CHOOSING A STRATEGY

The dozens of new U.S. government technology controls aimed at China in recent years did not all have a single, unified objective. Some sought to counter national security threats, some were more economically motivated, and some had ancillary purposes (like domestic or diplomatic gamesmanship) unrelated to technology itself. Yet in public discourse, and even in policy circles, distinct objectives are often left undifferentiated or undefined. Too frequently, U.S. leaders and analysts speak of “countering” or “reining in” Chinese technology threats and risks—highly general formulations that elide key goals and trade-offs.

Untangling this jumble of U.S. objectives is an important first step in developing a coherent strategy. Table 5 describes nine apparent rationales for recent U.S. technology restrictions aimed at China.

The existence of so many distinct policy rationales is not surprising. The United States has many different concerns with China, and technology plays a significant part in nearly all of them. Technology is rightly at the heart of America's China policies. (The corollary idea, that China should be at the heart of U.S. tech policy, is more debatable.) In many cases, these policy rationales overlap and reinforce each other. For example, potential Chinese influence over U.S. telecommunications networks raises multiple fears simultaneously: theft of commercial secrets, tracking of U.S. government officials, injection of disinformation, or subversion of critical infrastructure in a crisis, among other possibilities. Hence the U.S. telecommunications sector was an early target for American restrictive measures, and the global telecoms marketplace remains a central preoccupation of Washington’s tech diplomacy.
### Table 5: Untangling the Many U.S. Rationales for China-Related Tech Restrictions

<table>
<thead>
<tr>
<th>U.S. interest area</th>
<th>Rationale</th>
<th>Illustrative policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National security</strong></td>
<td>Maintaining a military edge over China</td>
<td>Since 2020, Chinese graduate students and researchers with institutional ties to Beijing’s “military-civil fusion” efforts have been denied visas.</td>
</tr>
<tr>
<td></td>
<td>Limiting Chinese national security espionage</td>
<td>In 2019, a Chinese company was forced to sell the dating app Grindr because the app’s sensitive personal data could be used for intelligence targeting.</td>
</tr>
<tr>
<td></td>
<td>Preventing Chinese sabotage in a crisis</td>
<td>Since 2019, U.S. telecommunications providers have been unable to receive federal subsidies to buy Huawei or ZTE equipment, partly due to sabotage fears.</td>
</tr>
<tr>
<td></td>
<td>Limiting Chinese influence operations</td>
<td>In 2020, Trump ordered a ban on TikTok in part because the app could “be used for disinformation campaigns that benefit the Chinese Communist Party.”</td>
</tr>
<tr>
<td></td>
<td>Denying support for Chinese and China-enabled authoritarianism and repression</td>
<td>In 2019, Chinese tech companies, including Hikvision, Megvii, and SenseTime, were placed on the Entity List due to their involvement in Beijing’s repression in Xinjiang.</td>
</tr>
<tr>
<td><strong>Economic</strong></td>
<td>Countering unfair Chinese economic practices and IP theft</td>
<td>The Trump administration’s broad-based tariffs on China—aimed at countering unfair economic practices such as intellectual property theft—applied to many technology goods, including smart devices, flash memory devices, and electronic components.</td>
</tr>
<tr>
<td></td>
<td>Competing and leading in strategic industries</td>
<td>U.S. controls on the export of American technologies to Huawei are especially strict for semiconductors and for any tech that would be used “with or in any 5G devices”—two areas considered strategic by Washington.</td>
</tr>
<tr>
<td><strong>Ancillary</strong></td>
<td>Obtaining general leverage over China</td>
<td>Trump described U.S. and allied actions against ZTE and Huawei as leverage in broader trade talks. In the Phase One deal, he used this leverage to gain concessions in non-tech areas like agriculture and financial services.</td>
</tr>
<tr>
<td></td>
<td>Shaping U.S. domestic narratives</td>
<td>Shortly before the 2020 election, the Trump administration released new H1-B visa restrictions that would have significantly affected Chinese high-tech workers.</td>
</tr>
</tbody>
</table>

### THE NEED FOR BETTER STRATEGY

However, a long list of policy aims is not the same as a strategy. In fact, it can be anathema to one. Many of these goals are vague and have no clear limiting principle. They can also come into conflict with each other, or with other U.S. national priorities. A good strategy would clarify key objectives and prioritize them. It would also proffer a theory of success—a realistic basis for determining which forms of technological decoupling will actually achieve U.S. aims. So far, Washington has struggled to articulate such a strategy.
Without more strategic clarity, decoupling can become overaggressive or incoherent and contrary to U.S. interests. For example, the U.S. military does not need (and cannot achieve) unlimited advantages over China’s military in every place, time, and domain. The United States must define its desired “military edge” over China in more specific terms. Likewise, if Washington seeks to rebalance the terms of bilateral economic competition, it should have a desired model of the global economy in mind. Are U.S. policymakers aiming for two largely separate international economic systems, or would China remain integrated within a modified global economy? And is the point to maximize U.S. prosperity and technology leadership, or to minimize China’s (which are not the same thing)?

