/; "Remarks by President Biden on a Future Made in America," White House, May 18, 2021, https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/05/18/remarks-by-president-biden-on-a-future-made-in-america/.

⁵⁶ Eamon Barrett, "China electric vehicle sales surged 154% last year, with Warren Buffett-backed BYD topping Tesla," Fortune, January 7, 2022, https://fortune.com/2022/01/07/china-electric-car-ev-sales-2021-growth-tesla-byd-li-auto-xpeng-nio/.

^{57 &}quot;China Dominates the Lithium-ion Battery Supply Chain, but Europe is on the Rise," BloombergNEF, September 16, 2020, https://about.bnef.com/blog/china-dominates-the-lithium-ion-battery-supply-chain-but-europe-is-on-the-rise/.

Meghan O'Sullivan, Indra Overland, and David Sandalow, "The Geopolitics of Renewable Energy," HKS Faculty Research Working Paper Series RWP17-027, June 2017, https://www.hks.harvard.edu/publications/geopolitics-renewable-energy; Daniel Yergin, The New Map: Energy, Climate, and the Clash of Nations (New York: Penguin Press, 2020), pp 396-397; "China Dominates the Global Lithium Battery Market," Institute for Energy Research, September 9, 2020, https://www.instituteforenergyresearch.org/renewable/china-dominates-the-global-lithium-battery-market/; Alistair MacDonald, "U.S. Faces Uphill Climb to Rival China's Rare-Earth Magnet Industry," Wall Street Journal, April 11, 2021, https://www.wsi.com/articles/u-s-faces-uphill-climb-to-rival-chinas-rare-earth-magnet-industry-11618133603; Teague Egan, "Beating China at the lithium game — Can the US Secure Supplies to Meet Its Renewables Targets?" Utility Dive, February 18, 2020, https://www.utilitydive.com/news/beating-china-at-the-lithium-game-can-the-us-secure-supplies-to-meet-its/572307/.

⁵⁹ With leading contenders including South Korea. But South Korea, home to the largest EV battery-producing company, LG Chem, also relies heavily on China for the fundamental inputs for green tech. Edward White, "Seoul's battery ambitions rely heavily on Beijing," Financial Times, June 1, 2021, https://www.ft.com/content/Off81a95-1fbf-43f2-8fb4-13cc0b3e4765.

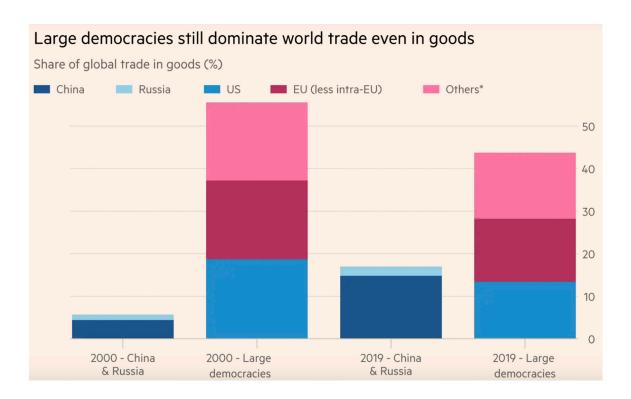
governments have called the "decisive decade." Indeed, where it will be possible to create alternative supplies that meet U.S. standards for "green" remains uncertain. In sum, the faster the U.S., EU, and other advanced economies actually take steps to power cars, factories, and homes without burning hydrocarbons, the more they will increase their dependence on China for critical supply chains. The greater their dependence on goods that China can unilaterally cut off, the greater China's leverage. ⁶⁰

At the same time, it is important to note that China also depends on foreign supply chains for essential items. China is the world's largest importer of food and energy, and its exports to the U.S. and other high-income countries play a central role in its economy. 61 Together these advanced economies account for a larger share of world trade than China. Thus, as Martin Wolf of the Financial Times has argued, if the U.S. and its G7 partners were able to act in concert, they could insist on rules for trade and finance to establish a level playing field that China would have to accept. Had previous American administrations joined the Trans-Pacific Partnership and EU-focused Transatlantic Trade and Investment Partnership (TTIP), for example, the U.S. would have been the architect of an economic coalition with nearly 60% of world GDP sitting on its side of the seesaw, lifting a China with 16% off the ground.⁶² Wolf's chart below underscores the point that if large democracies acted in unison, their combined economic weight would allow the U.S. to negotiate from a position of strength. But though a short word, "if" is a big idea.

⁶⁰ As the U.S. struggled to respond to the coronavirus pandemic, it found itself relying on heavily on China for medical supplies. China was the source of 36% of U.S. antibiotics and 30% of PPE imports in 2019, half of U.S. imports of medical wadding, gauze, and bandages, as well as over 70% of first-aid boxes and kit imports. Karen M. Sutter, Adres B. Schwarzenberg, and Michael D. Sutherland, "COVID-19: ChinaMedical Supply Chains and Broader Trade Issues," Congressional Research Service, December 23, 2020, https://crsreports.congress.gov/product/pdf/R/R46304; Karen M. Sutter, Michael D. Sutherland, "COVID-19: U.S.-China Economic Considerations," Congressional Research Service, March 2, 2021, https://crsreports.congress.gov/product/pdf/IF/IF11434.

⁵¹ Jude Clemente, "China Is The World's Largest Oil & Gas Importer." Forbes, October 17, 2019. https://www.forbes.com/sites/judeclemente/2019/10/17/china-is-the-worlds-largest-oil--gas-importer/?sh=5f87eb2d5441. "China Country Profile," Food Exports USA, https://www.foodexport.org/export-insights/market-and-country-profiles/china-country-profile.

The 12 nations of the TPP would have encompassed nearly 40% of global GDP, while countries in the TTIP would have represented 45% of global GDP. In total, the economic strength of all countries in the TPP and TTIP combined would have encompassed nearly 60% of global GDP. Ian Bremmer, "New Trade Deal May Be Doomed by Populism and Suspicion on Both Sides of the Atlantic," Time, May 5, 2016, https://time.com/4319133/new-trade-deal/; "Overview of TPP," Office of the United States Trade Representative, https://ustr.gov/tpp/overview-of-the-TPP.



Source : <u>FT</u>, 7/7/2020

Global Manufacturing

China has created a manufacturing ecosystem that allows it to dominate the production of almost everything. Initially a low-cost producer of inexpensive consumer goods, China became the world's largest manufacturer in 2010 and accounted for 29% of global manufacturing value added in 2019 – a 20-point increase over 2000. During that time, the U.S. share dropped from 26% to 18%.⁶³

R&D-intensive industry output tells a similar story. In medium-high R&D intensive industries, China has overtaken the U.S., its share of global value-added output increasing from 7% in 2003 to 26% by 2018, while the U.S. share dropped from 25% to 22%. The U.S. National Science Foundation further found that, over that same period, in high R&D intensive industries China's share of global value-added increase from 6% to 21%, while America's share declined from 38% to 32%. The transfer of the control of the same period, in high R&D intensive industries China's share declined from 38% to 32%.

China's rise in manufacturing has substantially increased its economic competitiveness. According to the most recent Competitive Industrial Performance Index, which "benchmarks the ability of countries to produce and export manufactured goods competitively," the U.S. dropped from number 1 in 2000 to number 4, while China rose from 23rd to 2nd, just behind Germany. Nonetheless, in overall economic competitiveness, defined by the World Economic Forum as "the set of institutions, policies and factors that determine the level of productivity of a country," the U.S. ranked 2nd in 2019 while China was 28th.

