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CHAPTER FIVE

Potential Economic Tools for a Victory Denial Deterrence Strategy

Introduction

As discussed in the preceding chapters of this study, implementation of a broad victory denial approach to deterrence of Chinese aggression against Taiwan requires the integration of multiple tools—military, economic and diplomatic. These tools may be integrated and applied both unilaterally by the United States and multilaterally, with like-minded countries, to help ensure that the CCP calculates that the risks and costs of military action against Taiwan would exceed the costs and risks of enduring the continuation of the status quo on Taiwan.

China's economy today is the second largest in the world after that of the United States and it has expanded its economic activity and influence around the world. Unlike the Soviet Union during the Cold War, there is significant trade and investment among China, the United States, and U.S. allies and partners. Despite a growing recognition that China is becoming increasingly belligerent and provocative—in its policies, statements, and military actions—and that coordinated, multilateral approaches are necessary to convince the Chinese leadership of the severe consequences they will face should China move against Taiwan, trade and economic links likely complicate the ability of the United States and others to impose strong sanctions and penalties on China that do not cause significant economic hardship for their citizens.

Deterring military aggression against Taiwan is a daunting task, especially in light of China's military buildup in conventional and nuclear forces, the CCP leadership's declared goal of integrating Taiwan with the mainland by 2049, and China's threats—including nuclear threats—against states that stand in Beijing's way. An effective deterrence policy requires an integrated strategy, involving all elements of state power. This includes using economic tools, as appropriate, in a measured and deliberate manner to convey to China's authorities that any use of force against Taiwan will carry consequences beyond potential military responses, which—when taken together—would be more intolerable than enduring the status quo on Taiwan.

Economic prosperity is one of the imperatives for the CCP to maintain legitimacy. Therefore, economic tools can be valuable elements of an integrated victory denial approach to deterrence. Importantly in this regard, there is a temporal dimension to any credible, effective deterrence strategy. It is impossible to build U.S. deterrence credibility via prospective deterrence actions that are taken in secret and/or not communicated *prior to any potential hostilities*. The United States needs to organize and communicate prospective deterrence sanctions well in advance of hostilities for those sanctions to have any pre-war deterrence effect on China's leadership. Sanctions organized and communicated *after* hostilities commence may serve a useful purpose, but they cannot contribute to deterring China's decision to launch hostilities.

For example, threatening to decouple China from international trade institutions in the event of an attack on Taiwan would be an overt and powerful signal to China that its unwanted behavior will entail significant costs. Deterrence threats organized and communicated in advance to reduce investments in China's economy, reduce supply chain dependence on China, and punish intellectual property theft, along with mapping and threatening the economic interests of the CCP leadership, could help to build credibility in the minds of China's leaders that the United States has both deterrence tools and resolve. As one former U.S. State Department official stated, "The most powerful weapon America has to reverse Xi Jinping's march to global domination is economic."[1]

In short, the United States has a plethora of economic, financial, trade, and investment tools, including the use of sanctions, that can be organized and brandished to apply pressure in those areas where China's economy is vulnerable and threaten to penalize China for aggressive behavior. Often, the United States announces these tools in a reactive manner—in other words, after actions are taken that the United States sought to deter. Transitioning from a reactive to a proactive approach that organizes and brandishes economic sanctions in advance of a crisis could yield important deterrence benefits, as it likely is better to communicate clearly U.S. intentions and the prospect of economic loss *before* China engages in aggression, rather than after the fact.[2]

The Potential Impact of Sanctions

The utility of sanctions to deter aggression has been challenged as a result of Russia's invasion of Ukraine. President Biden has stated, "Sanctions never deter";[3] however, senior administration officials have declared that the purpose of sanctioning Russia was to deter its invasion of Ukraine. For example, Secretary of State Antony Blinken stated, "The purpose of those sanctions is to deter Russian aggression."[4] And, the president's National Security Advisor, Jake Sullivan, declared, "The president believes that sanctions are intended to deter."[5] Brandishing sanctions alone and after an invasion is not a deterrence strategy and cannot contribute to an integrated victory denial strategy.

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[1] Len Khodorkovsky, quoted in Gordon G. Chang, "What America must do about China in 2022," *Fox News*, January 3, 2022, available at https://www.foxnews.com/opinion/america-biden-china-2022-gordon-chang.

[2] Russia's invasion of Ukraine sparked a debate over the utility of preemptive sanctions as a deterrent, with some contending that the imposition of sanctions before the invasion could have prevented Russian aggression; the Biden Administration maintained that imposing sanctions preemptively could prompt Russia to invade. As Pentagon press secretary John Kirby stated, "If it's a deterrent and you use it before the aggression is made or the transgression is made, then you lose your deterrent effect. If you punish somebody for something that they haven't done yet, then they might as well just go ahead and do it." See Ronn Blitzer, "Pentagon spox says threat of Russia sanctions has 'deterrent effect,' but admits invasion may be 'days away'," *Fox News*, February 13, 2022, available at https://www.foxnews.com/politics/pentagon-spox-kirby-us-not-considering-sanctions-against-russia. Some Members of Congress, however, challenged this view. For example, Rep. Mike Waltz (R-FL) argued that "promising tough action... after an invasion will do very little" to deter aggression. See "US lawmakers urge pre-emptive sanctions, Ukraine arms to deter Putin," *Agence France-Presse*, December 15, 2021, available at https://www.france24.com/en/live-news/20211214-us-lawmakers-urge-pre-emptive-sanctions-ukraine-arms-to-deter-putin.

[3] "Remarks by President Biden in Press Conference," March 24, 2022, available at https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/03/24/remarks-by-president-biden-in-press-conference-7/.

[4] "Secretary Antony J. Blinken With Dana Bash of CNN State of the Union," January 23, 2022, available at https://www.state.gov/secretary-antony-j-blinken-with-dana-bash-of-cnn-state-of-the-union-2/.

[5] "Press Briefing by Press Secretary Jen Psaki and National Security Advisor Jake Sullivan," February 11, 2022, available at https://www.whitehouse.gov/briefing-room/press-briefings/2022/02/11/press-briefing-by-press-secretary-jen-psaki-and-national-security-advisor-jake-sullivan-february-11-2022/.

The use of sanctions, as with other economic penalties, can be tailored, i.e., ratcheted up or down, narrowed or broadened, depending on circumstances. This may be referred to as "volume control," i.e., economic sanctions can be strengthened, suspended or reversed depending on China's behavior.

