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Competing With China: A Strategic Framework

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China will likely be the biggest business disruptor of the 2020s, but the discussion about how to respond has yet to take shape. A strategic framework should rebalance the global supply chains, bolster competitiveness, adjust to China's market size, and solidify the West's appeal.

KEY TAKEAWAYS

- China has long sought to become self-reliant in semiconductors, software, telecom equipment, mainframes, and databases—and over the last few years it has made great progress toward that goal.
- Its disruptive economic impact stems from its unique position as the world's largest market for many products, the leading supplier of many more, the toughest competitor, and the West's chief geopolitical rival.
- Because of its multidimensional presence, China has already exceeded the economic impact of earlier rivals the West has faced, and going forward it will be much more difficult to counter.
- The COVID-19 pandemic and recent actions by the Chinese government have finally coalesced long-standing Western concerns about China, focusing on self-sufficiency, national security, trade deficits, business ethics, and human rights.
- Chinese companies operating in the West and Western companies operating in China both are likely to come under closer government and public scrutiny in the near term.
- Although tensions could defuse, U.S.-China relations increasingly look like a win-lose economic struggle that will test which nation is stronger and which is likely to prevail in specific industries.
- The 2020s will likely be the decisive decade. To succeed, the United States and its allies should focus on rebalancing global supply chains, bolstering competitiveness, adjusting to China's market size, and solidifying the West's appeal.

INTRODUCTION

COVID-19 has been the great disruption of 2020, and climate change is expected to spawn some of the biggest societal disruptions of the 21st century, but China looms as the single most significant global business disruptor over the full course of the 2020s—even more than artificial intelligence (AI) and everything else going on in the digital world. A rising China is now the leading edge of change.

Although recent events have everyone talking about China, its momentum has actually been increasing steadily for more than two decades. Indeed, just about everything happening today—except for COVID-19—was anticipated in the Leading Edge Forum's 2015 "Clash of the Titans" report.[1] While that report detailed the power and dynamism emerging from within China, its focus is on the how Western governments should respond. It's a discussion that is long overdue—and having it amidst a global pandemic and a U.S. presidential campaign has greatly raised the stakes, emotions, and volatility.

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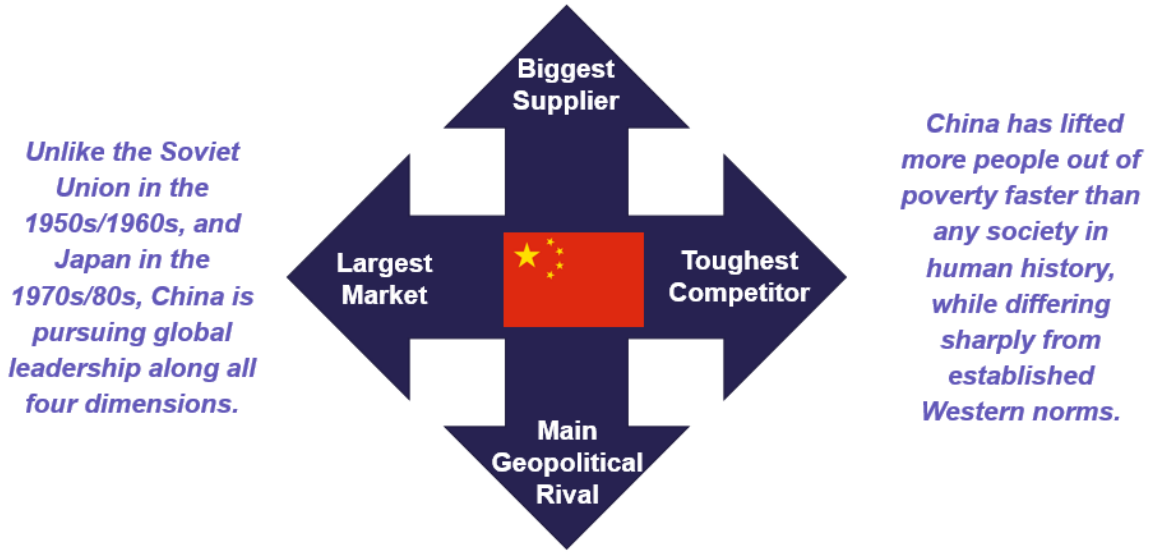
Of course, many Western companies have been dealing with China for decades, some much more successfully than others. But COVID-19 and recent Chinese government behavior have changed the discussion in two main ways. On the one hand, it has coalesced long-standing Western concerns about self-sufficiency, national security, product safety, trade deficits, business ethics, and human rights. But it has also forced people all around the world to ask themselves why China—and so much of Asia—has managed the pandemic so much better than most of the West.[2]

Looking ahead, we expect that both Chinese companies operating in the West and Western companies operating in China will come under closer government and public scrutiny. While much of today's fast-changing debate is focused on China's competition with the United States, we believe this paper's findings, recommendations, self-assessments, and decision-making frameworks will prove relevant for many years to come to just about any large organization in any nation affected by China's growing presence.

THIS ISN'T A RERUN OF THE COMPETITION WITH THE USSR AND JAPAN

One reason so many Americans long underestimated the challenge from China is having heard similar declinist warnings before. In the 1950s and 1960s, many experts predicted Soviet-style five-year plans would prove superior to the more laissez-faire U.S. approach—albeit one supported by defense and space spending. Likewise, in the 1970s and 1980s, there was a widely held view that—with its long-term planning, close business/government cooperation, disciplined workers, and giant keiretsu ecosystems—"Japan Inc." had developed a superior form of capitalism. Of course, both of these threats proved to be greatly exaggerated, although Japan's economic performance and competitiveness has been much stronger than the conventional wisdom suggests.

Figure 1: China's global leadership challenge isn't a rerun of the USSR or Japan



The four key dimensions to national economic competition are being a market, a competitor, a supplier, and a geopolitical rival. As depicted in figure 1, China is pursuing leadership in all four dimensions. China is already the world's *largest market* for cars, electronics, smartphones, steel, and many other products. It's by far the world's *biggest supplier*, accounting for roughly 25 percent of global manufacturing output. It's highly competitive in an increasing range of industries. Perhaps most fundamentally, its growing economic power and extraordinary success lifting its people out of poverty is helping China gain traction as an alternative economic and societal model, one that differs sharply from established western norms. It's this strategic and relentless pursuit along all four paths that makes China different.

In its ambitions and achievements, China has already exceeded the economic impact of earlier rivals, and its multidimensional presence is much more difficult to directly counter.