⁶³ Felix Richter, "These are the top 10 manufacturing countries in the world," World Economic Forum, February 25, 2020, https://www.weforum.org/agenda/2020/02/countries-manufacturing-trade-exports-economics/; "Country Profile," UN Statistics Division, December 2019, Accessed November 2, 2020, https://unstats.un.org/unsd/snaama/CountryProfile.

Medium-high R&D intensive industries include chemicals (excluding pharmaceuticals), transportation equipment (excluding aircraft manufacturing), electrical and machinery equipment, and IT services. "The State of U.S. Science and Engineering 2020," National Science Foundation, January 2020, https://ncses.nsf.gov/pubs/nsb20201/global-science-and-technology-capabilities.

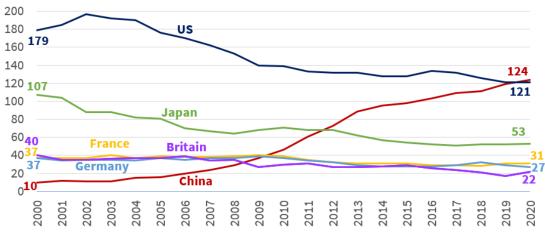
⁶⁵ High R&D intensive industries include aircraft manufacturing, pharmaceuticals, computers and electronics.

^{66 &}quot;Competitive Industrial Performance Index (CIP), Edition 2020," UNIDO, Accessed February 1, 2022, https://stat.unido.org/cip/?ga=2.145763900.96687431.1620069297-1072486131.1620069297.

⁶⁷ Singapore ranked first, though the U.S. held the top spot in 2018. Klaus Schwab, "The Global Competitiveness Report 2019," World Economic Forum, 2019, http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf.

Business & Investment

Global Corporations



Source: CSIS, 8/18/2020

In an eye-grabbing headline, *Fortune* announced last year that the "Global 500 is now more Chinese than American." For the first time since the magazine began listing its Global 500 rankings, China topped the list with 124 companies—ahead of the U.S.'s 121.⁶⁹ Twenty years ago, this list included only ten Chinese companies (today, China and the U.S. each account for almost as many companies as the total number for Japan, Britain, France, and Germany combined.⁷⁰) The big takeaway, as *Fortune* put it, is that "the 'American Century'…has at last given way to a new reality."

Alan Murray and David Meyer, "The Fortune Global 500 is now more Chinese than American," Fortune, August 10, 2020, https://fortune.com/2020/08/10/fortune-global-500-china-rise-ceo-daily/.

⁶⁹ In 2021, China's lead in total fortune 500 companies grew, with a total of 135 companies on the list (including companies in Hong Kong). In contrast, the US posted 122 companies.

⁷⁰ China Power Team, "How Dominant are Chinese Companies Globally?" China Power, September 13, 2019, Updated August 31, 2020, Accessed February 2, 2022. https://chinapower.csis.org/chinese-companies-global-500/.

^{71 &}quot;2020 A Sleeping Giant Awakes," Fortune, 2020, https://qlik.fortune.com/global500/.

The corporate race, however, is certainly not over. On *Fortune's* Global 500, U.S. companies lead by revenue – U.S. companies' revenue topped nearly \$10 trillion in 2020, compared to Chinese companies' reported \$8.3 trillion.⁷² American brands also continue to outshine Chinese ones. According to Brand Finance, the aggregate value of U.S. companies' brands was more than twice that of Chinese brands (\$3.2 trillion to China's \$1.3 trillion).⁷³ And the U.S. still boasts the largest number of 'unicorns'—startups valued at more than \$1 billion.⁷⁴

The companies in *Fortune's* 500 also differ significantly in their corporate structure and focus. Three quarters of China's companies on the *Fortune* list are State Owned Enterprises, and over half are related to the finance, energy, and materials sectors, which partially explains why top Chinese companies underperform relative to American firms in terms of profit margins.⁷⁵ Still, though private firms make up a smaller portion of China's major companies, they have been the driving force in China's economic miracle. Together, private firms account for 60% of China's GDP growth, 70% of innovation, 80% of urban employment, and 90% of job growth.⁷⁶

⁷² China Power Team, "How Dominant are Chinese Companies Globally?"

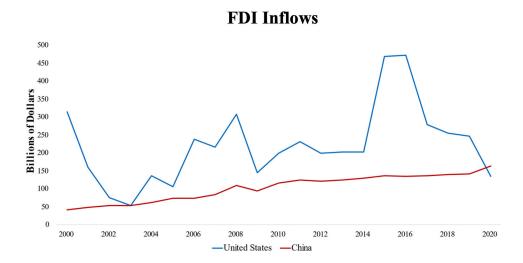
^{73 &}quot;Global 500 2020," Brand Finance, January 2020, 13, https://brandfinance.com/images/upload/brand_finance_global_500_2020_preview.pdf.

Huron, "Huron India Future Unicorn List 2021," https://www.hurunindia.net/hurun-india-future-unicorn-list-2021.

⁷⁵ China Power Team, "How Dominant are Chinese Companies Globally?"; Scott Kennedy, "The Biggest But Not the Strongest: China's Place in the Fortune Global 500," Center for Security and International Studies, August 18, 2020, https://www.csis.org/blogs/trustee-china-hand/biggest-not-strongest-chinas-place-fortune-global-500.

⁷⁶ Amir Guluzade, "The role of China's state-owned companies explained," World Economic Forum, May 7, 2019, https://www.weforum.org/agenda/2019/05/why-chinas-state-owned-companies-still-have-a-key-role-to-play/.

Foreign Direct Investment



Source: UNCTAD, Reuters

Over the past 20 years, China has grown to rival the U.S. as the preferred destination for FDI and became the largest FDI recipient in the world in 2020 amidst the coronavirus pandemic.⁷⁷ From 2000-2020, inflow of FDI into China grew four-fold, from \$41 billion in 2000 to \$163 billion in 2020.⁷⁸ By contract, U.S. FDI inflows have fluctuated over the past two decades and saw a net decline of \$180 billion from 2000-2020.⁷⁹ In terms of the total cumulative level of FDI, however, the U.S. remains substantially ahead, with five times the value of FDI inward stock as of 2019.⁸⁰

Over the next decade, as China continues to open its markets to foreigners (China's ranking in the World Bank 2020 Doing Business report jumped from 46th to 31st from 2019), China's market are expected to continue to grow in attractiveness to investors. 81 Wall Street's increasing interest in Chinese markets supports the bet made by China's leaders that the gravitational pull of their economy

In 2021, America reclaimed its spot as the top FDI recipient in the world. Paul Hannon, Eun-Young Jeong, "China Overtakes U.S. as World's Leading Destination for Foreign Direct Investment," Wall Street Journal, January 24, 2021, https://www.wsj.com/articles/china-overtakes-u-s-as-worlds-leading-destination-for-foreign-direct-investment-11611511200?mod=searchresults_pos5&page=1.

^{78 &}quot;Annex table 01. FDI inflows, by region and economy, 1990-2019," UNCTAD, June 16, 2020, https://unctad.org/topic/investment/world-investment-report.

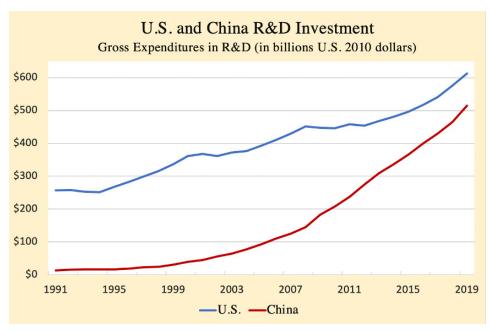
^{79 &}quot;Annex table 01. FDI inflows, by region and economy, 1990-2019," UNCTAD, June 16, 2020, https://unctad.org/topic/investment/world-investment-report; Reuters Staff, "China was largest recipient of FDI in 2020," Reuters, January 24, 2021, https://www.reuters.com/article/us-china-economy-fdi/china-was-largest-recipient-of-fdi-in-2020-report-idUSKBN29TOTC.