For sanctions to have a deterring effect on China's decision making, they will likely need to be in effect for a prolonged period of time, most likely years. This could lead to U.S. and allied "sanctions fatigue" and a desire to avoid extensive economic disruptions by abandoning them. China's leaders must be convinced of U.S. seriousness and must not perceive threatened sanctions to be a transitory phenomenon that will be reassessed, eased, or lifted by subsequent U.S. administrations unless CCP behavior conforms to U.S. redlines. This may be difficult given the ease of sanctions waivers and China's perceptions of the United States as unwilling to absorb significant economic hardship over the long term on behalf of Taiwan. However, if CCP leaders believe they face an indefinitely long sanctions campaign, one in which the United States can adjust the supply chain away from China, they may grudgingly weigh the long-term impacts to China's economic growth and prosperity.

The degree to which CCP leaders may be deterred by economic threats is debatable—even if they are properly brandished. CCP leaders who doubt U.S. resolve to defend Taiwan militarily and question the credibility of U.S. military threats may be more likely to view American economic ultimatums as credible. However, given the economic ties between the United States and China, it is also possible that China views the threat of economic sanctions as lacking the credibility needed to help deter aggression.

Financial sanctions may be more effective than trade-related measures and may provide the most important leverage by targeting a vulnerable sector of China's economy. They may also have the greatest impact on China's decision-making calculus as part of a consolidated approach to deter it from engaging in military aggression against Taiwan. For example, sanctions targeting banks could have a negative impact on China's economy by preventing Beijing from engaging in crucial U.S. dollar transactions in the United States. In addition, China's financial and banking sectors are heavily indebted, poorly managed, and highly corrupt, which may provide opportunities for institutional disruption.[6]

Recognizing its potential vulnerabilities, China has made moves to insulate its economy from possible sanctions. For example, Beijing recognizes its dependency on the U.S. dollar and is attempting to overcome that by internationalizing the yuan, or Renminbi (RMB), its official currency. One approach China has adopted is using digital currency to decouple its economy from the U.S. dollar.[7] The movement to digital currency would allow China to phase out physical bank notes and potentially give China the ability to mitigate the impact of economic sanctions. In addition, as one analysis noted, "the long-term potential of the digital yuan will be its ability to subvert the power of the American dollar by enabling countries sanctioned by the United States, such as Iran, North Korea and possibly Afghanistan, to

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[6] See *Global Times*, "Chinese bank executives investigated, arrested amid tightened crackdown on corruption," September 13, 2021, available at https://www.globaltimes.cn/page/202109/1234151.shtml. Also see Nathaniel Taplin, "For China's Banks, Corruption Is Only Half the Problem," *The Wall Street Journal*, October 12, 2021, available at https://www.wsj.com/articles/for-chinas-banks-corruption-is-only-half-the-problem-11634044402. (paywall)

[7] Alex J. Rouhandeh, "China Could Curb Reliance on U.S. Dollar, Avoid Sanctions Through Digital Currency Apps," *Newsweek*, January 5, 2022, available at https://www.newsweek.com/china-could-curb-reliance-us-dollar-avoid-sanctions-through-digital-currency-apps-1666116.

conduct greater business with China."[8] However, China's digital currency will still depend on its real economy; i.e., the digital currency will still be just as weak as the RMB. As one analyst has stated, "the current low status of the RMB means that even a digitised version will find it difficult to budge the power of the mighty US greenback."[9] In addition, because China owns so many assets in the United States, the United States still has credible options to impose hardship on China's economy, despite the potential for its retaliation.

The effect of sanctions on China's financial sector can also be increased through the application of so-called secondary sanctions. This involves imposing penalties not only on companies but on domestic and foreign entities that do business with China. However, the United States should be prepared for a negative international reaction if it embarks on a unilateral sanctions campaign. Secondary sanctions often affect many parties, and therefore may be seen by some as counterproductive if other countries that trade and do business with China, including U.S. allies and strategic partners, find their own economic health and prosperity at risk as a result of U.S. actions. This risk can be mitigated, however, by a U.S. policy that encourages greater trade and economic ties with other countries that currently have strong economic ties with China. Beijing's "Belt and Road Initiative" (BRI) has made inroads throughout Africa, Latin America, and Asia; however, some countries are now actively questioning the economic benefits of Chinese investment. For example, BRI projects have been canceled in countries like Bolivia, Kazakhstan, and Malaysia.[10] Although China continues to press forward with its BRI activities, the United States should consider ways to offset China's exploitative actions by expanding its economic relationships with countries subject to Beijing's predatory lending policies.

Unilateral Versus Multilateral Approaches

The use of economic tools to impose costs on China (or any opponent for that matter) can have significant consequences. Those consequences can be enhanced if economic tools like sanctions are applied multilaterally rather than unilaterally. This can also mitigate the potentially negative effects on other countries of secondary sanctions. However, the United States would need to coordinate actions with its strategic partners, with the level of coordination dependent on the scope of the sanctions. As described elsewhere in this study, achieving concurrence among Asian allies and strategic partners on a strong approach to sanctioning China is complicated by regional political and economic dynamics. Nevertheless, although the United States has the ability to implement sweeping sanctions on China unilaterally, the effect of sanctions will be magnified if U.S. allies and partners join in this approach.

There are historical precedents that demonstrate the United States can successfully obtain allied support for comprehensive sanctions campaigns. For example, the Cold War-era Coordinating Committee for Multilateral Export Controls (CoCom)—a multilateral

[8] Evan Freidin, "China's digital currency takes shape," *The Interpreter*, September 8, 2021, available at https://www.lowyinstitute.org/the-interpreter/china-s-digital-currency-takes-shape.

[9] Ibid.

[10] David Stanway, "China's Belt and Road plans losing momentum as opposition, debt mount -study," *Reuters*, September 29, 2021, available at https://www.reuters.com/world/china/chinas-belt-road-plans-losing-momentum-opposition-debt-mount-study-2021-09-29/.

export control regime established in the years after World War II and lasting until 1994—was a trade embargo campaign that placed export controls on sensitive technologies with the intent of preventing their acquisition by the Soviet Union and its Warsaw Pact allies.[11] CoCom was a voluntary and informal arrangement among states with a common purpose. Clearly, the situation with respect to China today is more challenging, given the greater economic robustness of the Chinese economy compared to the Soviet economy, and the more extensive economic ties many Asian nations have to China, but this is not to discount the possibility that a multilateral approach could yield greater deterrence benefits than a unilateral one.