In contrast, the USSR was a potent military and ideological rival, but never a major market or global business supplier/competitor. Similarly, Japan became a very tough competitor and an essential supplier in many industries, but it was never an essential market for most Western firms (in part because Japan often excluded foreign firms), and certainly was not a military or societal rival. Neither the USSR nor Japan was ever an across-the-board challenger, nor anywhere near as deeply integrated with the West economically, and this gave the United States and other nations considerably more room to maneuver. For example, it was relatively easy for the United States to impose broad and strict controls on technology exports to the USSR, usually with the cooperation of our allies. Doing this with China—although not inconceivable—would be much more costly, controversial, and, as we see now, difficult to get our allies such as Germany to cooperate. Likewise, the United States could and did use Japan's dependency on the U.S. security umbrella to wrest important concessions from Japan in semiconductors and producing more cars in the United States, and also in currency valuation adjustments.

In its ambitions and achievements, China has already exceeded the economic impact of these two earlier rivals, and its multidimensional presence is much more difficult to directly counter. However, the USSR and Japan analogies are relevant in one way: Both nations' achievements eventually woke up a then complacent United States, resulting in, for example, the Apollo lunar missions of the 1960s and a slew of important competitiveness and technology legislation in the 1980s, including the establishment of the R&D tax credit and the 1987 formation of SEMATECH to support the U.S. semiconductor industry.[3] Later in this paper, our recommended path toward a similar renewal is outlined. Perhaps COVID-19 and China will prove to be another Sputnik moment, but this is by no means assured.

ALTHOUGH THERE IS A LOT OF CLAMOR FOR ACTION, BUSINESS PRIORITIES OFTEN DIFFER SHARPLY

As shown in figure 2, the multidimensional nature of the Chinese challenge has historically made it difficult for the West to develop a strong, coordinated response. Depending on how an organization views China, that organization's priorities—summarized by the fictitious quotes in the figure—may be diametrically opposed, as explained further below.

Figure 2: Western organizations have conflicting China policy priorities

- **If China is seen mostly as a major market.** For companies such as Apple, Boeing, Nike, GM, Intel, Hollywood studios, McDonalds, the National Basketball Association (NBA), Proctor and Gamble, Starbucks, Qualcomm, Walmart, and many others, China is often their largest non-U.S. market. Building this type of local trust and presence has often been difficult, and has taken many years. Having seen how the NBA, Marriot, Mercedes-Benz, and many others have chosen to yield to Chinese pressure over seemingly minor statements and advertisements, companies with significant revenues in China want, at almost all costs, to avoid rocking the boat, and are mostly silent regarding the most pressing Chinese controversies.[4] For some companies, such as Microsoft, China is a big market in terms of product use, but not sales, because of

counterfeiting and piracy.[5] And walking away from this market would not only reduce these companies' sales, it would cede market share to either Chinese or other non-U.S. companies, hurting U.S. longer-term economic competitiveness.

- **If China is seen mostly as a major supplier.** Walmart, Target, Dell, HP, Nike, the major pharmaceutical companies, and many others that rely on Chinese manufacturing generally support reduced dependency in the long run, but in the short term, need to keep their supply chains running. For some companies such as Apple, China is a major market and a supplier. More uneasily, these same U.S. firms are inseparable from the $400 billion per year U.S./China trade deficit. For the most part, the deficit doesn't come from American consumers buying products from Chinese companies. Rather, it mostly comes from American consumers buying products from American companies that source them from China. If these products were sourced from elsewhere—or made domestically—much of the China trade deficit would disappear.

These two groups of companies are highly integrated with the Chinese economy and thus tend to prefer continuity and integration as the best way to serve their short-term interests—and in many cases their long-term interests. They also know that if they say or do the "wrong" thing, China is entirely willing to, and capable of, damaging their hard-won business gains and exploiting their supply chain vulnerabilities. It's very much in their interest to keep things as calm as they can. While they are generally not big fans of rapid "decoupling," many do support a tougher line on China—particularly in areas such as intellectual property theft and domestic subsidies—as they increasingly see that China is seeking to challenge their markets not only in China, but elsewhere. Indeed, many understand that, absent serious policy changes in China and the West, their long-term market share in China and globally is under threat from Chinese competition. But while for some industries such as solar panels, telecom equipment, and high-speed rail this has already happened, for most others that scenario is in the future.

At the same time, these companies are increasingly the target of domestic China hawks, such as White House advisor Peter Navarro, who regularly attacks U.S. firms, not only for supplying from China, but even selling to China.[6]

The reluctance of these firms to criticize China stands in sharp contrast to organizations that see China as a direct, or even existential, competitor. Consider these two perspectives:

- **If China is seen mostly as a major business competitor.** Companies in the information technology (IT), telecom equipment, steel, solar panel, toy, textile, and other industries are much more willing to state publicly that Chinese competition is "unfair" in one way or another: intellectual property (IP) theft, government subsidies, currency manipulation, suppressed wages, protected markets, and other violations of World Trade Organization (WTO) rules. Smaller, non-multinationals are also often in this camp. Not surprisingly, these companies often ask government officials to "help protect jobs." Many U.S. firms—especially in autos and semiconductors—once complained about Japan in similar ways, with considerable effect. As China becomes increasingly competitive in more industries—especially the ones targeted by "Made in China 2025"—we will likely see more companies shift over to this camp.

- **If China is seen mostly as a major military or geopolitical rival.** China is now a major military power within east Asia, and American dominance in the region during the 2020s can no longer be taken for granted. Similarly, through its Belt and Road initiative, international development banks, engagement in global institutions such as the International Monetary Fund (IMF) and World Health Organization (WHO), and other efforts, China's influence in Asia, Africa, Iran, Russia, Southern and Eastern Europe, and Latin America has risen steadily. Western leaders coming from this military and geopolitical perspective are also willing to complain about China, and their voices, especially national defense voices, are typically heard even more than the business ones. When the U.S. Department of Defense says that self-sufficiency in advanced technology manufacturing is inseparable from national security, it's hard to ignore.

(One could argue that the preceding points are just two different forms of competition: one business, one military/political. This is true. But they are mostly treated separately in this paper because they have very different dynamics—and national security interests tend to outweigh "mere" business concerns.)

In contrast to firms that see China mostly as a market or a supplier, those that see China as primarily a competitor are often willing to confront China and support decoupling. These fundamental differences between the integration and decoupling camps are compounded by the fact that many of America's most well-known companies—such as Apple, Walmart, and Nike—see China as all of the above (i.e., as a major market, a major supplier, and a major competitor). In such "coopetition" situations, effective short-term government interventions are even more difficult to develop, as a company's interest in one area can be sharply at odds with other parts of its own organization.