^{80 &}quot;World Investment Report 2020," UNCTAD, 2020, https://unctad.org/en/PublicationsLibrary/wir2020_en.pdf.

^{81 &}quot;Foreign direct investment (FDI) in China," Nordea.

will prove irresistible to key companies and countries.⁸² Indeed, despite recent market volatility from China's crackdown on its domestic tech firms, in 2021, **BlackRock, Goldman Sachs, JP Morgan, and Invesco have taken steps to establish joint or wholly owned mutual fund products in China.**⁸³ Even at the height of the Trump Administration's trade war in 2019, U.S. FDI into China increased.⁸⁴

Research & Development



Source : OECD. 2021

In its landmark 2020 report, "The Perils of Complacency," the American Academy of Arts and Sciences sounded an alarm. Documenting China's rapidly increasing R&D expenditures that are slated to soon overtake the U.S., it warns that "the future of the nation depends on taking action to assure a vibrant and productive R&D enterprise."

⁸² Thomas Hale, Siobhan Riding, Wang Xueqiao, "Wall Street brushes off political tensions to dig deeper into China," Financial Times, September 9, 2020, https://www.ft.com/content/01f92c8b-11dc-431c-adaf-c299e3964ff1.

⁸³ Aaron Back and Telis Demos, "American Banks Have What They Want in China. Their Fate Is Still Out of Their Hands." Wall Street Journal, October 29, 2021, https://www.wsj.com/articles/american-banks-have-what-they-want-in-china-their-fate-is-still-out-of-their-hands-11635499841.

⁸⁴ Michael Schuman, "How to Get U.S. Companies to Leave China," Bloomberg, December 28, 2020, https://www.bloomberg.com/opinion/articles/2020-12-29/u-s-should-give-manufacturers-incentive-to-leave-china?sref=H0KmZ7Wk.

⁸⁵ American Academy of Arts and Sciences, "The Perils of Complacency: America at a Tipping Point in Science & Engineering," AMACAD, 2020, https://www.amacad.org/sites/default/files/publication/downloads/Perils-of-Complacency_Report-Brief_1.pdf.

The U.S. and China have been neck and neck in R&D spending since 2017, together accounting for nearly half of global R&D expenditure. Measured by PPP in 2010 dollars, between 2000 and 2019, U.S. R&D expenditure almost doubled, growing from \$360 billion to \$610 billion. Chinese R&D investments, meanwhile, grew by a factor of 13, from \$40 billion to \$515 billion.

America's decline in innovation is also chronicled by the Bloomberg Innovation Index, which began tracking top innovating countries in 2013. While the U.S. began as number 1, it had fallen out of the top 10 by 2020. 88 And although China still lags behind the U.S. (at number 16 compared to U.S. number 11), it is catching up. As our earlier report on the "Great Tech Rivalry" noted, China's laser-like focus on frontier technologies has positioned it to dominate races like 5G and AI in the future. 89 Moreover, in former Deputy Secretary of Defense Robert Work's apt summary, "A lot of people still believe that all China does is steal technology and copy it. They still do that, and they're quite good at it. But also their technological ecosystem and their innovation ecosystem is really, really good. And it's getting better all the time." 90

Beethika Khan, Carol Robbins, and Abigail Okrent, "The State of U.S. Science and Engineering 2020," National Science Board, National Science Foundation, January 15, 2020, https://ncses.nsf.gov/pubs/nsb20201/preface.

⁸⁷ OECD (2021), Gross domestic spending on R&D (indicator), Accessed on 2 February 2022, https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm

⁸⁸ Michelle Jamrisko, Wei Lu, and Alexandre Tanzi, "South Korea Leads World in Innovation as U.S. Exits Top Ten," Bloomberg, February 3, 2021, https://www.bloomberg.com/news/articles/2021-02-03/south-korea-leads-world-in-innovation-u-s-drops-out-of-top-10.

⁸⁹ Graham Allison, Kevin Klyman, Karina Barbesino, and Hugo Yen. "The Great Tech Rivarly: China vs the U.S." Harvard Belfer Center, December 2021. https://www.belfercenter.org/sites/default/files/GreatTechRivalry_ ChinavsUS 211207.pdf

⁹⁰ Robert Work, "Artificial Intelligence and the Future of U.S. - China Technology Competition," Council on Foreign Relations, Online Panel, March 30, 2021, https://www.youtube.com/watch?v=mRUsT2C4E78.

Finance

Dollar Dominance

The U.S. remains the uncontested leader of the global financial system. Central banks around the world continue to hold most of their reserves in U.S. dollars. The dollar accounts for 60% of total foreign exchange reserves, down from 70% at the beginning of the century. While the IMF added China's RMB to the Special Drawing Rights valuation basket in 2016, it has barely cracked 2% in holdings. Similarly, U.S. dollar centrality persists in terms of share of forex trading, global payments, and trade.

<u>Currency</u>	Share of Forex Trading (%)	Share of Official Forex Reserves (%)	Share of Cross-Border Payments (%)
U.S. Dollar	88.3	<u>59</u>	<u>38.3</u>
Renminbi	4.3	2.3	2.4
<u>Euro</u>	32.3	21.2	<u>36.6</u>
Yen	16.8	<u>6</u>	3.6
Pound	12.8	4.7	6.8

Source: IMF, Bloomberg, BIS93

The dollar's share of SWIFT-mediated cross-border payments rose 10 percentage points from 2012-2019. As *The Economist* has noted: the dollar "underpins four-fifths of global supply chains and around two-thirds of securities issuance." In trade, "the dollar's share of invoicing was 4.7 times larger than America's share of the value of imports, and triple its share of world exports." Thus at the same time the U.S. share of overall trade has declined, the dollar's role in

^{91 &}quot;World Currency Composition of Official Foreign Exchange Reserves," IMF, https://data.imf.org/regular.aspx?key=41175.

⁹² China Power Team, "Will China's Push to Internationalize the Renminbi Succeed?" China Power, April 1, 2020, Updated August 26, 2020, https://chinapower.csis.org/china-renminbi-rmb-internationalization/.

⁹³ Forex Trading figures from 2019 BIS Triennial Survey; Forex reserves based on Q42020; Share of cross-border payments as of Jan 2021

⁹⁴ Eswar Prasad, "Has the dollar lost ground as the dominant international currency?" Brookings, September 20, 2019, https://www.brookings.edu/research/has-the-dollar-lost-ground-as-the-dominant-international-currency; "The dollar's dominance masks China's rise in finance," The Economist, April 20, 2020, https://www.economist.com/finance-and-economics/2020/04/16/the-dollars-dominance-masks-chinas-rise-in-finance; Alexandre Tanzi, "Dollar Loses to Euro as Payment Currency for First Time in Years," Bloomberg, November 18, 2020, https://www.bloomberg.com/news/articles/2020-11-19/euro-tops-dollar-as-payments-currency-for-first-time-since-2013.