More recently, comprehensive sanctions were imposed upon Russia by the United States and its European allies following Russia's 2014 annexation of Crimea. These sanctions have continued, with the Group of Seven (G7) countries announcing in 2021 that they were "fully committed to the implementation of sanctions" on Russia for its military actions.[12] And, in the wake of Russia's unprovoked and unjustified invasion of Ukraine, the United States, its allies and strategic partners imposed an unprecedented number of sanctions on Russia, including sanctioning Russian financial institutions, oligarchs, and even Vladimir Putin himself.[13]

Enlisting European support for trade embargoes or economic penalties has been complicated by the 2020 Comprehensive Agreement on Investment between the European Union (EU) and China, which is intended to "ensure that EU investors achieve better access to a fast growing 1.4 billion consumer market, and that they compete on a better level playing field in China."[14] However, there is some indication that America's European allies appear to be more willing to risk displeasure in Beijing by engaging directly with Taiwan as a result of a growing recognition of the danger China poses to international peace and stability. For example, several delegations from Central and Eastern European countries visited Taiwan in 2021 in defiance of China in an effort to strengthen economic cooperation with the island. Lithuania has borne the brunt of the CCP's displeasure since its withdrawal from the "17+1" group, a forum to promote Chinese investments in Central and Eastern European countries.[15] Lithuania also permitted Taiwan to open a representative office in Vilnius, its capital, in 2021. In retaliation, China downgraded Lithuania's diplomatic mission in Beijing and harassed its diplomats and their families to the point of Lithuania having to evacuate them

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[11] John H. Henshaw, *The Origins of CoCom: Lessons for Contemporary Proliferation Control Regimes* (Washington, D.C.: The Henry L. Stimson Center, May 1993), available at https://www.stimson.org/wp-content/files/file-attachments/Report7_1.pdf.

[12] German Federal Foreign Office, "G7 Foreign Ministers' Statement on Ukraine," March 18, 2021, available at https://www.auswaertiges-amt.de/en/newsroom/news/g7-ukraine/2448536.

[13] In this connection, it is important to note that these sanctions were imposed only *after* Russia invaded, as a form of punishment. The threat of prospective sanctions, which was clearly and publicly articulated to Russia prior to its military action, and which undoubtedly factored into Putin's calculus, failed to deter him from launching a war of aggression against a free and democratic neighbor. What the Ukraine experience demonstrates is that punishment is not a deterrent and that, even with the prospect of crippling sanctions, a determined opponent bent on conquest is unlikely to be deterred by the prospect of future penalties.

[14] European Commission Press Release, "Key elements of the EU-China Comprehensive Agreement on Investment," December 30, 2020, available at https://ec.europa.eu/commission/presscorner/detail/en/IP_20_2542.

[15] Stuart Lau, "Lithuania pulls out of China's '17+1' bloc in Eastern Europe," *Politico*, May 21, 2021, available at https://www.politico.eu/article/lithuania-pulls-out-china-17-1-bloc-eastern-central-europe-foreign-minister-gabrielius-landsbergis/.

on short notice.[16] Additionally, China declared an import ban on products with goods made in Lithuania, potentially in violation of World Trade Organization (WTO) rules.[17] The EU has pushed back against China, taking its case to the WTO and declaring China's action to be "discriminatory and illegal."[18]

In 2021, the European Parliament voted overwhelmingly to support upgraded economic ties with Taiwan that would include a bilateral investment agreement.[19] Former NATO Secretary General Anders Fogh Rasmussen praised this move, saying "Beijing uses its economic might to blackmail countries and corporations," and calling on the free world to "create an 'Economic Article 5' to blunt China's abuse of strategic investment and economic coercion to geopolitical ends."[20]

Growing European recognition of the danger posed by China may be leveraged to build support for sanctions and economic penalties on China that have significant impacts for Beijing: "There has been a clear realization that the situation in Taiwan is of concern to Europeans not only from a values perspective but from the perspective of regional security architecture."[21]

In addition, America's Asian allies continue to express increasing concern over China. Australia has suffered from actions that one U.S. official referred to as "really dramatic economic warfare."[22] Japan continues to be threatened with nuclear attack by China should it come to the defense of Taiwan militarily, yet appears willing to impose economic costs on Beijing should China attack Taiwan. Former Japanese Defense Minister Taro Kono stated, "If China actually tries to use force against Taiwan, it would probably lead to a very dire

[16] Milda Seputyte, "Foreign Diplomats Helped Lithuania Evacuate Staff From China," *Bloomberg*, December 20, 2021, available at https://www.bloomberg.com/news/articles/2021-12-20/foreign-diplomats-helped-lithuania-evacuate-staff-from-china.

[17] See Tod Lindberg and Peter Rough, "Lithuania Is the 'Canary' of World Order," *The Wall Street Journal*, December 28, 2021, available at https://www.wsj.com/articles/lithuania-is-the-canary-of-world-order-russia-china-baltic-states-putin-xi-jinping-11640726280. Also see Stuart Lau and Barbara Moens, "China's trade attack on Lithuania exposes EU's powerlessness," *Politico*, December 16, 2021, available at https://www.politico.eu/article/china-trade-attack-on-lithuania-exposes-eu-powerlessness/.

[18] Daniel Michaels and Drew Hinshaw, "EU Hits Back at China Over Trade Limits, Taking Lithuania Fight Global," *The Wall Street Journal*, January 27, 2022, available at https://www.wsj.com/articles/eu-takes-china-to-wto-over-lithuania-trade-restrictions-11643271938#:~:text=BRUSSELS%E2%80%94The%20European%20Union%20hit,pressure%20to%20advance%20political%20objectives.&text=The%20EU%20handles%20foreign%20trade%20on%20behalf%20of%20its%2027%20members. (paywall)

[19] See Keoni Everington, "China cries foul at EU report backing closer Taiwan ties," *Taiwan News*, October 22, 2021, available at https://www.taiwannews.com.tw/en/news/4322319. Also see Samson Ellis and Cindy Wang, "European Lawmakers Seek to Upgrade Ties With Taiwan," *Bloomberg*, September 2, 2021, available at https://www.bloomberg.com/news/articles/2021-09-02/european-lawmakers-seek-to-upgrade-ties-with-taiwan.

[20] Anders Fogh Rasmussen, "China Is Using Economic Coercion as Blackmail. The US and EU Must Fight Back," *Newsweek*, January 11, 2022, available at https://www.newsweek.com/china-using-economic-coercion-blackmail-us-eu-must-fight-back-opinion-1667958.