Without a sense of strategic priorities, decoupling can cause havoc as one objective smashes into another. Barring Chinese graduate students helps to reduce illicit technology transfer, but it also hampers U.S. technological competitiveness by spurning a key source of skilled labor. Which goal takes precedence? Technological decoupling is fraught with these kinds of costs and risks—and unfortunately, their ripples can spread far beyond the technological realm, affecting seemingly unrelated U.S. goals. For example, harsh U.S. measures against Huawei and TikTok have helped convince many in Beijing that Washington seeks wholesale economic containment. In climate change talks, China may now be even more liable to view proposed emissions reduction targets as a stealth means of stifling its economic growth.

Finally, without a strategic theory of success, decoupling may fail to accomplish much of anything good. U.S. efforts to prevent the flow of sensitive technology into China—for example, equipment for manufacturing 5- and 7-nanometer node microchips—require cooperation from many other countries that participate in the supply chain or have access to the same sensitive technology. Without this cooperation, technology controls can be futile and ultimately self-defeating. Which countries, or multilateral institutions, would belong to the U.S. “side” of trusted partners in a given technology area? What mixture of inducement, pressure, and persuasion could succeed in bringing those countries on board and/or reshaping multilateral institutions for this purpose? And when are these diplomatic efforts really worth the payoff?

**THE CURRENT U.S. STRATEGY DEBATE**

After the chaos and inconsistency of the Trump years, Biden will need a more rational approach—clearly defining U.S. objectives for decoupling and articulating a strategy to
achieve them. This is a high stakes challenge. Technology is a key determinant of American national well-being and power, and a central arena of U.S.-China strategic competition. It is also fraught with risk and uncertainty. Too much interdependence with China could leave the U.S. economy, society, and national security apparatus vulnerable to espionage or subversion, and make America complicit in Chinese technological abuses. Yet too much decoupling could impair the U.S. tech ecosystem, further destabilize the bilateral relationship, and alienate U.S. allies and trading partners caught in the crossfire.

There is heated debate about how the United States should thread this needle. To grossly oversimplify, one can define three general camps (see Table 6).¹⁸⁸

**Restrictionists.** First, what might be called a “restrictionist” camp calls for dramatically curtailing U.S.-China technology ties. The harshest proposals come from China hawks like Matt Pottinger (who has advocated expanding U.S. outbound investment restrictions “by at least an order of magnitude”), Derek Scissors (who has recommended far tougher export controls and an “outbound version of CFIUS”), and Senator Tom Cotton (who has proposed a “research blockade” on China, sweeping export controls on high-end semiconductors, secondary sanctions amounting to a “death sentence” for China’s “national champions,” and revocation of Permanent Normal Trade Relations).¹⁸⁹

Some human rights advocates also have restrictionist leanings: twenty-four NGOs including Human Rights Watch, Freedom House, and PEN America have called for “a series of escalating actions against technology companies found to be contributing to China’s mass surveillance, including by imposing Global Magnitsky sanctions,” while *New York Times* columnist Farhad Manjoo suggested that technological and economic integration with China “isn’t worth the moral cost.”¹⁹⁰ And restrictionist sensibilities seem fairly common within U.S. national security officialdom, particularly in the military and the Intelligence Community (IC). In 2019, Chairman of the Joint Chiefs of Staff General Joseph Dunford expressed “great concern” that U.S. tech firms provide “indirect benefit” to the PLA when they operate and conduct research in China.¹⁹¹

**Restrictionists tend to define bilateral tech ties as zero-sum: China gains long-term strategic advantages while America reaps only marginal and transitory gains.** As these examples indicate, restrictionists have varied diagnoses of the problems they seek to solve and the appropriate U.S. policy response. One common view holds that Beijing is successfully executing a long-term plan to sap American global strength and attain regional or even global hegemony.¹⁹² Technology is seen as central to China’s plans, allowing Beijing to steal U.S. secrets, leapfrog U.S. military capabilities, bolster its own and other countries’ repressive capabilities, and more. Restrictionists therefore tend to define bilateral tech ties as zero-sum: China gains long-term strategic advantages
by exploiting U.S. tech industries and systems, while America reaps only marginal and transitory gains, like paying lower prices for China-derived tech goods. Accordingly, restrictionists favor broad-based technological decoupling aimed at denying China meaningful opportunities to draw support from, or establish influence within, the U.S. tech ecosystem. Hal Brands, for example, has proposed that Washington “work with allies to slow Chinese innovation through technological denial policies.” Some restrictionists go beyond mere decoupling and argue that U.S. tech controls should be designed to harm and ideally destroy major Chinese tech companies, such as Huawei.

Cooperationists. At the other end of the spectrum, a range of what might called “cooperationist” voices have opposed major elements of Washington’s technological decoupling agenda. U.S. business interests often tout the economic and technological importance of maintaining global supply chains and market access to China. For example, Google warned that Huawei’s Entity List designation could create cybersecurity vulnerabilities, and the Semiconductor Industry Association has argued that “America’s longstanding leadership in semiconductors is put at risk by broad restrictions on U.S. exports of commercial chip technologies to China.” Meanwhile, some independent technologists and tech activists—including key pioneers of the early internet—remain vocally committed to techno-globalist ideals and view decoupling as anathema. The World Wide Web Foundation (joined by Amazon, Facebook, Microsoft, Twitter, and others) has warned against “internet fragmentation” and “techno-protectionist initiatives,” while the Internet Society believes that “having a government dictate how networks interconnect according to political considerations rather than technical considerations, runs contrary to the very idea of the Internet.”