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In sum, the need to compete with China along all four of the dimensions in figure 2 has historically put U.S. (and other Western) policymakers in a bit of a box. It has often been difficult to do anything that directly helps one U.S. firm or industry without adversely affecting another—and it often seems that various trade policies and proposals might hurt some American firms and consumers at least as much as they do Chinese ones, while helping other American firms and workers. The recent decision to suspend Hong Kong's special status is a good example of an action that cuts deeply both ways.[7] (In contrast, domestic industrial and technology policies generally do not suffer from this drawback, which is why there is increasing U.S. bipartisan support for them.)[8]

Perhaps most vexingly for the China policy hawks—and as shown in figure 3—as of today, there are many more industry sectors in the Continuity/Integration group than the Confrontation/Decoupling category, a fundamental reality insufficiently recognized in most government and media discussions, but one that has tended, until now, to help the quiet voices of continuity prevail over the louder voices of change. Put more harshly, short-term business

interests have outweighed the West's long-term strategic interests. Put even more harshly, the West transferred the technologies, trained the engineers and students, and set up the factories on which they are now dependent—usually with considerable Chinese pressure.[9]

Figure 3: Overall, there is more integration than competition today

		Is China Often a Major Market?	Is China Often a Major Supplier?	Is China Often a Major Competitor?
1.	Banking and capital markets	No	No	No
2.	Life, P&C, and health insurance	No	No	No
3.	Health care, pharmaceuticals, and life sciences	Yes	Yes	No
4.	Retail, wholesale, and distribution	Yes	Yes	No
5.	Discrete and process manufacturing	Yes	Yes	Yes
6.	Energy, transportation, and utilities	Yes	Yes	No
7.	Travel, entertainment, and hospitality	Yes	No	No
8.	Media, publishing, and information services	Yes	No	No
9.	Professional services --	Yes	No	No
10.	Food and Agriculture	Yes	No	No
11.	IT hardware, software, and Internet services	Yes	Yes	Yes
12.	Defense and defense contractors	No	No	Yes
13.	University education	Yes	No	No
14.	Government	No	No	Yes
	Totals	**Yes = 10**	**Yes = 5**	**Yes = 4**
		Favors Continuity		**Favors Change**

MORE INDUSTRIES STILL PREFER CONTINUITY THAN SEEK CHANGE

Figure 3 broadly summarizes the balance between industries that tend to prefer continuity and integration and those that are more willing to confront the status quo. While placing huge and diverse industry sectors into binary yes and no categories invites a wide range of critiques and exceptions, the groupings seem solid enough for our purposes. The basic message is that a large majority of the industries shown (10) see China as a major market, and at least 2 others (banking and capital markets and insurance) are working hard to make stronger inroads into the Chinese market. In addition, in 5 of these 10 sectors, China is also a major supplier.[10] Consider the scale of U.S. business operating inside China today:

- Starbucks has 4,100 shops in China, McDonalds 2,300 restaurants, and Walmart 430 stores.
- Apple's China revenues are over $40 billion, Intel's are $20 Billion, and Nike's $6 billion, and China is the NBA's largest international market.
- GM makes 3 million cars a year in China; China is over 20 percent of Boeing's commercial revenue.

One could easily list more Western firms that are doing well in China, and are understandably not always excited about decoupling. In contrast, only four industry sectors—Traditional Manufacturing, IT, Defense, and national governments—currently see China as primarily a competitor. The first three of these involve the manufacturing of products, which explains why

manufacturing has always dominated the China policy debate.[11] But even here, the tensions and conflicts caused by China's multidimensional presence have often led to policy paralysis. For example, protecting U.S. steel makers from unfair Chinese competition raises the steel prices paid by U.S. makers of cars, tractors, and washing machines, thereby making these manufacturers less competitive globally. This is why many economists and trade-oriented think tanks have long advised doing little or nothing in such situations, and letting the market sort itself out, even when China's market advantages stemmed from non-market forces. This thinking has now fallen out of favor, in part as the scope of China's intervention has grown, and it has become clear China is not moving toward the Western model of free markets and democracy.

THE RECENT ACTIONS AGAINST HUAWEI APPEAR TO BE A GAMECHANGER—FOR BETTER OR WORSE

Until recently, Huawei seemed like it might be a textbook case of the traditional policy paralysis. Using our four-part model, consider these different and conflicting interests:

1. For semiconductor firms such as Intel, Broadcom, and Qualcomm (or a software provider such as Google), Huawei is a major customer.
2. For telecom services providers in many countries, Huawei is a major supplier.
3. For smartphone makers such as Apple and Samsung, computer providers such as Dell, and telecom equipment providers such as Ericsson and Nokia, Huawei is a major competitor.
4. For the United States, the United Kingdom, Australia, and a growing number of other nations, Huawei is seen as a major national security risk. But for many developed and developing nations, China is their most important creditor and/or trading partner.

It's pretty much impossible to enact short-term policies that please all four constituencies, which explains why many government officials have long talked about the challenge from China's technology industry, but taken little action. However, all of this has changed. The U.S. and U.K. administrations have clearly sided with the competitive, national defense, and human rights arguments, essentially embracing more direct confrontation, at least for now.[12] Consider some recent actions:

- July 2018: Sweeping U.S. tariffs are imposed on a wide range of imports from China.
- December 2018: Huawei CFO, Meng Wanzhou, is detained in Canada at the request of the United States.
- May 2019: The United States labels Huawei a national security threat, thereby putting limits on U.S. businesses working with Huawei, including both U.S. chipmakers and Google with its Android software and apps.
- May 2020: The United States bans global chipmakers from using U.S.-made equipment when working with Huawei.

- July 2020: The United States ends Hong Kong's Special Status via The Hong Kong Autonomy Act in response to China imposing new national security laws on Hong Kong.
- July 2020: The United Kingdom and Singapore ban Huawei 5G use on national security grounds.
- August 2020: Significant actions are taken against TikTok, WeChat, and key Hong Kong individuals, and the announcement of State Department's "Clean Network" initiative is made.

However one feels about the wisdom of these actions, they have clearly shifted government policies from the continuity to competitive camps. U.S. Attorney General William Barr's July 16 calling out of Apple, Hollywood, and other companies for their self-censorship and other forms of compliance to China is further evidence of this shift.[13] U.S. Secretary of State Mike Pompeo gave an even more hawkish talk on July 23 and has proposed a dramatic and far-reaching Clean Network initiative to limit data interaction with China (an almost impossible task).[14] Both are real signs of systematic policy change, at least within the Trump administration.

Not surprisingly, the Huawei bans have angered China: Imagine if China took similar actions against Apple or Nike. U.S. and U.K. companies operating in China are now hoping they will be spared from what seems an inevitable set of retaliations. On the other hand, China knows perfectly well it has placed many limits on U.S. tech companies operating in China, so it can only complain so much without being hypocritical.[15] Moreover, it is well aware that its "business climate" for foreign firms has suffered, and that it can only go so far in penalizing Western firms without suffering a backlash. Perhaps more importantly, although the U.S. and U.K. sanctions, as well as those of a number of other nations that informally banned Huawei equipment, will clearly hurt Huawei in the short term, they have also served to redouble the company's efforts to become self-sufficient in advanced technologies—including software—with the full backing of the Chinese state and its people, many of whom see Huawei as China's most important technology company.[16]

Although it's certainly possible tensions will defuse, it increasingly looks like a win/lose economic struggle that will test which nation is stronger and which is likely to prevail in specific areas.