^{95 &}quot;Global trade's dependence on dollars lessens its benefits," The Economist, August 29, 2020, https://www.economist.com/schools-brief/2020/08/29/global-trades-dependence-on-dollars-lessens-its-benefits.

trade remains strong. And other nation's dependence on the U.S. and the dollar in SWIFT, CHIPS, and the Federal Reserve credit swap lines provide leverage the U.S. can use in dealing with others. ⁹⁶

While recent U.S. policy has "weaponized" the dollar in sanctioning North Korea, Iran, and Russia, whether this tool could be used to influence China is a subject of debate. U.S.-China economic relations have become so interdependent that they create an analogue of MAD that has been labeled MAED: mutual assured economic disruption. ⁹⁷ If the U.S. tried to exclude China from the U.S.-centered financial system, and China responded by stopping the shipment of goods to the U.S., leaving the shelves in Walmarts, Home Depots, and Targets empty, both economies and societies would be deeply disrupted. A competition to see who could suffer more and for longer has been, at least so far, a game of chicken neither has been willing to play.

We must also remember that America's dollar dominance is not a fact of nature. As the IMF noted in 2018: "the international monetary system's transition from a bi-polar system—in which two currency blocs dominate, i.e., the dollar and euro—to a tri-polar one—which includes the renminbi bloc—is well underway... [with] the economic size of the RMB bloc...at this stage geographically constrained" mainly around BRICS countries. ⁹⁸ A recent UBS survey of central banks and sovereign wealth funds highlighted this trend: 40% of respondents expect the RMB to become a leading reserve currency, a peer to the dollar and euro, over the next 25 years. ⁹⁹ Morgan Stanley anticipates that the RMB will be the third-largest reserve currency by 2030. ¹⁰⁰ Similarly, Bridgewater Associates founder Ray Dalio's provocative analysis of the rise and decline of financial empires foresees China's currency and capital

Robert D. Blackwill, Jennifer M. Harris, War by Other Means: Geoeconomics and Statecraft (Cambridge, MA: The Belknap Press of Harvard University Press, 2016). Chips refers to the Clearing House Interbank Payments System (CHIPS), the primary clearing house in the U.S. for large banking transactions.

⁹⁷ Leon Whyte, "US-China: Mutually Assured Economic Destruction?" The Diplomat, May 26, 2015, https://thediplomat.com/2015/05/u-s-china-mutually-assured-economic-destruction/

⁹⁸ Camilo E. Tovar and Tania Mohd Nor, "Reserve Currency Blocs: A Changing International Monetary System?" IMF, January 2018

⁹⁹ Massimliano Castelli and Philipp Salman, "Time to evolve," UBS, October 2019, https://www.ubs.com/global/en/asset-management/global-sovereign-markets/imf/quarter-century-fx-reserve-management.html.

¹⁰⁰ Nadia Schadlow and Richard Kang, "Financial Technology Is China's Trojan Horse," Foreign Affairs, January 13, 2021, https://www.foreignaffairs.com/articles/china/2021-01-13/financial-technology-chinas-trojan-horse.

markets becoming real competitors to America's in the near future. On the other hand, as long as the RMB is not freely convertible and China keeps its capital account closed, holdings of RMBs will be slow to rise.

China's success in advancing fintech adds another level of complexity to this picture. While American policy makers have only begun debating the introduction of a digital dollar, China is leading a national campaign to digitalize its entire economy. China is in the process of developing its own digital currency, the eCNY, which will lead to faster, cheaper, and more secure financial transactions for its citizens. The national effort is complemented by private sector endeavors, with dozens of Chinese tech and financial firms designing new applications to support the government's eCNY architecture. 101 China's early start in developing digital currencies threatens American dominance in international finance. A digital yuan could offer traders an easy way to reroute transactions and bypass the dollar-based system. China could also see its technologies adopted internationally and dictate the rules of digital financial practices around the world. While there remain great uncertainties about the impact of central bank digital currencies, the U.S. is not confident about its position in the digital race. As Federal Reserve Governor Lael Brainard put it: "If you have other major jurisdictions in the world with a digital currency, and the U.S. doesn't have one, I just can't wrap my head around that." 102

Equity Markets and Banking

While American stock markets still account for more than half the world's equity markets, China's domestic markets have grown over 2,500% since the beginning of the century, from little more than \$500 billion in market capitalization in 2003 to \$14 trillion by the end of 2021. Nonetheless, Chinese markets remains a distant second to the U.S. stock market value of \$53 trillion. 103

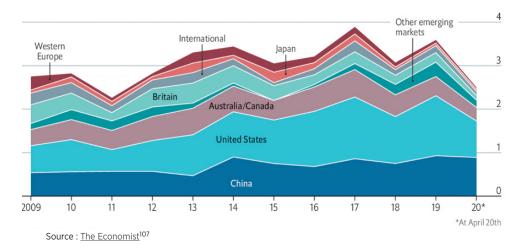
¹⁰¹ Yaya Fanusie and Emily Jin, "China Is Making Smart Money," Lawfare, September 15, 2021, https://www.lawfareblog.com/china-making-smart-money.

¹⁰² Ann Saphir, "Fed's Brainard: Can't wrap head around not having U.S. central bank digital currency." Reuters, July 30, 2021, https://www.reuters.com/technology/feds-brainard-cant-wrap-head-around-not-having-us-central-bank-digital-currency-2021-07-31/.

[&]quot;Shenzhen Stock Exchange," Trading Hours, February 2, 2022, https://www.tradinghours.com/markets/szse; "Shanghai Stock Exchange," Trading Hours, February 2, 2022, https://www.tradinghours.com/markets/nyse; "NASDAQ Stock Exchange," Trading Hours, February 2, 2022, https://www.tradinghours.com/markets/nasdag.

China's rise in the banking industry is more striking. In 2000, China had no entries in the top 10 global banks. **Today the four largest banks are Chinese** (with assets valued at a combined total of \$17.3 trillion as of December 2020). ¹⁰⁴ U.S. banks hold only the sixth and ninth spots in this top 10 rankings, for a combined total of \$6.2 trillion in assets. ¹⁰⁵ By market capitalization, however, Americans maintain the lead, with American banks ranking first, second, fifth, and seventh. As *The Economist* illustrates below, with a combined value of \$1.1 trillion, U.S. banks continue to be valued more highly than their Chinese competitors, whose combined market capitalization stands at \$972 billion. ¹⁰⁶

Up with the big boysMarket capitalisation of world's 30 biggest banks, \$trn



Of particular importance to China's global banking influence is the fact that Chinese banks now offer more cross-border credit, "the bread and butter of international banks," than U.S. and European counterparts, with

¹⁰⁴ David Feliba and Rehan Ahmad, "The world's 100 largest banks, 2021," S&P Global, April 12, 2021, https://pages.marketintelligence.spglobal.com/SM-Global-Bank-Ranking-Content-request-Global.html; Jun Qian, "The Chinese Banking System: Structure, Potential Risks, and Reforms," Peterson Institute Online Forum, July 22, 2020, https://www.piie.com/system/files/documents/qian2020-07-22ppt.pdf.

¹⁰⁵ It is important to note that "while the largest player in the country, JPMorgan Chase Co., advanced to reclaim its No. 6 position, it would have ranked even higher, at No. 4, had it reported in IFRS instead of U.S. GAAP. Under IFRS, the gorss value of derivatives is reported while U.S. GAAP requires the net value to be reflected. Had this been the case, JPMorgan would have taken a place at the top tier, breaking the dominance of China's 'Big Four.' Along similar lines, Bank of America Corp. would have ranked No. 7 instead of No. 9 under IFRS reporting." David Feliba and Rehan Ahmad, "The world's 100 largest banks, 2021," S&P Global, April 12, 2021, https://pages.marketintelligence.spglobal.com/SM-Global-Bank-Ranking-Content-request-Global.html.