[21] Amy Qin and Steven Erlanger, "As Distrust of China Grows, Europe May Inch Closer to Taiwan," *The New York Times*, November 10, 2021, available at https://www.nytimes.com/2021/11/10/world/asia/taiwan-europe-china.html.

[22] "Aukus deal: US accuses China of 'economic warfare' against Australia," *Agence France-Presse*, December 1, 2021, available at https://www.france24.com/en/asia-pacific/20211201-aukus-deal-us-accuses-china-of-economic-warfare-against-australia.

situation that would probably include some kind of economic sanctions."[23] And former Japanese Prime Minister Shinzo Abe declared that a Chinese attack on Taiwan would result in "economic suicide" for Beijing.[24] A Chinese threat to Taiwan, he declared, "is a dire challenge to all of us, especially to Japan."[25]

As a former senior U.S. State Department official has contended, the United States should "do extensive preparatory work—in conjunction with key allies and partners around the world" to impose international sanctions against China and to prepare "a 'menu' of such policies ahead of time, in order to enable them to be implemented more thoroughly and effectively if and when the need arises."[26] Doing so, and "[m]aking it known that such economic measures were indeed being prepared, moreover, could also serve the cause of deterrence."[27]

It is possible, of course, that this approach would not have the intended deterrent effect. The United States and Western allies threatened Russia with sanctions in advance of its invasion of Ukraine, yet this proved to be an insufficient deterrent as President Putin chose to take military action despite multiple warnings of the consequences. As emphasized above, punishment after the fact may serve some purpose, but it is not a deterrent. Nevertheless, organizing and communicating the prospective scope and certainty of economic punishment in advance should China take military action against Taiwan may be a useful part of a victory denial deterrent strategy.

Although a multilateral approach to sanctions would be useful, a number of experts interviewed for this study suggested that unilateral sanctions imposed on China by the United States could be just as useful, if properly applied. China's export economy is highly dependent upon the U.S. market. This dependency should be leveraged as part of a coordinated strategy to help bolster the U.S. deterrence position.

The imposition of sanctions would likely lead China to retaliate against U.S. companies. For many U.S. technology companies, for example, the Chinese market is seen as irreplaceable. As the U.S.-China Economic and Security Review Commission concluded, "Despite ongoing political frictions and concerns about discriminatory treatment, many U.S. companies remain committed to the Chinese market."[28] Indeed, one estimate concludes that the level of U.S. investment in China likely exceeds $1 trillion.[29] Consequently, alternative approaches must be developed to satisfy U.S. importers and manufacturers so that the

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[23] "China attack on Taiwan could draw economic sanctions: Japan's Kono," *Kyodo News*, December 2, 2021, available at https://english.kyodonews.net/news/2021/12/d66059529168-update1-china-attack-on-taiwan-could-draw-economic-sanctions-japans-kono.html.

[24] Ibid.

[25] Joel Gehrke, "Japan's Shinzo Abe warns China: Invasion of Taiwan would be 'suicidal'," *Washington Examiner*, December 14, 2021, available at https://www.washingtonexaminer.com/policy/defense-national-security/japans-shinzo-abe-warns-china-invasion-of-taiwan-would-be-suicidal.

[26] Christopher A. Ford, *Defending Taiwan: A Study in Defense and Deterrence, Occasional Paper*, Vol. 2, No. 2 (Fairfax, VA: National Institute Press, February 2022), pp. 49-50, available at https://nipp.org/wp-content/uploads/2022/02/Vol.-2-No.-2-Ford.pdf.

[27] Ibid., p. 50.

[28] *2021 Report to Congress of the U.S.-China Economic and Security Review Commission* (Washington, D.C.: U.S. Government Printing Office, 2021), p. 120, available at https://www.uscc.gov/sites/default/files/2021-11/2021_Annual_Report_to_Congress.pdf.

[29] Derek Scissors, "American Funding of China Is Becoming Dangerous," American Enterprise Institute, December 2020, available at https://www.aei.org/research-products/report/american-funding-of-china-is-becoming-dangerous/.

impact on U.S. industries from the prospective loss of China's market can be minimized to the greatest extent possible.

Beijing will likely seek to prevent or counter U.S. economic sanctions through a variety of means, including actions to minimize its own economic vulnerabilities and imposing costs on the U.S. economy by targeting U.S. companies that have strong economic ties to China. Therefore, the U.S. government—as part of an integrated strategy—should work with private sector entities in the United States and American companies operating abroad to mitigate in advance the impact of any Chinese retaliatory actions directed against U.S. economic interests. Doing so can help insulate the U.S. economy from the potential negative consequences of China's actions and, by minimizing U.S. economic vulnerabilities, can help strengthen the credibility of U.S. economic-oriented deterrent threats.

To have maximum deterrent effect, a sanctions campaign against China must target what the CCP values most. This may not be limited solely to traditional economic, financial, or trade entities but may also include key portions of China's war-making enterprise, including its nuclear, missile, space, cyber, and biotechnology sectors. Although the vulnerability of China's defense sector to outside pressure varies, such a comprehensive approach not only would demonstrate seriousness on the part of the United States but may be perceived by China as a more believable deterrent threat than military threats, particularly if sanctions prepared and communicated in advance appear to be certain, with no exemptions or waiver provisions.

Finance, investment, regulation, and trade are all areas where U.S. deterrence threats can promise the degradation of China's ability to attain its foreign policy goals and objectives. Trade and investment can be powerful near-term tools. The United States can limit U.S. investment in Chinese firms either through executive action or legislative mandate. China's financial stability is heavily dependent on foreign investment, which is a vulnerability that can be exploited by cultivating alternatives to the Chinese market. One area to consider is Chinese intrusion into the European automobile manufacturing industry. China owns significant portions of automobile companies such as Daimler-Benz (20 percent)[30] and is seeking to dominate the electric car sector. In fact, Mercedes-Benz has made China its "second home," has opened a major automotive technology and engineering center in Beijing, and has moved its design studio to Shanghai.[31] U.S. automotive companies have also invested in China, with Tesla opening a showroom in Urumqi, the capital of Xinjiang—where China has been conducting a campaign of persecution and genocide against the ethnic Uighur population.[32]

China's efforts to attract foreign investment as a means to accelerate its own economic growth can be countered through a sanctions strategy that provides disincentives for Western companies to invest in its market while offering prudent alternatives that cause

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[30] "Chinese carmakers may soon own a fifth of Daimler," *The Economist*, December 21, 2019, available at https://www.economist.com/business/2019/12/18/chinese-carmakers-may-soon-own-a-fifth-of-daimler.