The Huawei controversy is an excellent example of how national security—and related politics—often trumps private-sector interests. It also shows how U.S. actions tend to get stronger when Chinese-branded products are involved, as opposed to Chinese-made goods being sold by American firms (as we saw with the ZTE case, and now TikTok and Tencent). Today, China has relatively few well-known brands in the United States. The best-known include Anker, DJI, Haier, Hisense, Lenovo, Huawei, TikTok, ZTE, and some gaming firms. Other than TikTok, none are really household names. But since establishing its own global brands is a major long-term goal for China, the West's increasing ability to challenge Chinese companies directly will be an important leverage point going forward. Consider how the United States and Europe pressured Toyota and other Japanese automakers to make more of their cars in the markets that consume them. The reduced trade deficit and new local jobs greatly reduced long-simmering trade tensions.

While these branding dynamics will take a long time to play out, the Huawei case has suddenly brought U.S./China tensions to a head. Although it's certainly possible that tensions will defuse, it increasingly looks like a win/lose economic struggle that will test which nation is stronger and which is likely to prevail in specific areas, particularly as China targets a whole suite of other advanced technology products the United States is currently strong in, such as semiconductors, drugs, and aerospace. Not surprisingly, there are two conflicting scenarios that get floated: 1) The U.S. decline is well underway, and the Huawei bans are the desperate actions of an angry nation still in denial, and 2) Huawei's 5G leadership is the wake-up call that will spur the United States to respond, as it did with the Soviet Union and Japan. Let's look at both scenarios, starting with the declinists, followed by our recommended revitalization approach.

THE DECLINISTS ARE BACK

Just because experts have periodically predicted the loss of American global leadership since at least the 1960s doesn't mean the same predictions will be wrong this time—and in both Asia and the West, there are now many who predict China will be the dominant power of the 21st century. Looking ahead, 2021 will be the 100th anniversary of the founding the Chinese Communist Party. Expect China to flood the world with its accomplishments: reducing poverty, going to Mars, leadership in AI and clean energy, fighting COVID-19, etc. Although no one knows whether the future will see a dominant China, a revitalized America, the splitting of the world into geopolitical blocks, a simple rebalancing of the current situation, or some other chain of events, our four-part model can be used to quickly define each possibility. Let's start with the potential "declinist scenario."

- **World's largest economy.** China could become not just the largest market in various areas, but by far the largest economy and market in just about every key area. But to do that it would need to keep its rate of gross domestic product (GDP) growth at a robust level and see U.S. growth continue to stagnate.[17] This would give China considerable influence over global economic norms, rules, standards, and allegiances.
- **World's biggest supplier.** Should the world become even more dependent on increasingly advanced Chinese manufacturing and technology, the power shift to the East will be that much greater, especially as China moves up the innovation stack into higher forms of value. Recent problems at U.S. manufacturing giants such as Boeing, GE, HP, and Intel are certainly worrisome.
- **World's toughest competitor.** As we will discuss later, should China surpass Silicon Valley in global technology leadership, the implications would be profound, as IT increasingly underlies virtually every industry sector. And China is seeking advantage in other advanced technology sectors, including clean energy and life sciences.[18]
- **Main geopolitical rival.** Many less-democratic nations tend to support China's strong central government model and national controls over the Internet and related services and media. For example, 53 nations—most in the Middle East and Africa—have announced their support for China's new Hong Kong policies; just 27—mostly in Europe and the Five Eyes nations—have spoken out against it. Should China rival U.S. military power, these divisions could easily harden.

Again, these are not predictions, they are just plausible scenarios. But to give the declinist scenario its full due, we have to acknowledge that there is already a clear pattern of change that, if not unchecked, could have profound implications for the Western world.

Figure 4: Will the United States (and the West) follow the five stages of grief?*

Most readers will have heard of Elisabeth Kübler-Ross's framework that depicts the five stages of grief. Although originally developed to help people understand the changing emotions that often come with human death, the model has since been used to talk about how we cope with a wide range of difficult life experiences. Figure 4 presents the five stages—Denial, Anger, Depression, Bargaining, and Acceptance—through the lens of how the United States sees its competition with China. In many ways, the United Kingdom has already been through this process, being a world leader as recently as the 1930s, and within five decades losing much of its global power and economic competitiveness.[19] Looking at the figure, it's pretty clear the United States has gone through phase 1, and is now well into phase 2:

- **Phase 1: Denial.** When China was admitted to WTO in 2001, many experts predicted that, as it developed, China would become more like the West in terms of the openness and freedoms of its people. They also assured us that just about all global trade was "good," and embracing China would mean the U.S. economy would move up the value chain, as China focused on lower-wage, commodity-based production. Although both views have proved to be wrong, they were neither totally foolish nor naive at the time. Japan, South Korea, and Taiwan all became more democratic and globally integrated as their economies developed, which moved significantly up the value chain to challenge U.S. companies. However, it's been obvious for many years that China is different. Unfortunately, much of the political and thought-leadership class was unwilling to admit this, let alone significantly change course. The still-widespread belief that China's economic success is due principally to cheating, copying, and human rights abuses is another important form of denial.

- **Phase 2: Anger.** Given that serious Western concerns about human rights, censorship, trade policies, and the environment in China have been raised for literally decades, it's hard to avoid the conclusion that it wasn't until COVID-19 that phase 2 actually began. Whether one sees today's anger as entirely justified or mostly a form of distraction or scapegoating, we're clearly in a volatile—even dangerous—period. Frustration, irritation, anxiety, and blame can easily lead to rash actions and miscalculations by all parties. As we have discussed, it's impossible to know how the Anger phase will play out, but as of now, it is surely worsening on both sides, and would likely become uncontrollable if it were ever proven that COVID-19 was indeed some sort of Chinese gain of function or industrial accident that was covered up.

However, just because the West has followed the Kübler-Ross model so far, doesn't mean phases 3, 4, and 5 will necessarily follow. After all, we went through phases 1 and 2 with Japan—first a period of denial when Japan was seen as just a maker of cheap, low-quality items, to anger that was actually much greater than today's as Japan began to dominate the U.S. market for cars, consumer electronics, memory chips, and other products. But the fact that the next three phases didn't occur means the future doesn't stem entirely from the past.