Cooperationists often posit that a twenty-first-century system of open technology collaboration would reproduce the waves of innovation and widely shared global progress said to characterize the late twentieth century. And the United States—with its historically dynamic innovation system—would be well positioned to lead within and benefit from such an environment. They also argue that many technology controls are simply unworkable, given the practical difficulties of predicting technological change and regulating cross-border flows in an already globalized, digitized world.

Another strain of cooperationism exists among progressives, who caution against overinflating Chinese (and other foreign) threats. Senator Bernie Sanders, for example, has argued that “the growing bipartisan push for a confrontation with China” fuels wasteful spending, militarism, bigotry, and authoritarian populism at home while reducing the likelihood of cooperation on key global issues. Applying this critique to U.S. tech policy, Sanders has described proposed federal investments in semiconductors as a form of corporate welfare.
Others have blamed the China Initiative for fomenting xenophobia and racism toward U.S.-based academics of Chinese nationality or ethnicity. In addition, some progressives cite climate change as an area where U.S.-China technology cooperation must greatly increase, not decrease. More than forty activist groups—including MoveOn, the Sunrise Movement, and the Union of Concerned Scientists—have urged the Biden administration to “speed the [global] transition away from dirty energy economies” by marrying U.S. clean tech with Chinese industrial capacity. (On the other hand, progressive concerns about Chinese human right abuses and untrammeled free trade lead some on the left to favor more tech restrictions.)

**Centrists.** Between the poles of restrictionism and cooperationism lies what might be called a “centrist” camp, which seeks to incorporate the best insights of each side while making more room for complexity and uncertainty. Centrists agree with restrictionists that Beijing poses unique long-term challenges to the United States and that technology is a central risk factor. But, echoing cooperationists, they think that some Chinese tech threats are exaggerated, offset by the benefits of cooperation, and only partially addressable via China-focused governmental restrictions. Centrists generally endorse the overall U.S. shift toward partial technological decoupling and accept that decoupling must progress further to protect U.S. national security and economic security. However, they want new technology controls to be carefully scrutinized; they doubt the viability or wisdom of dividing the world into sealed geo-technological blocs. Centrists view Chinese military aggression as a major possibility and question Beijing’s willingness to partner on global issues like climate change and pandemics. Yet they insist that co-existence and collaboration on urgent challenges must still be tried, and so they hope to avoid a technological confrontation that would take bilateral relations to a breaking point. Some centrists emphasize how much we still do not know about China’s long-term path and the ultimate impacts of emerging technologies, and therefore recommend hedging strategies to account for multiple possible futures.

A leading centrist statement is the China Strategy Group report co-led by Eric Schmidt and Jared Cohen. It argues that “some degree of disentangling is both inevitable and preferable,” yet “we [should] seek to avoid unnecessary and counterproductive levels of separation.” Many other centrists can be found in technocratic bastions such as mainstream Washington think tanks and academic policy centers. Stephanie Segal of the Center for Strategic and International Studies developed a cost-benefit framework to assess U.S.-China interlinkages; she found that “existing [U.S. government restrictions] go a long way in protecting national security” and that further decoupling should be “targeted” and rigorously evaluated. Richard Danzig and Lorand Laskai, summarizing a body of research on technological decoupling commissioned by the Johns Hopkins University Applied Physics Laboratory, advocated “an incremental approach rooted in the indeterminacy of the current moment and recognition of the fact that interdependence is likely to continue.” Samm Sacks of New America and others have promoted the “small yard, high fence” concept. This popular metaphor, attributed to former U.S. secretary of defense Robert Gates, conveys that
technology controls should be the exception instead of the rule, applying only to the most sensitive and strategic areas.\textsuperscript{205}

The centrist approach to technological decoupling has been embraced by some moderate political figures as well. Senator Chris Coons has also endorsed the “small yard, high fence” metaphor and has proposed “safeguard[ing the] crown jewels of technology” while “strik[ing] the right balance to avoid [full-scale] decoupling of global tech industries between the United States and China.”\textsuperscript{206} A quiet centrist may also exist at the state and local level. The Carnegie report “Making U.S. Foreign Policy Work Better for the Middle Class,” published in 2020, drew on interviews of state and local government, business, labor, and community leaders and middle-income workers in Colorado, Nebraska, and Ohio. Most interviewees “want[ed] the United States to push back more effectively against unfair Chinese trading practices and make investments at home to compete more successfully with China. But otherwise they tend[ed] to see China pragmatically and [were] not inclined to view the geopolitical rivalry as an organizing principle of U.S. foreign policy.”\textsuperscript{207} (More recent surveys by the Chicago Council on Global Affairs found that the general American public has become “dramatically” more hostile to U.S.-China trade since 2019.\textsuperscript{208})

Like the other camps, centrists have diverse policy ideas but tend to unite around a few general principles. First, centrists say that U.S.-China technological decoupling should be selective and targeted. Second, they want decoupling to be coordinated multilaterally. Centrists observe that the United States is a leading, but not exclusive or indispensable, player for many technologies. This means that unilateral U.S. controls are often ineffective, resulting only in self-imposed competitive disadvantages and friction with international partners. Therefore, Washington should work with so-called like-minded countries (in particular, technologically advanced liberal democracies) to create shared policy frameworks.\textsuperscript{209}