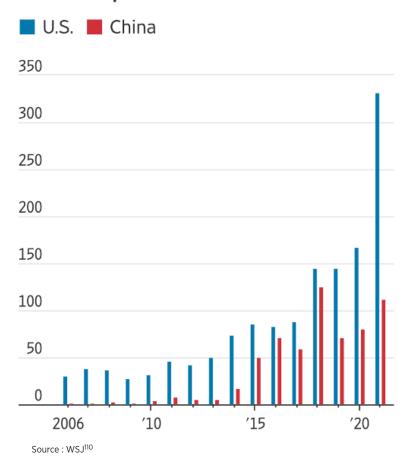
¹⁰⁶ F. Norrestad, "Leading banks worldwide as of July 2020, by market capitalization," Statista, November 25, 2020, https://www.statista.com/statistics/264905/top-10-banks-by-market-capitalization/.

^{107 &}quot;Geopolitics and technology threaten America's financial dominance," The Economist, May 9, 2020. https://www.economist.com/special-report/2020/05/07/geopolitics-and-technology-threaten-americas-financial-dominance

loans largely concentrated in emerging markets. ¹⁰⁸ Indeed, **China has** become the number one creditor to the world, exceeding the totals of the World Bank, IMF, or all OECD creditor governments combined. ¹⁰⁹

But in the "third great institution of modern capitalism" – venture capital – Chinese firms are still far behind their American counterparts in their ability to attract new investors and capital. In 2020, Chinese start-ups only received half the total venture-capital deal value of American firms. And as the graph below illustrates, Xi's economic crackdown in 2021 further depressed that ratio to one-third. In its ability to unleash human potential and innovation, the United States is still unmatched.

Venture-capital deal value



[&]quot;As China goes global, its banks are coming out, too," The Economist, May 7, 2020, https://www.economist.com/special-report/2020/05/07/as-china-goes-global-its-banks-are-coming-out-too.

¹⁰⁹ Sebastian Horn, Carmen M. Reinhart, Christoph Trebesch, "How Much Money Does the World Owe China?" Harvard Business Review, February 26, 2020, https://hbr.org/2020/02/how-much-money-does-the-world-owe-china.

¹¹⁰ Greg Ip, "Venture Capital becomes a tech battle ground between China, U.S." Wall Street Journal, January 26, 2022, https://www.wsj.com/articles/venture-capital-becomes-a-tech-battleground-between-china-u-s-11643202001.

Finally, China struggles to attract tech superstars from around the world. The total number of naturalized Chinese citizens remains under 2,000.¹¹¹ In contrast, America has naturalized almost 15 million citizens in the past two decades.¹¹²

Immigrants have fueled U.S. leadership in technology, from the co-founders of American tech giants, including Google and Intel, to the founders and chief executives of the firms that brought us vaccines against COVID-19, Pfizer and Moderna. Of all the billion-dollar startups in the U.S. in the past 20 years, how many have been founded or cofounded by individuals born abroad or their children? More than half. As the society that attracts the most talented inventors and entrepreneurs in the world and gives them the freedom and opportunity to realize their dreams, the U.S. remains unrivaled.

¹¹¹ Daniel Bell, "Why Anyone Can be Chinese," Wall Street Journal. July 14, 2017. https://www.wsj.com/articles/can-anyone-be-chinese-1500045078

¹¹² Maria Gabriela Sanchez and Jeanne Batalova, "Naturalized Citizens in the United States," Migration Policy Institute. November 10, 2021. https://www.migrationpolicy.org/article/naturalization-trends-united-states

III. What about the Future?

Looking ahead, what does the future hold? Everyone agrees that, over the decade ahead, China will grow more slowly than it has in the past four. But since the focus of this report is the rivalry between the U.S. and China, the central issue is whether China's economy will continue growing at twice or more the rate of the U.S.? As the warning on the standard investment prospectus cautions: past performance is no guarantee of future results.

Five years ago as President Trump was taking office, I addressed this question. To quote *Destined For War: Can America and China Escape Thucydides's Trap*: "As I write this, the favorite story line in the Western press about the Chinese economy is 'slowdown'. A word-cloud search of reports on the Chinese economy from 2013 to 2016 in the elite press finds that this is the most frequently used word to describe what is happening there.¹¹³ The question few pause to ask is slowing compared to whom? Over the same period, the American press's favorite adjective to describe American economic performance has been 'recovering.'" 114

Five years on we can now see how China's "slowdown" compared to the America's "recovery." China's annual growth averaged 6%; the U.S., 2%.

Looking in cloudy crystal balls today, the future appears even more uncertain than it did then. Will Xi Jinping's current campaign to reign in excesses of the private sector and extend the Party more deeply into the economy succeed? As Lee Kuan Yew told Xi candidly, China's existing 20th century operating system is not fit for service in the 21st century. How long will the current CCP regime sustain its "mandate from heaven" to govern? If it proves no more successful than previous dynasties that have ruled China over the past several thousand years, since it came to power in 1949, it is already past its

¹¹³ The word "cloud" was generated on the Factiva database, using all headlines from the New York Times, Wall Street Journal, and Financial Times from October 25, 2013, through October 25, 2016, featuring the words "China" and "growth," or "GDP," or "economy."

¹¹⁴ Graham Allison, Destined for War, 12.

expiration date (given their average life span of 70 years). Facing all these unknowns, one is tempted to quote Yogi Berra's caution against making predictions "especially about the future"—and punt.

Nonetheless, in the real world, many actors have to make their bets. Investment firms seeking to earn the highest risk-adjusted returns for their investors can invest more of their portfolios in China—or less. Global corporations seeking to manufacture the highest quality products at the lowest cost can expand production in China—or build factories elsewhere. Retailer can build additional outlets in Chinese cities—or focus on other markets. Political leaders making choices about their economic relations with both China and the U.S. can hedge, but often have to choose. Thus, this chapter concludes with a summary of key considerations emphasized by those who are grappling with these difficult choices but coming to competing conclusions.

The watchword for the Chinese government on the road to this November's Party Congress at which plans call for Xi to become the new "emperor" for life has been: "stability." The categorical imperative has been: don't rock the boat. Thus, the array of major initiatives the Chinese government has taken recently to shift the balance of power between the private sector and the government has taken observers by surprise. Reigning in visible high-flying entrepreneurs, regulating its "platform monopolies," attempting to lance its real estate bubble, and other interventions summarized in the chart below have caused turbulence that will predictably slow economic growth. Nonetheless, as Xi has repeatedly insisted: The Party rules the economy, the Party rules the society, the Party rules everything.

¹¹⁵ Yuhua Wang, "What Can the Chinese Communist Party Learn from Chinese Emperors?" To appear in The China Questions: Critical Insights into a Rising Power, https://scholar.harvard.edu/files/yuhuawang/files/wang_yuhua_what_can_the_chinese_communist_party_learn.pdf

[&]quot;In China, the Economic Buzzword for 2022 is Stability," Wall Street Journal, January 17, 2022. https://www.wsj.com/articles/china-economy-plans-2022-stability-11642131322