That said, given China's current momentum and future potential, phases 3, 4, and 5 are certainly within the realm of possibility. If the full declinist scenario plays out, it might look something like this:

- **Phase 3: Depression.** It would indeed be an overwhelming political and cultural shock if future facts and developments gave American leaders little choice but to acknowledge that the United States were no longer the dominant economic, military, scientific, or media power—or that Silicon Valley were no longer the high-tech capital of the world, and nothing could be done to change it. The United States continues to hold on to the view of U.S. exceptionalism and American leadership in technology, which in part is a constraint on taking effective domestic action. Taking that away would be a rude awakening to say the least.
- **Phase 4: Bargaining.** If phase 3 occurred, it's not hard to imagine the United States would try to define new missions and a new purpose through various forms of "bargaining" such as ceding to China's spheres of influence, accepting second-tier status in innovation, forming blocks with other like-minded nations, negotiating new trade terms and conditions, etc.—much like Europe has done in recent decades, moving to protectionism, and even simply ignoring business competition altogether opting for a regime of a big, redistributionist government and favoritism of small local businesses. Any of this would have many business and value chain implications.
- **Phase 5: Acceptance.** Just as the United Kingdom and EU have adjusted to no longer being the world's main technological or economic engine, cultural capital, or global leader, Americans might come to accept that not carrying all the burdens of global leadership is not so bad, and that there other ways to find personal and national meaning while still taking care of one's people. As cynics often describe Europe today, America might become a "global theme park"—with millions of Chinese touring the Grand Canyon, Times Square, and the Capital Mall every year.

Again, these next three phases are certainly not inevitable, but if they do occur, they will likely be linked to major disruptions at an individual-industry level as well. Thus far, most of the industry focus has understandably been on manufacturing and the power of China's scale economies, supply chain networks, robotics, low costs, and accelerating innovation, and in these areas it's getting late in the game. But, over the longer term, many industry sectors have a potential China disruption story. Consider the following possibilities.

- **Defense.** It's not hard to imagine today's huge U.S. investment in aircraft carriers, fighter jets, globally dispersed military bases, and satellite communications might someday look like vulnerable, even obsolete, legacy systems in a 21st century military competition centered around autonomous drones and submarines, robots, lasers, hypersonic missiles, electromagnetic rail guns, miniaturization and swarming, space, and cyber threats of all sorts.[20]
- **Energy and transportation.** China already leads in solar panels, and is well along the way to having leadership positions in batteries, electric vehicles, high-speed rail, nuclear power, and related smart cities/grids capabilities, which it will seek to export all around the world as energy and transportation systems, as nations seek to decarbonize in order to help save the planet.[21]
- **Banking.** The United States has become used to the dollar being the world's reserve currency, and SWIFT (Society for Worldwide Interbank Financial Telecommunications) being the dominant financial messaging system. China seeks to establish alternatives to both systems, and will get support from many nations that don't like America's control of these critical systems and the power it gives the United States. China (like much of the world) already has more modern consumer payment systems than the United States, and the Digital Yuan might someday extend this leadership. The Trump administration's recent more-assertive use of the U.S. dominance in global financial system to punish other nations will only accelerate this trend.
- **Life Sciences.** It wasn't until COVID-19 that much of the world woke up to China's aggressive efforts to be a major biotech player, both as a generic drug manufacturing supplier and a world class source of research and development (R&D) focused particularly on large-molecule biologics. China's experience in digital services, AI, predictive analytics, genomics and related biotechnology areas, wearables, and personalization position it to be a major U.S. rival during the 2020s.[22]
- **Aerospace.** Given both the difficulties facing Boeing and the significant Chinese government funding pouring into COMAC (Commercial Aircraft Corporation of China), both Boeing and Airbus will face increasing competition from China in the 2020s, likely starting with dramatically fewer sales in Chinese and Belt and Road markets.
- **Insurance.** Relatively new Chinese insurance companies have fundamentally lower costs than their Western counterparts, despite the latter's long history of legacy systems and practices. Given that so much of Asia is considered "underinsured," there are enormous market opportunities ahead.

- **Education.** Although America's lead here is still substantial at a university level, China hopes its universities will soon be comparable in many STEM (science, technology, engineering, and mathematics) fields. An important wildcard is whether Chinese students will continue to be accepted (and under what terms) at American universities. Either way, the days of American universities depending on significant numbers of Chinese students for enrollment is likely ending. China is also making important progress in AI-based tutoring in technical fields at the grade-school and undergraduate levels.
- **Information Technology.** It's no secret that China seeks to be both self-reliant and a global leader in AI, robotics, autonomous systems, drones, 5G/telecom, semiconductors, facial recognition, quantum, and other emerging areas. As these technologies will underpin just about every other industry sector, this is arguably the most important competition of all. If China prevails in IT, phases 3, 4, and 5 become much more likely. If the United States continues to lead, the challenge from China will be much less than the declinists predict. As Taiwan is such a critical part of the U.S. tech industry, its future is inseparable from this discussion.[23]

THE CLASH OF THE DIGITAL TITANS

Early in this century, China made arguably the most important digital strategy decision in the history of the IT industry. It decided it would not let the giant U.S. dot-coms—especially Google, Facebook, and Amazon—just set up shop and dominate the Chinese market the way they were doing in so many other nations. Instead, it significantly limited the role of or banned U.S. firms, creating time for its own firms—especially Baidu, Alibaba, and Tencent (often called BAT)—to build similar services, or at least initially copies of U.S. services. While many in the United States argued that this type of protectionism was unfair, or even illegal under WTO, there's no doubt this "China First" strategy has been wildly successful, and led directly to China's now highly diverse and dynamic mobile and Internet services industries. Many other nations probably wish they had followed a similar course.

China has long sought to become self-reliant in semiconductors, software, telecom equipment, mainframes and associated storage, and databases, and over the last five or years, it has made great progress toward that goal.

Today, the United States and China are mirror images of each other. China has long sought to become self-reliant in semiconductors, software, telecom equipment, mainframes and associated storage, and databases, and over the last five or years, it has made great progress toward that goal. Its so-called De-IOE initiative has sought to reduce China's reliance on IBM, Oracle, and EMC in large business and government environments, and has helped drive Alibaba's cloud business.[24] (Indeed, De-IOE might be better termed De-IOEAWS to include Amazon Web Services.) The Huawei, ZTE, Fujian Jinhua, and SMIC (Semiconductor Manufacturing International Corporation) controversies have further convinced China that self-reliance is the best path to economic sovereignty and eventual market leadership.[25]

The United States is coming from the opposite direction. It has always been the global market leader in most IT marketplaces, but it is now concerned about self-reliance, as its dependence

on Chinese suppliers—and Taiwanese ones such as TSMC—has grown. If you think the United States is too dependent on Chinese technology manufacturing today, imagine if China assumed control over Taiwan.

It remains to be seen whether U.S. efforts at self-reliance will be as successful as those of China, just as it is unclear whether China will be able to play a broad-based global leadership role outside of China and its immediate spheres of influence. But the bottom line is both China and the United States now have very similar IT goals. They both want to be the global leader in advanced technologies, they both want to be strategically self-sufficient, and they both want to use and govern the Internet and related technologies in their own very different ways. Arguably the only way they can both get what they want is for significant decoupling to take place. The future of Taiwan will be especially important in this regard, as will the evolution of open source technologies, and the future direction of U.S. antitrust policy, which could threaten U.S. leadership, depending on how aggressive its new forms take.