Third, centrists insist that “defensive” efforts to curb or thwart Chinese technology threats cannot distract from a core “offensive” program to strengthen U.S. and allied technology ecosystems. Washington has only so much influence over the course of Chinese technological advancement, centrists argue, but there is far more the United States can do to improve its own technological strength. Moreover, many of the problems commonly framed as Chinese technology threats are partially, or even mostly, the result of domestic American challenges. For example, supply chain insecurity (a central focus of China-oriented technology controls) stems in part from industrial consolidation and workforce shortages in the United States; disinformation targeting Americans (a growing concern of China tech watchers) is a largely homegrown problem. According to the centrist view, U.S. policy should primarily focus on supporting America’s own technology leadership, competitiveness, and resilience. Countering China would be a secondary priority.
Table 6: Three U.S. Camps Offer Competing Strategies for Technological Decoupling

<table>
<thead>
<tr>
<th>Camp</th>
<th>Beliefs</th>
<th>Adherents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restrictionists</strong></td>
<td>• U.S.-China tech relationship is zero-sum and tends to advantage China</td>
<td>• China hawks</td>
</tr>
<tr>
<td></td>
<td>• U.S. has a short window in which to prevent Chinese technological dominance</td>
<td>• Some human rights defenders</td>
</tr>
<tr>
<td></td>
<td>• U.S. should greatly expand tech restrictions aimed at China</td>
<td>• Many national security officials</td>
</tr>
<tr>
<td><strong>Cooperationists</strong></td>
<td>• U.S.-China tech relationship is non-zero-sum and tends to benefit the U.S.</td>
<td>• Many business interests</td>
</tr>
<tr>
<td></td>
<td>• Americans often inflate China-tech threats</td>
<td>• Techno-globalist activists</td>
</tr>
<tr>
<td></td>
<td>• Major U.S. tech restrictions are domestically harmful and internationally destabilizing</td>
<td>• Some progressives</td>
</tr>
<tr>
<td><strong>Centrists</strong></td>
<td>• U.S.-China tech relationship has both zero-sum and non-zero-sum elements with mixed costs and benefits for both countries</td>
<td>• Many mainstream think tank analysts</td>
</tr>
<tr>
<td></td>
<td>• More U.S. tech controls are needed but these should be selective, carefully designed, and multilateral</td>
<td>• Some moderate politicians</td>
</tr>
<tr>
<td></td>
<td>• U.S. should focus on nurturing its own technological strength and tech policymaking capacity</td>
<td>• Some state and local leaders</td>
</tr>
</tbody>
</table>

**Implications.** This three-camps taxonomy is admittedly crude. Individual people and institutions do not self-identify with these labels and may not agree with them. Each camp is internally diverse and their boundaries overlap and shift. Still, the taxonomy helps to reveal some of the major questions and choices facing U.S. policymakers.

It is clarifying, for example, to compare what each camp sees as the greatest risks for U.S. policy. Restrictionists most fear U.S. complacency during a brief window when China’s tech-driven dominance can still be prevented. Cooperationists most fear U.S. overreaction resulting from inflated perceptions of Chinese tech threats and excessive confidence in restrictive measures. Centrists, hoping to avoid both these perils, most fear U.S. incapacity to achieve a successful balance. Key capacity challenges include securing public-private coordination, mapping complex supply chains, and overcoming Washington gridlock, polarization, and bureaucratic clumsiness. Ultimately, U.S. leaders must choose which fears (and hopes) they most identify with.
This taxonomy also gives a rough guide to the changing direction of U.S. thought and policy. Cooperationism was the dominant view when Obama took office, and it still had some currency by the time he stepped down. The Trump administration’s policies and rhetoric became increasingly restrictionist over four years—though it sent contradictory signals, and Trump departed before a fully restrictionist vision could be realized. The Biden administration has so far retained much of the Trump policy architecture, while speaking a language that sounds more centrist. For now, the center of gravity in Washington seems to lie somewhere between the centrist and restrictionist positions.

A CASE FOR A CENTRIST STRATEGY

The debate among restrictionists, cooperationists, and centrists cannot be resolved by a policy paper. Part of what separates these camps are divergent worldviews and values—deep-seated disagreements about American priorities and purposes. The three camps also disagree about more tangible questions, such as how to understand China’s capabilities and intentions, what kind of political economy will produce the most innovation in the coming decades, and how much influence the United States will have in shaping global technological choices. The answers to these questions will not be known for decades. For now, strategists and policy experts can only venture their best assessments based on incomplete data and personal beliefs—and, for some, perceived political advantage. Indeed, the biggest drivers of real-world U.S. strategy will probably be political: partisan dichotomies, public sentiment, business interests, media attention, and civil society advocacy.

Despite these limitations, expert analysis can still help to inform and guide political and public dialogues about U.S.-China technological decoupling. Analysts can present the strongest, clearest versions of each strategic position, and continually sharpen and disseminate their ideas in the face of critiques and evolving evidence. In that spirit, below are two brief arguments in support of the centrist position. First, narrow and targeted China-focused technology restrictions can buy time for more positive U.S. investments to bear fruit, while reducing the costs and risks of decoupling. And second, a clearly articulated centrist strategy can help Washington maintain control of the pace and course of technological decoupling, thereby helping to prevent a runaway cycle that moves faster and further than U.S. leaders want.