Xi's Economic Crackdown

<u>Event</u>	<u>Date</u>	<u>Rationale</u>	Description
Ant Group IPO suspended	11/20/20	Financial stability	Chinese fintech company Ant Group's IPO was halted by the regulator one day before the intended IPO date.
Draft rules for anti-competition in Internet sector	11/20/20	Anti-monopoly	The State Administration for Market Regulation (SAMR) issued draft rules to stop anti-competitive practices in the internet sector.
Anti-trust investigation of Alibaba	12/20/20	Anti-monopoly	SAMR opened an investigation into Alibaba over monopolistic practices.
Alibaba is fined \$2.8B	4/21/21	Anti-monopoly	Chinese regulators fined Alibaba \$2.8B as part of the anti-monopoly investigation citing Alibaba's abuse of its market dominance.
Anti-trust investigation of Meituan	4/21/21	Anti-monopoly	SAMR opens second ever anti-trust investigation into food delivery company Meituan.
Crackdown on foreign automakers	5/26/21	National data security	Regulators passed provisions requiring data from foreign automakers to be stored in China. In response to new regulation, Tesla opened data center in China.
Didi Global crackdown	7/21/21	Anti-monopoly National data security	An anti-trust probe into Didi started late June. A full crackdown ensued after the company listed on the NASDAQ despite pushback from Chinese regulators.
Cybersecurity Probe	7/21/21	National data security	After Didi, China launches cybersecurity probe into more US-listed firms. This extends to an announcement that platforms with more than a million users to submit to cybersecurity reviews before overseas IPOs.
Increased scrutiny of foreign listings	7/21/21	National data security	The VIE structure is called into question with companies now officially required to seek permission prior to listing overseas.
Education crackdown	7/21/21	Common prosperity	China banned after-school education institutions that teach core school subjects from making profits, raising capital, or going public.
Tencent Music fine	7/21/21	Anti-monopoly	SAMR fined the company and said it would not be permitted to enter into exclusive music copyright agreements in China anymore.
Regulation of the food delivery sector	7/21/21	Common prosperity	Guidelines outlining various rules companies had to follow to improve workers' wellbeing were released.
Online gaming restriction	8/21/21	Common prosperity	Under 18s limited to an hour of play on Friday, weekends and public holidays
Personal Information Protection Law (the "PIPL")	8/21/21	National data security	PIPL lays out a comprehensive set of rules around data collection for Chinese tech firms, like those of Europe's GDPR
Breakup of Alipay	9/17/21	Anti-monopoly	Chinese regulators announced plans to separate Alipay, an online loan app owned by Jack Ma's Ant Group, from its parent company to create separate app.
Tightening on casino regulations	9/21/21	Common Prosperity	Tightening of restrictions on operators, including appointing government representatives to "supervise" companies in the world's biggest gaming hub
Meituan fined \$530mn	10/8/21	Anti-monopoly	Chinese regulators fined Meituan 3.44 billion yuan (\$534 million) for violating the country's anti-monopoly regulation.
Creation of new stock exchange	11/15/21	Financial stability	New stock exchange established in Beijing to encourage citizens to funnel savings into investment in local companies.
Establishment of Anti-Monopoly Bureau	11/18/21	Anti-monopoly	China launches new Anti-Monopoly bureau in Beijing to "further crackdown on market monopolies which stifle free competition."
Limiting central bank independence	12/8/21	Financial stability	Chinese regulators forced the People's Bank of China (PBOC) to ease bank's reserve requirements to make more cash available for lending.
Increased scrutiny of foreign listings	12/27/21	National data security	Regulators announced that Chinese domestic companies must gain approval before listing overseas if they operate in sectors deemed "off limits" to foreign investor.

The ferocity of this campaign has provided red meat for China bears predicting the end of Beijing's years of meteoric growth. And, of course, they may be right. As Stein's law states: a trend that cannot continue forever won't. Nonetheless, those who have followed this debate will remember how often the impending crash of China's economic miracle has been predicted over the past three decades. After the brutal crackdown on protestors in Tiananmen Square in 1989, *The Economist* informed its readers that the end was nigh: "the bell tolls for Deng." In 2003, a celebrated book by Gordon Chang entitled *The Coming Collapse of China* forecasted that the "People's Republic of China would fall" by 2011. And China scholar David Shambaugh has earned the nickname "Dr. Doom" for his forecast of an imminent "Chinese crackup" —a claim he has repeated annually for almost two decades.

Many observers, especially those quoted most frequently in the elite American press, believe that the end of China's economic miracle growth has finally arrived. They are thus betting against China's growing at twice the rate of the U.S. in the decade ahead. In explaining their judgment, most begin by highlighting new risks caused by the government's recent overreach into the private sector. Autocratic paranoia risks strangling the golden geese that have long fueled economic growth. Xi's crackdown on entrepreneurs like Jack Ma of Alibaba or Zhang Yiming of ByteDance (the parent company of TikTok) and tightening of oversight of web-based services like Ant and Didi have dampened the "animal spirits" of entrepreneurs and innovators that Keynes identified as a major driver of growth. The campaign against big tech erased more than \$1.5 trillion from the value of Chinese stocks in the past year and spurred backdoor capital flight. 121

^{17 &}quot;The bell tolls for Deng," The Economist, April 22, 1989.

¹¹⁸ Gordan Chang, The Coming Collapose of China, Arrow, 2003.

¹¹⁹ David Shambaugh, "The Coming Chinese Crackup," Wall Street Journal, March 6, 2015, https://www.wsj.com/articles/the-coming-chinese-crack-up-1425659198; lan Johnson, "Q. and A.: David Shambaugh on 'China's Future'" New York Times, May 30, 2016, https://www.nytimes.com/2016/05/31/world/asia/china-future-david-shambaugh.html.

[&]quot;Techlash with Chinese characteristics: China seems intent on decoupling its companies from Western markets," The Economist, July 10, 2021, https://www.economist.com/business/2021/07/10/china-seems-intent-on-decoupling-its-companies-from-western-markets.

¹²¹ Indeed, China's balance of payments sheet suggests that backdoor capital outflows have worsened despite tightened capital controls. See: Nathaniel Taplin, "'Back Door' Capital Outflows Should Worry Beijing," Wall Street Journal, October 14, 2019, https://www.wsj.com/articles/back-door-capital-outflows-should-worry-beijing-11571051723;

The "no" sayers also emphasize the three structural Ds at the top of Vice Premier Liu He's list of "17 insurmountable challenges:" demographics, debt, and serious damage to the environment. With a population that is peaking and aging, as the cliche goes: China could grow old before it gets rich. On current trends, its workforce could shrink by 200 million by 2035. 122 Over the decade and a half since the great financial crisis, China's total debt (both government and private) has doubled from 140% of GDP to 280%. 123 The ongoing collapse of Evergrande is just the tip of the iceberg of a property bubble. And China's single-minded focus on economic growth without much attention to externalities has left deep scars on the environment.

In addition to this canonical list, China's economy faces additional potential headwinds from growing hostility from the U.S. and other countries that could impact their willingness to depend on China for products or to invest in its future growth. According to the chief China economist at the world's largest wealth manager—UBS—the "biggest risk to China's outlook in the next few years" comes from "rising geopolitical tensions, especially the worsening U.S.-China relationship." Trade wars could result in selective decoupling from China, reducing opportunities for technology transfer, limiting Chinese firms' investment options, and slowing the flow of capital into China. UBS estimates that decoupling in the technology sector alone could lower Chinese growth by as much as 0.5% per year. 124

In sum: there are many sound reasons for concluding that China's economy will not grow over the next decade at a rate twice that of the U.S.