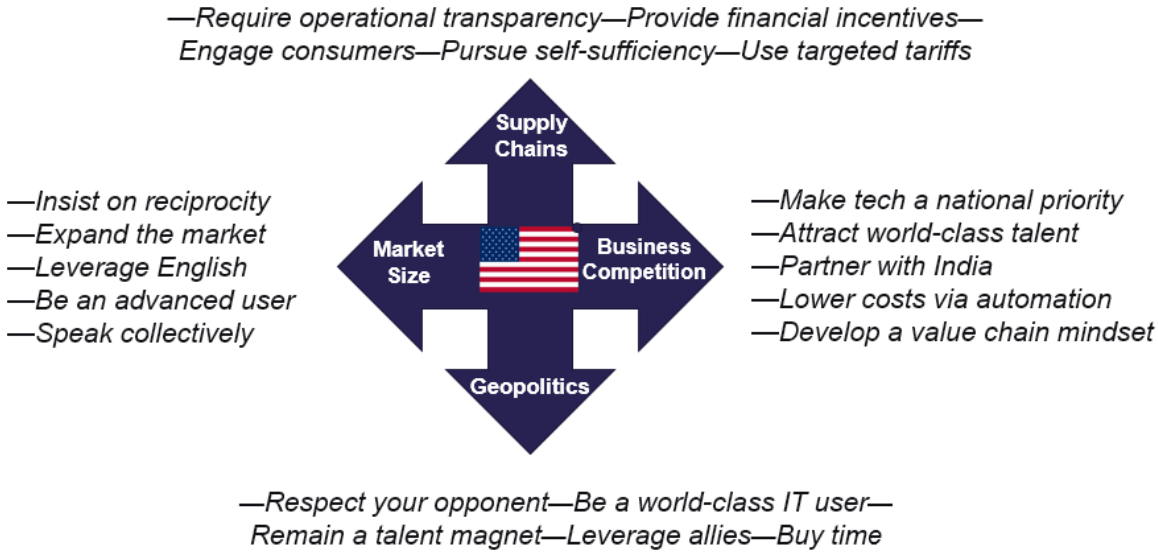
Given these stakes and dynamics, U.S./China high-tech competition could be the biggest economic battle in international business history, which is why the 2015 report was called "The Clash of the Titans." When Google, Amazon, Facebook, Apple, Intel, HP, Microsoft, IBM, Oracle, Dell/EMC, and Cisco are lined up on one side, and Alibaba, Tencent, Huawei, Xiaomi, Baidu, JD, DJI, Lenovo, SMIC, and Sina on the other, it looks like a pretty fair fight, especially if there is a level playing field, which there currently is not. The question going forward is which side will outperform the other in terms of both the underlying technologies as well as the key software and Internet platforms of the future. We know what China wants to do, and that there are no easy short-term Western answers. What we don't know is how well the West will respond over the longer term in both the public and private sectors. Let's turn to that now.

A FOUR-PART MODEL FOR LONG-TERM U.S./WESTERN REVITALIZATION

While the declinists focus on America's numerous weaknesses, and its current political and cultural tensions that distract from taking needed action, the United States still has enormous competitive advantages globally. Despite some recent declines, it has many of the world's leading universities, although government funding continues to fall.[26] If it chooses to, it can attract talent from just about every nation in ways China can't. It maintains many significant leads in key industries such as IT, software, life sciences, medical devices, agriculture, financial services, professional services, media/entertainment, aerospace, and defense. It is blessed with a remarkable land full of natural resources, and a population composed of people from every corner of the globe, many of whom are entrepreneurial. The English language will remain the world's dominant mode of global communication for a great many years. And of course, China has its own well-known weaknesses, especially its rapidly aging population, and increasingly its alienation of many other nations through its so-called "wolf warrior diplomacy."

Additionally, the United States is far from the only nation concerned about China's rising influence. In just the last few months, India, Australia, the United Kingdom, the European Union, and the Philippines, among others, have all strongly objected to various Chinese actions. If the United States develops an effective China strategy, at least some other nations might well join in. But how can all these strengths and advantages best be harnessed?

Figure 5: The long-term strategies should have much broader support



As with our declinist scenario, and as summarized in figure 5, our four-part model can help define a set of more-positive changes that significantly raise the Western game and put today's anger to practical use. Importantly, bipartisan support is achievable in many of these areas if there is a will to make this an overriding national priority. If 20 high-level policy efforts are broadly followed, U.S. and Western positions versus China would almost certainly improve over course of the 2020s. Let's look at each dimension in turn.

FIVE STEPS FOR REBALANCING SUPPLY CHAINS

1. **Require operational transparency.** Requiring U.S. and Western companies to publish information about the size of their China operations in terms of revenues, value of imported goods, technology-transfer activity, critical dependencies, investments, partnerships, and similar information would provide both transparency and measurable data so changes could be tracked over time. (Such reporting is analogous to today's efforts to get companies to produce more-detailed carbon emissions data.) Transparency is the only way to really understand the dynamics behind today's trade deficit. It's a low-cost, high-value area.
2. **Provide financial incentives to reduce dependencies.** Many firms are already diversifying their production to become less dependent on China, but direct financial incentives, in the form of grants or tax breaks, could accelerate the process, as they are now doing in Japan. In the United States' case, some work will come back to America, but countries such as Vietnam, Mexico, and India will also likely benefit, which would weaken China. There are modest costs to such programs, but also tangible value—and this would be a sign of real change, especially when combined with the previously mentioned reporting requirements. A case in point is recently proposed legislation to support the U.S. semiconductor industry that includes incentives for companies to establish fabs in the United States.[27]

3. **Leverage the power of consumers.** If the labels "Made in China" or "Made in Xinjiang, China" (or made anywhere else) were more prominent, consumers could make a more-conscious choice about how much these issues matter to them. Similarly, labels such as those used today for "fair trade" or "environmentally friendly" could be used to pressure China in various ways. This approach has low costs, and potentially high value. It also taps into the power of the consumer, which will be increasingly important as Chinese brands such as Huawei, Xiaomi, Haier, and TikTok go global. The Chinese government routinely uses its influence to shape how Chinese consumers feel about individual American brands.

4. **Pursue greater domestic production in key areas.** Again, companies are already moving in this direction, but a national effort to ensure the skills, capacity, and resources to meet emergency societal needs would be a significant step toward reducing Chinese dependencies. Although self-sufficiency projects might prove to be complex and costly, some action here seems likely, as the lessons of COVID-19 sink in. The recently proposed $750 million U.S. government loan to Kodak to make more pharmaceuticals in the United States is a good example, whether or not it was given to the right firm through the right process. Rare earth minerals—or alternatives—are another important area. More generous tax incentives for investment in R&D, skills, and capital goods will also need to play an important role.[28] And this self-sufficiency does not need to be American, it can and in many cases should be allied, as it is in current efforts around rare earth minerals.