[31] Norihiko Shirouzu, "Home from home: Mercedes-Benz doubles down on China," *Reuters*, October 11, 2021, available at https://www.reuters.com/business/autos-transportation/home-home-mercedes-benz-doubles-down-china-2021-10-10/.

[32] Liza Lin, "Tesla Opens Showroom in China's Xinjiang, Region at Center of U.S. Genocide Allegations," *The Wall Street Journal*, January 4, 2022, available at https://www.wsj.com/articles/tesla-opens-showroom-in-chinas-xinjiang-region-at-center-of-u-s-genocide-allegations-11641214630?mod=hp_lead_pos4&eType=EmailBlastContent&eId=97a41203-73d6-41f3-8094-ec5249c1a164. (paywall)

greater economic discomfort to China. Canada, in particular, has sought to bolster its economic ties with Taiwan, with the country's International Trade Minister calling the island "a key trade and investment partner as Canada broadens its trade links and deepens its economic partnerships in the Indo-Pacific region."[33] Canadian Prime Minister Justin Trudeau accused China of "very cleverly playing us off each other in an open market competitive way," saying that China has sought to "play the angles and divide us, one against the other."[34] Bolstering trade ties with Taiwan would also send an important political message to Beijing.[35]

Sanctions can be legislatively mandated, and, in fact, Congress has often required that sanctions be imposed on foreign individuals and entities who act against U.S. national security interests. With congressional support, legislation can be crafted that specifies the kinds of behavior that would trigger sanctions against China, e.g., the manner and degree by which China violates Taiwanese sovereignty. Sanctions triggers could be defined by the law to strengthen their credibility.

While legislative action would be useful, sufficient legal authority already exists empowering the executive branch to take punitive actions against China, including preemptive actions intended to deter aggression. This requires policy decisions, not legislative mandates. For example, the president has authority under the 1977 International Emergency Economic Powers Act (IEEPA) to prohibit certain foreign transactions in response to any "unusual and extraordinary threat, which has its source in whole or substantial part outside the United States, to the national security, foreign policy, or economy of the United States."[36] In fact, presidents have used IEEPA to control economic transactions more than 60 times by declaring national emergencies since it was first invoked in response to the Iran hostage crisis in 1979.[37]

Various U.S. administrations have relied on sanctions as a tool to punish those who violate U.S. laws or engage in nefarious behavior, to include imposing penalties on foreign leaders and regimes, freezing financial assets, and prohibiting travel. The 2018 *National Strategy for Countering Weapons of Mass Destruction Terrorism*, for example, called for "targeted" sanctions "to deter individuals and institutions who are beyond state control from

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[33] Statement of International Trade Minister Mary Ng, cited in Star Editorial Board, "With Taiwan talks, Ottawa is finally pushing back against Beijing," *Toronto Star*, January 11, 2022, available at https://www.thestar.com/opinion/editorials/2022/01/11/with-taiwan-talks-ottawa-is-finally-pushing-back-against-beijing.html.

[34] Rachel Gilmore, "Canada working on new China strategy, Joly says as PM calls out Beijing's 'coercive diplomacy'," *Global News*, January 9, 2022, available at https://globalnews.ca/news/8496485/china-strategy-canada-joly-trudeau-beijing-coercive-diplomacy/.

[35] Kathleen C. Bailey, *Maintaining Taiwan's Democracy, Information Series No. 479* (Fairfax, VA: National Institute Press, February 11, 2021), available at https://nipp.org/wp-content/uploads/2021/03/IS-479.pdf.

[36] See Legal Information Institute, "50 U.S. Code § 1701 - Unusual and extraordinary threat; declaration of national emergency; exercise of Presidential authorities," available at https://www.law.cornell.edu/uscode/text/50/1701.

[37] See Christopher A. Casey, Ian F. Fergusson, Dianne E. Rennack, and Jennifer K. Elsea, *The International Emergency Economic Powers Act: Origins, Evolution, and Use*, Congressional Research Service, July 14, 2020, available at https://www.everycrsreport.com/files/2020-07-14_R45618_aadd12ce75fbb55365c4c4eb58a135d2791a245a.pdf. Also see Andrew Boyle, *Checking the President's Sanctions Powers: A Proposal to Reform the International Emergency Economic Powers Act*, Policy Report, Brennan Center for Justice at New York University School of Law, June 10, 2021, available at https://www.brennancenter.org/sites/default/files/2021-06/BCJ-128%20IEEPA%20report.pdf.

aiding and abetting WMD terrorism."[38] The Trump Administration imposed multiple sanctions on China, to include sanctioning elements of the Defense Ministry, a high-ranking official of the CCP's Politburo, PLA officers, and state-owned business enterprises, including the China National Offshore Oil Corporation.[39] More recently, in 2021, the Biden Administration imposed sanctions on dozens of Chinese companies for enabling "China's destabilizing military modernization efforts" and for their "support of the military modernization of the People's Liberation Army."[40]

In coordination with the Department of State, the Department of the Treasury has applied sanctions numerous times over the past two decades, noting, "When used effectively, sanctions have the capacity to disrupt, deter, and prevent actions that undermine U.S. national security."[41] Since 2000, the use of sanctions has increased by more than 900 percent.[42] The Biden Administration has called for sanctions to be applied "as part of a larger strategy in support of specific policy objectives" and in coordination with allies where possible.[43]

China is still dependent on overseas sources for metals and fuel. The oil industry is another area where sanctions could prove effective in threatening significant costs. China's industry relies on substantial imports of foreign oil and China has become the world's biggest importer of crude oil, importing more than 10 million barrels of oil per day in 2019.[44] Most of China's oil imports—some 55 percent—come from the Organization of Petroleum Exporting Countries (OPEC) member countries, with Russia as the largest non-OPEC supplier, providing roughly 15 percent of China's oil imports.[45] However, targeted sanctions against the Chinese oil industry, along with secondary sanctions that impose costs on supplier states, including Russia, may have prospective economic consequences for China that would affect Beijing's deterrence calculus.

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[38] The White House, *National Strategy for Countering Weapons of Mass Destruction Terrorism*, December 2018, p. 9, available at https://www.whitehouse.gov/wp-content/uploads/2018/12/20181210_National-Strategy-for-Countering-WMD-Terrorism.pdf.