¹²² David Dollar, "How domestic economic reforms in China can ease tensions between Washington and Beijing," Brookings, December 15, 2020, <a href="https://www.brookings.edu/blog/order-from-chaos/2020/12/15/how-domestic-economic-reforms-in-china-can-ease-tensions-between-washington-and-beijing;" Fertility rate, total (births per woman) - China," The World Bank, Accessed July 16, 2021, https://data.worldbank.org/indicator/SP.DYN.TFRT. IN?locations=CN.; https://hbr.org/2019/09/can-china-avoid-a-growth-crisis

Michael Pettis, "Debt, not demographics, will determine the future of China's economy," Fortune, June 17, 2021, https://fortune.com/2021/06/17/china-census-population-change-debt-economy/; Katie Holliday, "China's debt soars to 250% of GDP," CNBC, July 21, 2014, https://www.cnbc.com/2014/07/21/chinas-debt-to-gdp-ratio-breaks-250-of-gdp.html.;; "China's debt is 250% of GDP and 'could be fatal', says government expert," The Guardian, June 16, 2016. Responses to the pandemic will likely have shifted this proportion in China's favor. Emre Tiftik, Paul Della Guardia, Jadranka Poljak, and Katherine Standbridge, "IIF Weekly Insight Surging Global Debt: What's Owed to China?" Institute of International Finance, May 14, 2020, https://www.iif.com/Portals/O/Files/content/1 200514%20Weekly%20Insight.pdf.

¹²⁴ Tao Wang, Ning Zhang, William Deng, Jennifer Zhong, Aaron Luo, Katharine Jiang, "China Economic Perspectives: The Case for China," UBS, August 31, 2020.

On the other hand, the majority of those who cannot avoid making bets about China's economic future are still answering "yes" to our question. They expect that over the 2020s, China will continue growing at more than twice the rate of the U.S. The first factor they point to is that to win this bet, China only has to run twice as fast as the U.S. No one expects the U.S. economy to grow at more than 2% annually (once the 3.5% decline caused by the COVID pandemic in 2020 and subsequent recovery in 2021 and 2022 are taken into account). The Congressional Budget Office projects U.S. GDP to grow at an average of 1.8% per year from 2021-2031, while the IMF expects U.S. GDP to grow at no more than 1.7% per year after 2023. In contrast, the IMF, CEBR, and other economic forecasters expect China to average 4.5–5% growth between now and 2030. 126

Second, while China faces daunting challenges today, it faced daunting challenges a decade ago, and a decade before that. Its track record in "surmounting the insurmountable," as some Chinese put it, is hard to deny. Moreover, the team that China's government has addressing these challenges has analyzed them in greater detail and with more insight than any Western expert we have read. While China's "zero tolerance" strategy for containing the COVID pandemic is a favorite target amongst Western commentators, the Chinese remind critics that only one major economy in the world escaped this plague without a single year of negative economic growth. Who managed the coronavirus pandemic in 2020 with positive GDP growth and a per capita death rate 1/800th that of the of the U.S., as the rest of the world's major economies fell into recessions, they ask. 127 The competence of Xi's team, on the one hand, and the instruments their authoritarian government has available for addressing them, on the other, gives China more degrees of freedom to meet challenges than most other governments.¹²⁸ For example, when the air in Beijing became a serious health risk, the Chinese government simply

[&]quot;CBO Releases New 10-Year Economic Projections," February 2, 2021. Committee for a Responsible Budget. https://www.crfb.org/blogs/cbo-releases-new-10-year-economic-projections

¹²⁶ Chosun Ilbo, "China's Economy Could Overtake US Economy by 2030." Center for Economics and Business Research, January 5, 2022. https://cebr.com/reports/chosun-ilbo-chinas-economy-could-overtake-u-s-economy-by-2030/

¹²⁷ Gavin Yamey, "U.S. Resposne to COVID-19 is worse than China's. 100 times worse." Times, June 10, 2020. https://time.com/5850680/u-s-response-covid-19-worse-than-chinas/. While China has officially reported fewer than 5,000 COVID deaths, other organizations estimate China's death toll to be much higher. The Economist has reported that China's excessive deaths during the COVID-19 pandemic range near 500,000. "The pandemic's true death toll," The Economist, https://www.economist.com/graphic-detail/coronavirus-excess-deaths-estimates

¹²⁸ Andrew J. Nathan, "Capsule Review: China: The Bubble That Never Pops," Foreign Affairs, November/December 2020, https://www.foreignaffairs.com/reviews/capsule-review/2020-10-13/china-bubble-never-pops.

banned burning coal in factories and homes in the Beijing district. As viewers of the February Beijing Winter Olympics saw, the sky over Beijing was blue. To address a worker shortage caused by its earlier one-child policy, the government is likely to extend its retirement age from 60 to 65.

Third, optimists about China's future economic prospects point to China's success in strengthening its position as the most critical link in vital global supply chains. Despite the rhetoric about decoupling, foreign economies have become more dependent on China during the coronavirus pandemic, not less. China's trade surplus with the world hit a record \$675 billion in 2021, a 60% increase from pre-pandemic levels in 2019. As discussed above, China is now the world's largest manufacturer and exporter of scores of essential goods, including 90% of refined rare earth minerals, 80% of solar panels, 50% of computers, and 45% of electric vehicles. Despite China's worsening geopolitical relations with other major nations, fear of economic consequences will, they believe, deter most companies and countries from joining any serious effort to constrain China's economy.

Finally, those betting "yes" say: follow the "smart money." Over the past several years, including 2021, the world's most successful technology, manufacturing, and investment firms have doubled down on their bets on China—despite worsening U.S.–China geopolitical relations. China's middle class currently numbers 400 million and is expected to grow by an additional 400 million by 2035. This will unleash a wave of consumer spending that will make China not only most companies' preferred location for production, but also their largest consumers' market. In 2021, nearly half of the one million EVs produced by Tesla

[&]quot;China's Trade Surplus Hit a Record \$676 Billion in 2021," Bloomberg, January 13, 2022. https://www.bloomberg.com/news/articles/2022-01-14/china-posts-record-trade-surplus-in-2021-on-soaring-exports

Orange Wang, "China's rare earth exports surge past pre-coronavirus levels, despite Western push to diversify supply," South China Morning Post. July 21, 2021. https://www.scmp.com/economy/china-economy/article/3141844/chinas-rare-earth-exports-surge-past-pre-coronavirus-levels Joan Fitzgerald, "The Case for Taking Back Solar." The American Prospect, March 24, 2021. https://prospect.org/environment/climate-of-opportunity/case-for-taking-back-solar/ "Computers," Observatory of Economic Complexity, https://occ.world/en/profile/hs92/computers?redirect=true. Stephen Edelstein, "Global EV sales more than doubled in 2021 vs 2020." Green Car Reports. February 10, 2022. https://www.greencarreports.com/news/1134999_global-ev-sales-more-than-doubled-in-2021-vs-2020-tripled-vs-2019

^{131 &}quot;Forecast 2025: China Adjusts Course," Macro Polo, October 2020, https://macropolo.org/analysis/forecast-china-2025-adjusts-course/

were made in its Shanghai factory and sold to Chinese buyers. ¹³² In Elon Musk's words: "China in the long term will be our biggest market, both where we make the most number of vehicles and where we have the most number of customers." ¹³³ This view is shared by the CEO of the world's most valuable company by market share, who says directly: "We are investing in China not just for next quarter or the quarter after, but for the decades ahead...China will be Apple's top market in the world." ¹³⁴ The world's largest coffee chain—Starbucks—is now opening a new store in China every twelve hours. ¹³⁵ And the world's largest asset manager with \$10 trillion of assets under management (BlackRock), the largest hedge fund in the world (Bridgewater), and leading international banks including Goldman Sachs and JPMorgan have all also increased their stake in China throughout the last two years.

¹³² Of the 936 thousand Teslas sold in 2021, 321 thousand were sold to Chinese consumers. Ben German. "Taking stock of the global electric vehicle race." Axios. February 2, 2022. https://www.axios.com/taking-stock-global-ev-race-c2a2df42-3453-4fcf-ae30-964499371ca4.html

¹³³ Matt Grossman, "Tesla Says Its In-Car Cameras Aren't Activated in China," WSJ, April 8, 2021, https://www.wsj.com/articles/tesla-says-its-car-cameras-arent-activated-in-china-11617804602.