5. **Use targeted tariffs and domestic content sparingly.** These types of direct interventions can play a role if used carefully. But both can easily trigger retaliation, and often have hard-to-foresee second-order and gaming effects. There is much debate about the impact of the current China tariffs, but if nothing else, they have spurred some initial decoupling and put trade with China on the political map. But tariffs on intermediate goods—semiconductors, for example—as opposed to final goods, can reduce overall U.S. competitiveness by raising input costs.[29] And "Buy American" provisions, as opposed to "Buy Allied" provisions, can lead to countermeasures from other nations.

FIVE WAYS TO ADJUST TO CHINA BEING THE WORLD'S LARGEST ECONOMY

1. **Expand the market.** Although China will eventually become the world's biggest economy, it will still only be about 15 percent of global GDP. If large portions of the rest of the world are highly integrated economically, they will add up to far more than that. This means avoiding excessive nationalism and protectionism in much of the non-Chinese world. While current trends here are not favorable, if every country goes down a path of high levels of self-sufficiency and national-champion support, the world will become much less efficient and much less well-off, and China's advantage will grow, in part because of their size and scale advantages. In this regard, deep trade integration within the Americas (from Alaska to Tierra del Fuego) and a strong U.S.-India free trade agreement would be of great benefit—as would, if the Europeans could find the political will to do it, a U.S.-EU trade agreement.

2. **Leverage English.** Taken together, English-speaking nations will account for a greater GDP than China's, especially as India modernizes. (If nations with a strong English-as-a-second-language position are also included, the numbers will be much greater than anything China can do.) Looking ahead, there is little chance that Chinese will rival or replace the global role of English for many decades, if ever. This creates major opportunities in media, entertainment, software, law, education, and other language-intensive fields, especially if U.S. foreign policy and the State Department do more to build on this strength.

3. **Pursue advanced technology usage.** You don't have to be the biggest to be the best, and being a leader in advanced technology usage is an excellent way to stay independent. If Western businesses stay ahead in applying technology within their respective industries, it will be difficult for China to expand its success beyond physical traded goods. However, as Chinese firms are investing heavily in AI and automation, supported by Chinese governments with extremely generous tax and grant programs, Western nations must do the same, in part by ensuring tax, spending, and regulatory policies, as well political rhetoric, favor such investments. As of now, they do not in most Western nations, particularly as there is now widespread fear and condemnation of advanced technology use, such as facial recognition, AI, and robotics.

4. **Revisit reciprocity.** Establishing technology and market access reciprocity has long proved difficult because China hasn't had much technology to share, and there have been few Chinese companies seeking global market access. Both of these factors will have to change if China is to meet its goals, and as it does, reciprocity should become easier to insist upon, especially if the United States, Europe, Japan, and other nations agree and insist upon basic reciprocity rules.

5. **Speak collectively.** Succeeding in the Chinese domestic market is arguably the most effective solution of all. But for the foreseeable future, this means playing by many Chinese rules that often are not palatable. At a time when Western companies are expected to speak out on social justice issues within their own countries, remaining silent on China may well become untenable. Although there are no easy answers, rather than remain silent, businesses might try to speak more collectively through groups such as the Business Roundtable, the Semiconductor Industry Association (SIA), and similar organizations. Looking back, SIA has played a highly visible role in the U.S. response to Japan, both in terms of its advocacy and its ability to collect and publish relevant data. The recent joint actions of Google, Microsoft, Facebook, Twitter, and others regarding Hong Kong may be a small step in that direction.[30] In addition, nations should consider altering antitrust laws to allow Western companies to cooperate more effectively against China. At the same time, nations should more-formally cooperate to resist Chinese economic threats and intimidation.[31] Finally, political leaders and the elite class need to stop condemning companies for doing business in China and agreeing to comply with Chinese laws. Such condemnation may assuage human rights advocates and play to the crowd, but they have no effect on Chinese behavior, and limit U.S. competitiveness vis-à-vis China.

FIVE WAYS TO INCREASE WESTERN COMPETITIVENESS

1. **Prioritize technology leadership.** The United States may or may not need a formal organization such as SEMATECH, but systematically assuring that U.S. companies, universities, government agencies, and defense companies are doing the necessary R&D in critical areas such as AI, robotics, space, biotech, new materials, cybersecurity, semiconductors, et al. remains a top priority—with bipartisan support and expected legislation.[32] Although such coordination is complex and long term in nature, it is of high symbolic and actual importance, and has a track record of success. The United States has already taken modest steps recently in this direction with its Manufacturing USA Network.

2. **Attract world-class talent.** Attracting—and retaining—the best and brightest from around the world remains vital to America's universities, companies, and entrepreneurial spirit. The U.S. educational system just isn't producing enough STEM talent on its own, in part because of a lack of any serious domestic STEM agenda, and U.S. universities, for financial reasons, giving priority to foreign students. Although the appeal of studying in the United States has declined somewhat in recent years, this pattern must be reversed. Probably the toughest question is to what extent—and on what terms—students from China should be included in this mix. Assuring a STEM talent pipeline is low cost, and has always had a very high payback.

3. **Partner with India.** A close alliance with India would provide both the talent and the market size to fully match—or even exceed—China over the longer term. There may be no more important U.S. relationship. Another advantage of alignment is many U.S. firms might move production out of China to India. Building this alliance is relatively low cost, but requires political adroitness and commitment. Thus far, there has been much more talk than meaningful action. On the other hand, the big risk is that if India drifts away from the West it might get closer to China than it is today. The combination of India's global software and services skills and China's hardware leadership would provide potentially devastating competition to Silicon Valley.

4. **Reduce U.S. cost disadvantage.** This can be done in two main ways—either by lowering labor costs or increasing output through innovation and automation. Clearly, the latter is preferable, as we wrote about in our recent report, "The Enterprise Automation Imperative."[33] Enterprise automation has sharply accelerated in response to COVID-19, but there is still much more that can be done by both the public and private sectors, and China is rapidly pressing ahead with its own automation efforts. This begins by stopping the now all-too-prevalent demonization of automation and productivity, coupled with expanding tax incentives for investing in new capital equipment.

5. **Develop a value chain mindset.** Too often, U.S. companies have focused on the top-down delivery and consumption of the end product, with insufficient focus on the full industry value chain—from raw materials to components, subsystems, logistics, and related ecosystems. China has taken much more of a bottom-up approach, and history shows that it's easier to move up a value chain than down one.[34] Having visibility across the entire value chain is critical strategically, but many companies still fall well short of this goal, and most government agencies have relatively little industry-specific value chain

knowledge or data, with many outdated data-collection and reporting processes. In this sense, a thorough modernization and expansion of the federal economics and business statistics system is long overdue.