[39] "US sanctions under Trump: A legacy that could box in Biden?," *Aljazeera*, January 21, 2021, available at https://www.aljazeera.com/news/2021/1/21/us-santions-under-trump-all-you-need-to-know.

[40] See, "U.S. adds 14 Chinese companies, to economic blacklist over Xinjiang," *CNBC*, July 10, 2021, available at https://www.cnbc.com/2021/07/10/us-adds-14-chinese-companies-to-economic-black-list-over-xinjiang.html. Also see Jill Disis and Kylie Atwood, "US adds a dozen Chinese companies to its trade blacklist," *CNN*, November 25, 2021, available at https://www.cnn.com/2021/11/25/tech/us-chinese-companies-trade-blacklist-intl-hnk/index.html; Alexandra Alper, David Shepardson, and Humeyra Pamuk, "U.S. blacklists dozens of Chinese firms including SMIC, DJI," *Reuters*, December 18, 2020, available at https://www.reuters.com/article/us-usa-china-sanctions-idUKKBN28S0HL; and, U.S. Department of Commerce, "Commerce Lists Entities Involved in the Support of PRC Military Quantum Computing Applications, Pakistani Nuclear and Missile Proliferation, and Russia's Military," November 24, 2021, available at https://www.commerce.gov/news/press-releases/2021/11/commerce-lists-entities-involved-support-prc-military-quantum-computing.

[41] Department of the Treasury, *The Treasury 2021 Sanctions Review*, October 2021, p. 2, available at https://home.treasury.gov/system/files/136/Treasury-2021-sanctions-review.pdf.

[42] Ibid., p. 3.

[43] Ibid., p. 4.

[44] Jeff Barron, "China's crude oil imports surpassed 10 million barrels per day in 2019," U.S. Energy Information Administration, March 23, 2020, available at https://www.eia.gov/todayinenergy/detail.php?id=43216.

[45] Ibid.

The Semiconductor Challenge

Because the United States currently relies heavily on semiconductor imports from China, and the imposition of strong sanctions would cause a major disruption to the semiconductor market, China may not take this potential U.S. threat seriously and may believe that China has greater retaliatory power over semiconductor imports from the United States. If China shuts that down, it would impact U.S. industry negatively. Moreover, a number of U.S. companies have reportedly been investing in China's semiconductor industry. A recent analysis indicates that "U.S. venture-capital firms, chip-industry giants and other private investors participated in 58 investment deals in China's semiconductor industry from 2017 through 2020, more than double the number from the prior four years."[46]

Working to stem the flow of U.S. investment in China could lead to retaliatory action by Beijing that may be directed against other U.S. technology sectors, as well as financial institutions that have assets in China. However, Taiwan is also a lead manufacturer of semiconductor chips, producing more than 60 percent of the world's supply compared to only 16 percent supplied by China,[47] and expanded trade with Taiwan in this area could mitigate supply chain issues resulting from the loss of the Chinese chip market. As one analyst noted, "Democracy coupled with chips is a winning formula in Europe."[48] Moreover, Taiwan's largest semiconductor chip manufacturer, TSMC, which reportedly manufactures roughly half of the semiconductors in the world today and approximately 90 percent of the most advanced chips,[49] signed a deal to begin manufacturing advanced 5-nanometer chips in 2024 at a new $12 billion plant being built in Phoenix, Arizona.[50] In December 2021, the United States and Taiwan agreed to work together to "strengthen critical supply chains," including semiconductor supply chains.[51] As a U.S. defense official noted, "Indeed, our economy—like many others around the world—has come to count on Taiwan as a critical supplier of high-technology, including semiconductors."[52] Therefore, a Chinese takeover of Taiwan could have significant consequences for the United States.

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[46] Kate O'Keeffe, Heather Somerville and Yang Jie, "U.S. Companies Aid China's Bid for Chip Dominance Despite Security Concerns," *The Wall Street Journal*, November 12, 2021, available at https://www.wsj.com/articles/u-s-firms-aid-chinas-bid-for-chip-dominance-despite-security-concerns-11636718400.

[47] Caitlin McFall, "China could win 'trump card' over global economy by taking over Taiwan semiconductor manufacturing," *Fox News*, December 3, 2021, available at https://www.foxnews.com/politics/china-taiwan-semiconductor-manufacturing.

[48] Qin and Erlanger, op. cit.

[49] Charlie Campbell, "Inside the Taiwan Firm That Makes the World's Tech Run," *Time*, October 1, 2021, available at https://time.com/6102879/semiconductor-chip-shortage-tsmc/.

[50] See Katie Schoolov, "Inside TSMC, the Taiwanese chipmaking giant that's building a new plant in Phoenix," CNBC, October 16, 2021, available at https://www.cnbc.com/2021/10/16/tsmc-taiwanese-chipmaker-ramping-production-to-end-chip-shortage.html. Also see Yen Nee Lee, "2 charts show how much the world depends on Taiwan for semiconductors," *CNBC*, March 15, 2021, available at https://www.cnbc.com/2021/03/16/2-charts-show-how-much-the-world-depends-on-taiwan-for-semiconductors.html; and, Caitlan McFall, op. cit.

[51] Department of Commerce Press Release, "Secretary of Commerce Gina M. Raimondo holds introductory call with the Taiwan Minister of Economic Affairs Mei-hua Wang," December 6, 2021, available at https://www.commerce.gov/news/press-releases/2021/12/secretary-commerce-gina-m-raimondo-holds-introductory-call-taiwan.

[52] Huileng Tan, "Taiwan, the world's biggest chip-maker, just set up a new trade framework with the US amid tensions with China," *Business Insider*, December 9, 2021, available at https://www.businessinsider.com/taiwan-sets-up-trade-framework-with-united-states-chip-maker-2021-12.

In 2020, the Trump Administration restricted trade with China's largest semiconductor chip manufacturer, SMIC, placing them on the U.S. entities list—along with dozens of other companies in China—noting that this action "stems from China's military-civil fusion (MCF) doctrine and evidence of activities between SMIC and entities of concern in the Chinese military industrial complex."[53] As Commerce Secretary Wilbur Ross stated at the time, the United States would "not allow advanced U.S. technology to help build the military of an increasingly belligerent adversary."[54] The impact of these actions has prompted negative rejoinders from Beijing, with one commentary published by the China Global Television Network (CGTN) contending that the United States is engaged in a "tech war" with China and that "the blocking of China's semiconductor industry is an attempt to block the construction of socialism."[55] The Biden Administration is also considering further restrictions on exports to SMIC and is seeking to enlist international partners in this effort. As U.S. Secretary of Commerce Gina Raimondo stated, "If America puts export controls vis-à-vis China on a certain part of our semiconductor equipment—but our allies don't do the same thing, and China can therefore get that equipment from our ally—that's not effective."[56] This reinforces the need to work with allies and partners to develop a multilateral approach that minimizes China's ability to circumvent restrictions on its importation of critical technologies.