Restrictionists fear U.S. complacency toward Chinese tech threats, while cooperationists fear U.S. overreaction. Meanwhile, centrists fear U.S. incapacity to navigate between both perils.
BUYING TIME

The very existence of a heated debate among restrictionists, cooperationists, and centrists is itself an argument for the careful incrementalism that centrists espouse. We are still in the early years of a radically new phase in U.S.-China relations, and we are only at the cusp of far-reaching global transformations promised by AI and other emerging technologies. These coming changes, while undoubtedly significant, remain difficult for present-day observers to assess. How will China's strategic intentions and technological capabilities change as the country further develops? How will cross-border data flows, new energy tech, or quantum computing reshape the global economy and security environment? How will countries of the world (and multinational companies) align themselves in a more fractured geo-technological landscape? How will the familiar costs and benefits of U.S.-China technological interdependence shift in the coming decades? There is simply no reliable way to answer these questions today. Policymakers should therefore play for time—preserving and expanding American options while the future comes into sharper focus.

Offense and defense. The primary effort should be a positive program to strengthen U.S. and allied technology ecosystems from within (the so-called “offensive” agenda). An offensive program would include new investments and incentives to bolster and diversify innovation pathways, supply chains, talent pipelines, and revenue models in strategic technology areas. Such investments make sense regardless of how U.S.-China technology relations develop over time. If the United States ultimately concludes that full-scope technological decoupling has become necessary, then offensive investments will have prepared America to separate with fewer costs and risks. But if American leaders eventually decide to maintain substantial tech ties with China, then the offensive measures will have positioned U.S. firms to compete more effectively in a globalized technology marketplace. Moreover, many offensive investments are worth making for their own sake, irrespective of the China challenge. Even if China did not exist, concerted efforts to strengthen the U.S. technology base would still help boost American productivity and economic dynamism.

Offensive investments like education and R&D take a long time to pay off. Conversely, “defensive” measures—government restrictions aimed at thwarting Chinese technological advancement or influence—are fast-acting and readily implemented. They should therefore be used to buy time for the offensive agenda to bear fruit. Specifically, Washington should impose new controls in technology areas where China seems close to securing unique, strategically significant, and long-lasting advantages. In such circumstances, defensive measures can help to forestall Chinese breakthroughs long enough for the United States to regroup and regain technological momentum.

Defense is not risk-free, however. U.S. tech controls can be costly (harming U.S. industries and innovators), imprecise (chilling more activity than intended or desired), and even fu-
tile (failing to substantially remedy the relevant Chinese tech threats). And these side effects can be hard to predict, measure, and control. That is why restrictive tools should be confined to a secondary, supporting role and only used in compelling circumstances. Restrictive tools by themselves are incapable of ensuring U.S. technological preeminence over the long haul, but they can and should be used to frustrate Chinese dominance in the short run. The right U.S. technology controls can help to preserve competitive opportunities while American offensive efforts better position the country to succeed and lead in key technologies.

**Comparing technology areas.** Consider 5G telecommunications equipment. The United States and many other countries have been in the process of purchasing large-scale 5G infrastructure that will likely operate for many years, providing the supplier country with a long-lasting technological beachhead as well as durable economic and political influence. Until 2019, Huawei and ZTE appeared set to secure Chinese dominance of the global 5G telecoms marketplace—occupying, for the foreseeable future, some of the most strategic terrain in cyberspace.\(^{211}\) Although no U.S. company competed on a one-for-one basis with Huawei or ZTE, multiple U.S. national security and economic interests were nevertheless at risk: protecting secrets, preventing sabotage, blunting the global influence of an adversary, and more. This was a closing window of opportunity if there ever was one, and a clear impetus for defensive measures.

In response, the United States imposed a barrage of restrictions on ZTE and even more on Huawei: the Entity List, the Covered List, the Non-SDN Chinese Military-Industrial Complex Companies List, the Section 889 blacklist, the special foreign direct product restrictions, the “remove and replace” rule, federal indictments of Huawei and its CFO, and visa bans for certain employees, among other actions.\(^{212}\) Washington also waged a unique diplomatic campaign (branded for a time as “The Clean Network”) to dissuade third countries from buying Huawei and ZTE 5G equipment.

These moves were reasonably successful: several major countries opted not to purchase Chinese 5G gear, improving the market position of European competitors.\(^{213}\) Most important, an open 5G architecture called O-RAN was given precious time to develop as a serious alternative, reducing the prospects of Chinese vendor lock-in and creating new openings for U.S. firms.\(^{214}\) Meanwhile, Washington took active steps to manage the costs of its telecoms decoupling efforts. It has paid for small U.S. carriers to replace Huawei and ZTE equipment, helped finance certain third-country purchases of Western-made 5G gear, allowed U.S. chipmakers to retain some Huawei business, and drafted legislation to infuse the U.S. semiconductor sector with new federal funds.\(^{215}\)

**Fast-acting and readily implemented “defensive” restrictions can buy time for “offensive” investments, like education and R&D, to bear fruit.**
5G telecommunications equipment provided an especially compelling case for U.S. restrictions, because the United States faced a closing window of opportunity to prevent Chinese dominance of a strategic technology. But each technology area has a different strategic profile, and few of them will present as clear-cut a case for so many restrictive measures. AI software, social media platforms, smartphones, drones, Internet of Things devices, routers, advanced batteries, semiconductors, cloud services: they all have distinct national security implications, economic impacts, marketplace dynamics, supply chains, and innovation trajectories. In many cases, strong new U.S. government technology controls could do more harm than good.