FIVE WAYS TO ENSURE THE WEST REMAINS THE MORE APPEALING SOCIETAL MODEL

1. **Respect what China has accomplished.** China has lifted more people out of poverty faster than any country in history. This shouldn't be dismissed as merely the result of state subsidies, IP theft, environmental degradation, low wages, and other concerns. Clearly, many nations do similar things without similar economic success. The effectiveness of China's infrastructure investments, educational systems, entrepreneurship, and government planning must be acknowledged. Moreover, Japan, Korea, and Taiwan have shown that nations can adopt government-enabled economic development strategies without the human rights and other downsides.[35] If China did the same, it might be even more powerful than it already is. The West must respect what China has done economically for the vast majority of its people.

2. **Be a world-class user.** Government policymakers often ask Leading Edge Forum (LEF) and Information Technology and Information Foundation (ITIF) what they can do to better support the technology industry, and of course there is much discussion about education, infrastructure, standards, R&D, and similarly important pursuits. But what is usually missing is the importance of government using technology effectively to meet its own needs. The best of example of this is the Internet. The U.S. government didn't set out to build a national public infrastructure. (If it had, it would probably have worked with AT&T to develop something like the French Minitel system.) Instead, the U.S. Department of Defense set out to meet its own needs for a highly resilient computer network capability. The technologies behind that effort quickly became the foundation of today's Internet. There are many areas wherein governments could help their domestic technology industries by better meeting their own needs in, for example, individual identity, authentication, cybersecurity, smart cities, satellite communication, geo-positioning, autonomous systems, health IT, fintech, AI, clean energy, and many other areas.

3. **Remain a talent magnet.** In advanced fields such as AI, robotics, autonomous vehicles, and quantum computing, a relatively small group of people do most of the pioneering work. Where do these folks—and their families—want to live? Although China spends lavishly to attract talent and provide world class resources, most technology experts are still wary of moving there. Additionally, many highly skilled people would prefer to live in an English-speaking nation, as English is often either their first or second language. This is a huge natural advantage for the United States, United Kingdom, Canada, Australia, New Zealand, and, increasingly, India. It needs to be nurtured and leveraged. Helping spread tech hubs to a few more places across America would make that strategy easier.[36]

4. **Work with allies.** China has very few natural allies. It has a relationship of convenience with Russia, a weak client state in North Korea, and various ties via its subsidized Belt and Road initiative. But mostly it is surrounded by powerful Western-leaning nations: Japan, South Korea, Taiwan, India, Australia, New Zealand, Vietnam, and more.[37]

Outside of Asia, China has many business interests, but few natural supporters. But thus far, the West has done a poor job of leveraging this situation, especially in regards to so-called "forced" technology transfers. If every nation refused to transfer its advanced technologies as a precondition of operating in China, China might have to back off. But once one company or country yields in a given industry sector, it becomes very hard for others in that sector to hold out.[38] Similarly, there is also much more strength and safety when nations speak up collectively on sensitive China topics.

5. **Buy time.** China's population is expected to peak within the next few years, and then flatten and age rapidly. This means the 2020s may be the height of China's potency, with major demographic challenges emerging by the 2040s. While many developed nations will see their populations age, China—like Japan and South Korea—will be a particularly severe case, unless today's low levels of immigration increase dramatically, or China can leverage the labor forces across its Belt and Road-related initiatives. In contrast, the U.S. and India populations are still rising and relatively young. Although no one can predict the long-term future, perhaps we're not facing a century of Chinese dominance, but rather major adjustments that will buy time for a decade or two. It's a very different mindset.

A new "great game" is on, but who will play it best? The 2020s seem likely to be the decisive decade.

These 20 items are broad national policy goals and directions that ride above many of the conflicts of interests that have been noted throughout this paper. Indeed, most U.S. companies will support just about all of these items, especially if the alternative is hard decoupling—which is why developing a long-term consensus agenda that substantially raises the game of the West is entirely feasible, and much less controversial than taking strong, specific actions in the short run. But given today's deep political and cultural divides, coupled with an increased focus on addressing U.S. domestic social policy challenges, an effective U.S. response is by no means assured. And there are certainly those who think that even if well executed, these step will not be enough, and much more aggressive, Cold War-style decoupling is needed, especially as governments are also under pressure to take meaningful actions today.

CONCLUSION: THE GREAT GAME OF THE 2020s

No one knows what future holds. Will Chinese-Western relations calm down, intensify, or remain wary through an extended Cold War? Never in modern history have two great rivals been so deeply intertwined economically, and even culturally. It's easy to forget that there is a reason so many Chinese citizens love watching the NBA, and Chinese immigrants have so often thrived throughout the West. The natural bonds between the people—and the symbiotic strengths of the two economies—are still strong, and this creates both hope and confusion. Likewise, the rest of the world is wondering how it should respond, while trying to avoid the dangerous age-old question of, "Which side are you on?" As we saw in the long struggle between the United States and USSR—and we see now with Huawei—such avoidance is not always possible.

Twentieth-century history tells us to bet on freedom, democracy, and alliances—and those of us in the West are certainly inclined to stick with that advice, especially as most of the developed economies of Asia are also following that path. But we should also ask ourselves, "What can we

learn from China's highly effective use of a strong and strategically engaged state? What if China didn't oppress the Tibetans and the Uighurs? What if it didn't crack down so harshly on Hong Kong, surveil its own citizens, and loom so ominously over Taiwan?" There's always a chance, however slim, that China will change in these areas. What would we do and say about China's economic model and economic success then?

In no way minimizing the human rights issues involved, this is the competitive mindset the West must develop and sustain. Economically, China has clearly done a great many things extremely well—investing in itself and leveraging Western business interests to lift an impoverished, even humiliated nation to global-superpower status in less than 50 years, an achievement it will hammer home during the centennial celebrations of 2021. Given that so many nations remain underdeveloped, it's not surprising many might think China has something to teach them, especially as the Washington Consensus of free markets and limited government has often failed. Given the speed of its advancement, perhaps China has something to teach the West as well. A new "great game" is on, but who will play it best? The 2020s seem likely to be the decisive decade.

About the Authors

David Moschella is a research fellow at the Leading Edge Forum (LEF), where he explores the global business impact of digital technologies. A well-known speaker and columnist, David's books include *Seeing Digital—A Visual Guide to the Industries, Organizations, and Careers of the 2020s* (DXC, 2018); *Customer-Driven IT* (Harvard Business School Press, 2003); and *Waves of Power—The Dynamics of Global Technology Leadership* (Amacom,1997). Previously, he was head of worldwide research for International Data Corporation (IDC), the largest market analysis firm in the IT industry.

Robert D. Atkinson is the founder and president of ITIF. Atkinson's books include: *Big Is Beautiful: Debunking the Myth of Small Business* (MIT, 2018), *Innovation Economics: The Race for Global Advantage* (Yale, 2012), and *The Past and Future of America's Economy: Long Waves of Innovation That Power Cycles of Growth* (Edward Elgar, 2005). Atkinson holds a Ph.D. in city and regional planning from the University of North Carolina, Chapel Hill, and a master's degree in urban and regional planning from the University of Oregon.

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