The relationship between Taiwan's semiconductor industry and foreign economies has been referred to as a "silicon shield" that will help deter Chinese aggression against the island.[57] As TSMC's chairman Mark Liu stated, "the world all needs Taiwan's high-tech industry support. So, they will not let the war happen in this region because it goes against [the] interest of every country in the world."[58] China itself relies heavily on semiconductor chips produced by TSMC and, despite efforts to increase domestic production, less than 6 percent of semiconductor chips used in China in 2020 were manufactured domestically.[59] Moreover, since 2005, China has imported more semiconductor chips than any country in the world and, according to its own data, spent more in 2020 on the importation of chips than on oil.[60] Hence, China's desire to control the supply of Taiwanese chips—as well as to deny them to the United States and allies—could help make an invasion scenario appear attractive to the CCP leadership. As part of a cost-imposition strategy to deter China's

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53 "U.S. blacklists dozens of Chinese firms including SMIC, DJI," *Reuters*, December 18, 2020, available at https://www.cnbc.com/2020/12/18/us-adds-chinese-drone-company-dji-to-economic-blacklist-.html.

54 Ibid.

55 Keith Lamb, "U.S. seeks to engage in tech war by strangling China's semiconductor industry," *CGTN*, November 23, 2021, available at https://news.cgtn.com/news/2021-11-23/U-S-to-wage-a-tech-war-by-strangling-China-s-semiconductor-industry-15q13B7M1uE/index.html.

56 Jenny Leonard and Ian King, "Biden Team Mulls New Clampdown on China's Largest Chipmaker," *Bloomberg*, December 14, 2021 (updated December 15, 2021), available at https://www.bloombergquint.com/china/biden-team-considers-new-clampdown-on-china-s-biggest-chipmaker.

57 The term "silicon shield" was first attributed to Craig Addison, who wrote in 2000 that Taiwan's growth in fueling the world's digital economy would be "a deterrent against possible Chinese aggression." See Joyce Huang, "Can Taiwan's Silicon Shield Protect It against China's Aggression?," *Voice of America*, May 10, 2021, available at https://www.voanews.com/a/east-asia-pacific_can-taiwans-silicon-shield-protect-it-against-chinas-aggression/6205660.html.

58 Ibid.

59 Wei Sheng, "China made 6% of chips it used in 2020: report," *TechNode*, February 19, 2021, available at https://technode.com/2021/02/19/china-made-6-of-chips-it-used-in-2020-report/.

60 Wei Sheng, "China spends more importing semiconductors than oil," *TechNode*, April 29, 2021, available at https://technode.com/2021/04/29/china-spends-more-importing-semiconductors-than-oil/.

potential aggression against the island, Taiwan could threaten to destroy its own TSMC facilities if China attacks Taiwan, essentially immobilizing China's high-tech industries as part of what some analysts have referred to as a "broken nest" approach that would impose severe, long-term economic costs on China.[61]

In addition, export controls targeting China's communications and technology firm Huawei seriously undermined its bid to dominate 5G development and industry.[62] However, U.S. companies that sell components, such as computer chips, to firms in China depend on the money generated from business with these companies to fund research and development, so it is also important to consider the secondary effects of any policy as part of an integrated approach. Beijing is also seeking ways to insulate itself from penalties imposed on it by foreign states. As the U.S.-China Economic and Security Review Commission notes, "China's government is formalizing a legal and regulatory framework to counter foreign trade restrictions and sanctions, aimed especially at U.S. export controls on Chinese companies and financial sanctions on Chinese individuals."[63] This may further limit the value of threatened U.S. economic sanctions for deterrence purposes.

Imposing Costs on China While Hedging Against Retaliatory Actions

While it is true that Beijing is seeking to limit its vulnerability to U.S. sanctions, it continues to have significant dependencies on the United States. In addition, China's economic growth—once seen as a juggernaut of success—has been slowing, and its official Gross Domestic Product (GDP) has been in decline since 2007.[64] One recent analysis has highlighted China's economic vulnerabilities, including its significant debt burden.[65] Other analyses have cited the problems with Evergrande—a major real estate developer in China that has been declared in default and is facing collapse under a crushing debt of $300 billion—as indicative of larger economic challenges.[66] These problems may make threatened economic pressure much more useful as a deterrent and help shift Beijing's calculations away from an attack on Taiwan.

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[61] Jared M. McKinney and Peter Harris, "Broken Nest: Deterring China from Invading Taiwan," *Parameters*, Vol. 51, No. 4 (Winter 2021-22), pp. 30-31, available at https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=3086&context=parameters.

[62] See Kathrin Hille, "Huawei woes hide 'toothless' US export controls against Chinese tech," *Financial Times*, August 18, 2021, available at https://www.ft.com/content/2f5fc6c9-ca2b-496c-9783-b47bf060769d. Also see Dan Strumpf, "U.S. Restrictions Push Huawei's Revenue Down by Nearly a Third," *The Wall Street Journal*, December 31, 2021, available at https://www.wsj.com/articles/u-s-restrictions-push-huaweis-revenue-down-by-nearly-a-third-11640934969. (paywall)

[63] *2021 Report to Congress of the U.S.-China Economic and Security Review Commission*, op. cit., p. 120.

[64] Derek Scissors, "Chinas Growth Spurt Ends. What's Next?," American Enterprise Institute, November 2021, available at https://www.aei.org/research-products/report/chinas-growth-spurt-ends-whats-next/.

[65] Ibid.

[66] See, for example, Weizhen Tan, "China's embattled developer Evergrande is on the brink of default. Here's why it matters," *CNBC*, September 16, 2021, available at https://www.cnbc.com/2021/09/17/china-developer-evergrande-debt-crisis-bond-default-and-investor-risks.html. Also see Andrew Galbraith and Clare Jim, "Evergrande teeters on edge of default as $148 mln payment falls due," *Reuters*, November 10, 2021, available at https://www.reuters.com/business/investors-await-evergrandes-overdue-148-mln-payment-amid-contagion-fears-2021-11-09/; and, Alexandra Stevenson and Cao Li, "China Evergrande Defaults on Its Debt. Now What?," *The New York Times*, December 9, 2021, available at https://www.nytimes.com/2021/12/09/business/china-evergrande-default.html.