Balancing global challenges. One reason for caution is the existence of other urgent crises, beyond Chinese tech threats, that compete for Washington’s resources and attention and can sometimes clash with technological decoupling. Even as the United States engages in bilateral power struggles with China (and other state adversaries), it faces global and domestic challenges that are arguably still more daunting and have their own closing windows of opportunity. At a global level, COVID-19 exemplifies the perils of today’s interconnected world. Contagions—in the form of infectious diseases, financial crises, or cyber catastrophes—loom on many fronts, requiring new forms of collective action across geopolitical divides. The most obvious of these enormous threats is climate change.

While decoupling might seem like a solution to excess interconnectedness, global challenges cannot be solved without deep global cooperation. If Washington and Beijing cannot come together with others to address shared risks, then any U.S. national accomplishments may be washed out by a rising tide of global calamity. It is imperative that U.S. government policies toward China—including tech policy—address these larger problems and avoid making them worse.

For example, Washington should think twice before walling itself off from Chinese clean energy technology such as solar cells, wind turbines, and advanced batteries. Granted, some Chinese clean tech companies have benefited from unfair practices like intellectual property theft, and the United States has powerful motivations to protect and nurture its own industries in these emerging strategic sectors. Yet the world has years, not decades, to avoid catastrophic and irreversible climate damage; any delays in the deployment of low-carbon-intensive infrastructure would require powerful justifications. By the same token, U.S. sanctions on Beijing’s national tech champions should avoid inflicting so much Chinese economic pain that bilateral climate cooperation breaks down. In September 2021, China’s climate envoy made the not-unreasonable case that climate “cannot possibly be divorced” from other friction points: “The U.S. side hopes
that climate cooperation can be an ‘oasis’ in China-U.S. relations, but if that ‘oasis’ is surrounded by desert, it will also become desertified sooner or later.”

Balancing domestic challenges. Domestically, the U.S. political system is floundering, its social cohesion fraying, and its economic promise hollowing for too many people. These trends have complex, multi-decadal causes but have dangerously accelerated in recent years. It was only a year ago that the United States suffered an abortive insurrection, and most experts believe that American democracy remains unstable. U.S. policymakers must therefore focus much of their attention on the home front, even at some risk to traditional national security priorities such as addressing Chinese tech threats. For example, the U.S. government’s ongoing crackdown on Chinese graduate students and researchers cannot be allowed to trigger a mass exodus of Chinese undergraduates, who pose little security risk yet pay billions of tuition dollars, in effect subsidizing educational opportunity for many Americans.

In sum, an overaggressive technological decoupling can set back other national priorities that may matter more or come to a head sooner. This does not negate the risks of U.S.-China technological interdependence, which are real and will likely grow in years ahead. But the United States must balance the troubling possibilities of tomorrow against the lethal dangers of today. This means buying additional time for U.S. leaders to assess geotechnological developments, juggle domestic and global crises, and implement long-term investments in American technological strength. Select defensive measures can extend these timelines—helping to lay the groundwork for greater technological independence in the future, should it become needed, even as most U.S.-China tech ties are allowed to endure for now. Balancing in this way can help hedge against multiple scenarios, from full-scope decoupling to relative technological integration.

MAINTAINING CONTROL

Time is one of two decisional resources that Washington must conserve as it manages technological decoupling. The other key resource is control over the decoupling process—the ability to set its pace and scope so that decoupling aligns with American needs. Granted, the U.S. government has never had total control. Beijing maintains its own long-standing limits on foreign technology; other governments have significant influence on global supply chains and markets; and companies around the world make private calculations about cross-border investments and deals. Nevertheless, the distinct wave of technological decoupling that began in the mid-2010s was initially of Washington’s design—set in motion by the U.S. government’s purposeful, albeit ill-coordinated campaign of China-oriented restrictions. Other actors have been comparably reactive (maneuvering in response to U.S. policy) and cautious (often seeking to conserve the status quo ante). This kept the U.S. government in the driver’s seat, letting American officials advance decoupling as they saw fit while stopping short wherever they perceived risks to U.S. interests.
That privileged position could not last for long. As decoupling progresses, various foreign and domestic actors have increasingly sought to seize initiative for themselves—seeking to shape the decoupling process rather than remain at the mercy of U.S. government policy. These dynamics, explored below, create a risk of feedback loops: each new U.S. technology control strengthens the incentives for others to retaliate in kind, or to get ahead of the next Washington restriction, which accelerates decoupling beyond what U.S. officials intend. If Washington fails to monitor and manage these escalatory dynamics, it could accidentally set in motion a frenzied, ever-intensifying cycle of decoupling that races well past what America can afford.

**Figure 4: The U.S. Government Is Just One of Many Actors Shaping Technological Decoupling**

![Diagram illustrating the influence of various actors on technological decoupling]

**Preemptive action by outside actors.** The first kind of feedback loop involves outside actors seeking to anticipate and preempt future rounds of U.S. technology restrictions. Now that U.S.-China technology decoupling is well underway, companies, universities, investors, and other actors around the world want to avoid being caught in the maelstrom. This means not making significant long-term commitments that could be vulnerable to collapse if the U.S.
government decided to impose new technology controls. In essence, these actors could “self-decouple” now, on their own terms, rather than risk a more abrupt and forceful U.S. government mandate later. The more restrictive measures that Washington imposes, the more outside actors will look to stay ahead of the curve. The consequences could potentially snowball, causing much more extensive technological decoupling than the U.S. government intends.