Taylor Soper, "Apple CEO Tim Cook: China will be our top worldwide market, and not just for sales," GeekWire. October 27, 2015. https://www.geekwire.com/2015/apple-ceo-tim-cook-china-will-be-our-top-worldwide-market-and-not-just-for-sales/

¹³⁵ Wang Zhuoqiong, "Starbucks China aims for 6,000 stores by 2022," China Daily. July 29, 2021. https://www.chinadaily.com.cn/a/202107/29/WS6102a77fa310efa1bd6655a3.html

AMERICA'S TOP CEOS ARE ALL BETTING ON CHINA

	<u>CEO</u>	<u>Company</u>	<u>Views on China</u>
1	Elon Musk	Tesla	"China in the long term will be Tesla's biggest market, both where we make the most number of vehicles and where we have the most number of customers."
	Tim Cook	Apple	"We are investing in China not just for next quarter or the quarter after, but for the decades aheadOur view is that China will be Apple's top market in the world.
	Larry Fink	BlackRock	"China will be one of the biggest opportunities for BlackRock over the long term, both for asset managers and investors, despite the uncertainty and decoupling of global systems we're seeing today."
	Ray Dalio	Bridgewater	"Our objective is to be in China both economically and investment-wise. It's a part of the world that one can't neglect and not only because of the opportunities it provides but you lose the excitement if you're not there."
	Jamie Dimon	J.P. Morgan	China is "a critical market for many of our domestic and global clients. We will continue to invest in and fully support our business in the country."
	Howard Schultz (former CEO)	Starbucks	"Starbucks and myself remain very bullish on the Chinese economy, and specifically the buying power of the Chinese consumerI wouldn't be surprised if one day we have more stores in China than we do in the U.S."
n gr	Doug McMillan	Walmart	"China remains a strategic market for our future It's already a priority market for us. This country has so much potential."
	Robert Scaringe	Rivian	"We wouldn't be serious about building a car company if we weren't thinking about China as an important market long term."
	Christiano Amon	Qualcomm	"We will go big in China."
	Jensen Huang	Nvidia	"There is nothing that is slowing down China's development of technology. Nothing. They don't need any more inspirations China is full-steam ahead and we all have to be full-steam ahead."

In sum, the consensus among major forecasters is that after the 3.4% decline caused by the pandemic in 2020 and recovery to 5.7% in 2021 and 3.9% in 2022, U.S. economic growth will average less than 2% thereafter. In comparison, Chinese growth will decline from the 8.1% it saw in 2021 to 5.0% in 2022 and 4.5% for the remainder of the decade. If these forecasts prove to be correct, by the end of the decade, even when measured by the traditional market exchange rate, press headlines will be forced to declare: China is No 1. In 2021 and 3.9% in 2021 and 3.9% in 2022 and 4.5% for the remainder of the decade, even when measured by the traditional market exchange rate, press headlines will be forced to declare: China is No 1. In 2021 and 3.9% in 2022 and 4.5% for the remainder of the decade, even when measured by the traditional market exchange rate, press headlines will be forced to declare: China is No 1. In 2021 and 3.9% in 2022 and 4.5% for the remainder of the decade, even when measured by the traditional market exchange rate, press headlines will be forced to declare: China is No 1. In 2021 and 3.9% in 2022 and 4.5% for the remainder of the decade, even when measured by the traditional market exchange rate, press headlines will be forced to declare: China is No 1. In 2021 and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of the decade and 3.9% in 2022 and 4.5% for the remainder of 4.5% in 20

Readers can consider the evidence and make their own bets. For the past six decades, the world's most successful investor has made fortunes for his shareholders on the basis of "Buffet's bet." As Warren Buffett told his Berkshire Hathaway shareholders in a 2021 letter: "In its brief 232 years of existence...there has been no incubator for unleashing human potential like America. Despite some severe interruptions, our country's economic progress has been breathtaking... Our unwavering conclusion: Never bet against America." 138

^{136 2022} GDP growth estimates are calculated by averaging IMF and World Bank estimates. The Congressional Budget Office projects U.S. GDP to grow at an average of 1.8% per year from 2021-2031, while the IMF expects U.S. GDP to grow at no more than 1.7% per year after 2023.

Common estimates range from 2028-2032. "World Economic League Table 2021," CEBR, December 2020, https://cebr.com/service/macroeconomic-forecasting/.; Adrian Francisco Veral, Jeevan Ravindran, "China's economy could double in size by 2035, according to the Bank of America," Business Insider, March 3, 2021, https://www.businessinsider.com/china-us-economy-contraction-gdp-purchasing-power-imf-jinping-growth-2021-2.; Naomi Xu Elegant, "China's 2020 GDP means it will overtake U.S. as world's No. 1 economy sooner than expected," Fortune, January 18, 2021, https://fortune.com/2021/01/18/chinas-2020-gdp-world-no-1-economy-us/; "The World in 2050," PWC, February 2017, httml://mww.pecc.com/gx/en/research-insights/economy/the-world-in-2050.
https://www.oecd.org/economy/outlook/OECD-economic-outlook-general-assessment-macroeconomic-situation-may-2021.pdf; https://www.feberalreserve.gov/monetarypolicy/files/fomcprojtabl20210317.pdf

¹³⁸ Warren Buffet, "Berkshire Hathaway Inc." CNBC, February 27, 2021, https://fm.cnbc.com/applications/cnbc.com/resources/editorialfiles/2021/02/27/2020ltr.pdf.

Authors

Graham Allison

Graham Allison is the Douglas Dillon Professor of Government at the Harvard Kennedy School, where he was the founding dean. He is a former U.S. assistant defense secretary, former director of Harvard's Belfer Center for Science and International Affairs, and the author most recently of the international bestseller *Destined for War: Can America and China Escape Thucydides's Trap?*

Nathalie Kiersznowski

Nathalie Kiersznowski is a Research Assistant at the Harvard Kennedy School's Belfer Center for Science and International Affairs, where she focuses on geoeconomics, renewable energy, and U.S.-China relations. Prior to joining the Belfer Center, Kiersznowski worked at the World Bank, the Department of Defense, and in frontier market investing.

Charlotte Fitzek

Charlotte Fitzek is a former Research Assistant at the Belfer Center for Science and International Affairs, where she worked on the Avoiding Great Power War Project. Her work focused on economic affairs and Korean Peninsula security.

Acknowledgments

Larry Summers (Harvard University)

Larry Summers is the Charles W. Eliot University Professor at Harvard University, the Weil Director of the Mossavar-Rahmani Center for Business & Government at Harvard's Kennedy School, and President Emeritus at Harvard University. Professor Summers served as the 71st Secretary of the Treasury for President Clinton and the Director of the National Economic Council for President Obama.

Martin Wolf (Financial Times)

Martin Wolf is the chief economics commentator at the *Financial Times*. He is the author of many highly regarded books, including *Why Globalization Works* and *Fixing Global Finance*, and was awarded a Commander of the British Empire designation in 2000 for his service to financial journalism.

Esther Tetruashvily (Georgetown Law School)

Esther Tetruashvily is a former Economic Affairs Officer at the U.S. Embassy in Beijing. She is currently a J.D. candidate at Georgetown Law School.

Miles Neumann (Insight Partners)

Miles Neumann is an investor at Insight Partners and a former Research Assistant at the Belfer Center for Science and International Affairs.



Avoiding Great Power War Project

Belfer Center for Science and International Affairs Harvard Kennedy School 79 JFK Street Cambridge, MA 02138

www.belfercenter.org