A vivid example came in July 2020, when the Justice Department announced the indictment of six Chinese researchers for hiding their affiliations with the PLA. Following these six indictments, more than one thousand other Chinese researchers reportedly left the United States. “The breadth and depth of the exodus was not expected,” an anonymous U.S. official told the Washington Post. James Mulvenon, who has written extensively on China tech threats, told the newspaper that “he does not believe there were 1,000 active PLA-linked researchers in the United States but said it is possible many researchers affiliated with state institutes and universities left over the last year because they feared they might lose their fellowships.” In other words, the U.S. government failed to anticipate that its small action would trigger a huge counterreaction, disrupting vast amounts of legitimate research activity. In the end, the Justice Department dropped charges against five of the six defendants. Still, it claimed to have “advanced our deterrence objectives,” citing the mass exodus of Chinese researchers as a positive development. The whole episode casts significant doubt on Washington’s ability to predict and adequately weigh the collateral consequences of its China-tech actions.

**Chilling effects from vague restrictions.** The episode also illustrates a more general problem: vague or opaque U.S. government restrictions can chill far more technological activity than policymakers intend. There are many impediments to designing precise U.S. controls. Major “technologies” that Washington seeks to protect (such as AI, 5G, microelectronics, and drones) are really high-level constructs and systems-of-systems built from multiple interlinked technology families. Their smaller subelements (for example, advanced batteries that might power drones or electric cars) have complex global supply chains and innumerable uses and users. Agencies struggle to divvy up this mass of technological interconnections into clean administrative categories. And their criteria for doing so—premised on such notions as “national security” and, increasingly, “economic security”—are poorly conceptualized and highly contested. Early-stage technologies pose particular regulatory challenges because their future impact can only be guessed.

In the face of these uncertainties and administrative dilemmas, U.S. government agencies often take what they view as a cautious approach. They announce broad, open-ended authorities that would permit—but not require—a sweeping range of new government actions and foreign governments could “self-decouple” now, on their own terms, rather than risk a more abrupt and forceful U.S. government mandate later.
technology restrictions. The government can then apply these authorities on a case-by-case basis, deliberating in secret and weighing a host of variables. This approach maximizes flexibility: enforcement can be dialed up or down based on new data, circumstances, and political imperatives. Its ambiguity also makes it harder for adversaries to identify and exploit loopholes in Washington’s decisionmaking framework. Examples of this approach include CFIUS reviews, enforcement of the Commerce Department’s new ICTS supply chain security rule, the licensing process for many export-controlled items, and designations under many sanctions authorities.

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However, too much discretion can ultimately be self-defeating. A major risk is that outside stakeholders see these opaque technology control regimes as risky and unpredictable, thereby chilling activity that could otherwise benefit the United States. Consider the Trump administration’s visa ban for Chinese graduate students and researchers affiliated with Beijing’s “military-civil fusion” programs; the ban left many key terms undefined, including what affiliations would be disqualifying. The policy’s ambiguity generated widespread confusion about its scope and impact. A rigorous analysis by Georgetown’s Center for Security and Emerging Technology tentatively “suggest[ed] 3,000 to 5,000 as a reasonable range for the annual number of students affected,” calling this “a low-confidence estimate” and warning that the real number “would be much larger” if “military-civil fusion” was interpreted more broadly than the report assumed.223 (The study was “unable to assess” the impact on Chinese nonstudent researchers due to a lack of publicly available data.) Today, more than eighteen months after the policy was announced, there is still no official public account of its key parameters.

Confronting this uncertainty, many Chinese graduate students and researchers can be expected simply to avoid applying to U.S. universities. Many U.S. universities will likewise avoid admitting or hiring certain Chinese applicants—even in cases where there was no national security risk and a visa might actually have been granted. (U.S. officials have offered rough estimates of visa revocations and denials, but have not yet publicly addressed potential chilling effects.)224 Moreover, such dynamics can become self-reinforcing. Chinese graduate students and researchers diverted from the United States will go somewhere else instead, and eventually these alternate academic paths could become popular or even default options. The net result could be large, long-term reductions in American access to top academic talent.

Chinese government retaliation. Another feedback loop stems from Beijing’s retaliation against U.S. technology controls aimed at China, which creates a risk of lengthy tit-for-tat reactions or escalatory spirals. So far, Beijing’s responses have generally been reciprocal.225 For example, it established an “unreliable entities list” following increased U.S. use of the Entity List, and Beijing imposed new technology export controls after related moves by
Washington. But future responses could be more damaging. Many in Beijing believe that the United States is intent on destroying the Chinese technology ecosystem, and Chinese domestic narratives about tech competition have become increasingly nationalistic. A particularly harsh U.S. restriction, or the overall accumulation of controls, may cause China to step up its responses or broaden them into new areas. Alternatively, Beijing might over-react due to misperceived U.S. intentions.

Retaliation by China could put pressure on Washington to respond in kind, risking a repetitive cycle that takes decoupling further or faster than the United States initially envisioned. For example, the U.S. order for ByteDance to divest from TikTok was followed, less than a year later, by China’s pressure on ride-hailing company DiDi to de-list from the New York Stock Exchange. Although Beijing probably had multiple motivations for reining in DiDi, it publicly cited data security concerns, mirroring Washington’s main justification for the TikTok order. Beijing’s abrupt exercise of power over DiDi aggravated U.S. leaders’ worries that Chinese companies fail to disclose regulatory (and other) risks and are in Beijing’s thrall. Several senators seized upon the episode to promote an accelerated timeline for de-listing all Chinese companies from American exchanges under the Holding Foreign Companies Accountable Act. These moves and countermoves illustrate how easily escalatory spirals could be set in motion.

China has many cards to play if it chooses to step up its retaliation for U.S. tech restrictions. For example, it could dissuade or bar Chinese undergraduates from attending U.S. universities, depriving the United States of billions of dollars in tuition revenue at a time when many American institutions of higher learning are struggling financially. It could impose controls on the rare earth metals required for many important technologies, which China nearly monopolizes. It could further limit the activities of U.S. tech companies operating in China, bar or unwind U.S. investments and joint ventures, or ban the purchase of certain U.S. tech products. And if Beijing seeks to respond outside of the technology domain, the possibilities are open-ended.

These Chinese retaliation options illuminate vulnerabilities that U.S. leaders should try to address over time. For now, however, they are realities of interdependence. They highlight the damage America could suffer if decoupling gets out of hand and is no longer being controlled by Washington. Granted, China would also suffer in the process, so a measure of deterrence almost certainly exists. Nevertheless, history is replete with examples of destructive, seemingly irrational cycles of international escalation. A responsible U.S. strategy for technological decoupling must account for and mitigate this risk.

**Domestic political dynamics.** Finally, U.S. technology controls can shape domestic politics in ways that encourage ever-stronger restrictions in the future. Politically speaking, China-related controls—like other kinds of U.S. sanctions and restrictions targeting adversaries—are easy to impose and hard to reverse. Congress has also repeatedly stepped in
to turn discretionary executive measures into permanent statutory requirements. The result is a one-way ratchet, gradually limiting the policy space of each successive administration.

Biden, for example, has so far opted to retain many Trump policies that were highly controversial when first instituted—including the China tariffs and the unique foreign direct product rule applied to Huawei. Biden also allowed Trump’s sweeping ICTS regulation to come into effect, surprising multiple business groups that had called the rule unworkable. Although Biden may actively support some of these measures, politics are probably a factor in others. The Wall Street Journal reported that “administration officials [were] concerned that blocking or diluting the [ICTS] rule would send the wrong message about the new administration’s approach to China, potentially fueling criticism that it [was] taking a weaker approach.”

The economic impact of U.S. government technology restrictions can also ripple into the political arena. For example, a U.S. import ban on certain Chinese tech products could economically weaken the American resellers of those products. If those resellers ultimately exit the marketplace, that would mean fewer voices advocating for bilateral tech cooperation. Conversely, hawkish voices tend to thrive in a restrictive and securitized environment. Palantir, whose data products are used by the U.S. national security establishment, has emerged as a strong advocate of technological decoupling. Washington’s drive to counter China tech threats creates business and political opportunities for companies like Palantir, potentially fueling the rise of a well-connected decoupling lobby. There is already a long American tradition of defense and national security contractors exerting influence over public policy—for example, by supporting political candidates and thinkers who warn of foreign threats and advocate muscular U.S. responses. Technology controls aimed at China could unleash similar dynamics, as a subset of U.S. tech companies will benefit from such restrictions and work to entrench or expand them.

In sum, Washington might aim for a moderate level of technological decoupling but end up with something broader, faster, and messier. The risks are serious and demand a strategic response. The United States must preserve the ability to adjust the decoupling process upward or downward—keeping its pace and scope aligned with American needs. That means U.S. technology restrictions should be kept as targeted and precise as possible to minimize the risk of unwanted escalation. Moreover, Washington must communicate its intentions clearly and convincingly to multiple audiences. It should openly clarify its strategic objectives, and even some specific policy criteria, to reassure companies, universities, and foreign governments—including China—of its intentions. This degree of clarity cuts against the American grain: U.S. political and national security leaders like to preserve their own discretion, and they struggle to make credible commitments across presidential administrations. But in a complex and interdependent global technology landscape, too much silence or ambiguity may actually cede control to others.
CHOOSING A STRATEGY


192 A magisterial version of this argument can be found in Rush Doshi, The Long Game (New York: Oxford University Press, 2021). That said, Doshi’s discussion of technology does not necessarily fit within restrictionist canon. He ultimately calls for a fairly targeted set of U.S. government tech controls combined with robust offensive investment and international coordination. Meanwhile, Hal Brands and Michael Beckley have provided a contrasting set of predictions, arguing that China is a “peaking power” whose growing boldness on the world stage stems from a sense of impending decline. Hal Brands and Michael Beckley, “China Is a Declining Power—and That’s the Problem,” Foreign Policy, September 24, 2021, https://foreignpolicy.com/2021/09/24/china-great-power-united-states/.


Huawei’s current placement on the Treasury Department’s Non-SDN Chinese Military-Industrial Complex Companies List is an outgrowth of its earlier (now-lapsed) designation as a “Communist Chinese Military Company” by DOD. Huawei still remains on another, similar DOD list—the so-called Section 1260H List—but this does not yet have any clear legal consequences. “Biden Administration Revises and Expands Restrictions on U.S. Person Investment in Chinese Companies and Releases New


Although the analysis and recommendations in this section are grounded in the centrist strategy outlined earlier, the analytical structure and methodology used can be readily adopted by restrictionists or cooperationists to frame their own arguments.