China's economic weaknesses reportedly have been exacerbated by the policies implemented by Xi Jinping. Though not a universally shared view, one analyst has noted, "an economic meltdown is a potential threat to the implicit social compact in China between authoritarian rulers and a quiescent population."[67] Moreover:

> Despite the frequent assertions that China is catching up or moving ahead of the West in technology industries, it has a long way to go to achieve the self-sufficiency and global leadership it seeks….
>
> In short, it is difficult to escape the conclusion that China's economy is systematically weakening and that Mr. Xi's new priorities offer little hope for a quick turnaround. The U.S. and its allies could further compound Mr. Xi's challenges by vigorous enforcement of trade laws, limiting Chinese access to technology and financing from the West, and imposing sanctions against China's brutal human-rights abuses in Xinjiang and in countries in the developing world that it is trying to exploit through its Belt and Road Initiative….
>
> A major slowdown or acute financial crisis in China would certainly have a negative impact on the global economy. But U.S. and allied policy makers do have tools that could both influence the direction of the Chinese economy and help repair some of the accumulated damage to their economies from Chinese mercantilism. A first step is to undermine the narrative of a relentless, unstoppable economic advance under Mr. Xi's leadership.[68]

China's Economic Resilience

Despite the economic difficulties China faces, as noted above, Beijing is making extensive efforts to insulate the country's domestic economy from the potentially negative effects of sanctions and penalties that could disrupt China's supply of needed foreign goods. From foodstuffs to technology to energy production, China is seeking to become more self-sufficient and less dependent on foreign sources of supply. As President Xi reportedly stated, "The Chinese people's rice bowl must be firmly held in their own hands at all times, and the rice bowl must mainly contain Chinese grain."[69] Nevertheless, despite China's extensive moves to decouple its economy from the West, there are indications that China's efforts are falling short. As one analysis has suggested, "China is likely to be the biggest loser from the technological and economic decoupling under way" between it and the United States. In half a dozen critical areas—including mRNA vaccines, semiconductors, civil aerospace, computer

[67] Thomas J. Duesterberg, "The Slow Meltdown of the Chinese Economy," *The Wall Street Journal*, December 20, 2021, available at https://www.wsj.com/articles/slow-meltdown-of-china-economy-evergrande-property-market-collapse-downturn-xi-cewc-11640032283. (paywall)

[68] Ibid.

[69] Lingling Wei, "China Looks to Secure Supplies as Strains With U.S. and Its Allies Grow," *The Wall Street Journal*, January 13, 2022, available at https://www.wsj.com/articles/china-looks-to-secure-supplies-as-strains-with-u-s-and-its-allies-grow-11642075381. (paywall)

operating systems, agrochemicals, and payments networks—"self-reliance is some way off."[70]

Beijing could retaliate against American economic pressure, but in ways that would be detrimental to China as well. Although retaliatory actions by China would not likely cause devastating or permanent economic damage to the United States, a sound U.S. deterrent strategy would nevertheless seek to cushion the impact of such retaliatory measures by encouraging the development of alternative supply chains that reduce dependence on sources in China.[71] Doing so would provide a measure of protection for the United States if economic sanctions were implemented and thereby add credibility to the deterrent threat.

As the U.S. Congress considers legislation to improve U.S. economic competitiveness against China,[72] CCP authorities are pushing back, suggesting that such legislation would be met with a harsh reaction by Beijing and would be detrimental to U.S. interests. A Foreign Ministry spokesman criticized congressional actions as "Cold War thinking."[73] In addition, China's Embassy in Washington reportedly sent letters to various U.S. business executives encouraging them to "play a positive role in urging members of Congress to abandon the zero-sum mindset and ideological prejudice, stop touting negative China-related bills, delete negative provisions, so as to create favorable conditions for bilateral economic and trade cooperation before it is too late."[74] As one letter notes, "The result of those China-related bills with negative impacts will not be that the interests of U.S. companies will be protected while those of Chinese companies will suffer. It is only going to hurt everyone…. Promoting a China-free supply chain will inevitably result in a decline in China's demand for U.S. products and American companies (sic.) loss of market share and revenue in China."[75] Indeed, the U.S. share of global semiconductor manufacturing has declined since 1990 from roughly 40 percent to just 13 percent, and congressional legislation seeks to address this downturn by

[70] "China wants to insulate itself against Western sanctions," *The Economist*, February 26, 2022, available at https://www.economist.com/business/china-wants-to-insulate-itself-against-western-sanctions/21807805?giftId=d6059b83-4163-4186-a290-0a572855ab94. (paywall)

[71] One expert has noted that "Beijing derives so much leverage from this dependency, which in some case borders on addiction, that supply chain diversification, selective de-coupling, and a consistent demand for real reciprocity in market access must become a clarion call." See Heino Klinck, "Deterring The Dragon – What China's Neighbors Can Do To Hem In Its Adventurism And Aggression," *MEMRI*, January 12, 2022, available at https://www.memri.org/reports/deterring-dragon-%E2%80%93-what-chinas-neighbors-can-do-hem-its-adventurism-and-aggression.

[72] Legislation currently under consideration includes the *U.S. Innovation and Competition Act of 2021 (USICA)*, which would restrict U.S. cooperation with China, support working with strategic partners to compete more effectively with China, and establish U.S. policy to "strenuously oppose any action by the People's Republic of China to use force to change the status quo of Taiwan." The bill declares that "in order to deter the use of force by the People's Republic of China to change the status quo of Taiwan, the United States should coordinate with allies and partners to identify and develop significant economic, diplomatic, and other measures to deter and impose costs on any such action by the People's Republic of China, and to bolster deterrence by articulating such policies publicly, as appropriate and in alignment with United States interests." See *United States Innovation and Competition Act of 2021 (S.1260)*, available at https://www.congress.gov/bill/117th-congress/senate-bill/1260/text.

[73] Michael Martina, "EXCLUSIVE Chinese embassy lobbies U.S. business to oppose China bills – sources," *Reuters*, November 12, 2021, available at https://www.reuters.com/business/exclusive-chinese-embassy-lobbies-us-business-oppose-china-bills-sources-2021-11-12/?mkt_tok=ODUwLVRBQS01MTEAAAGAwrjNu6qGlHaj6AK2MZvViwjdnaN-bbuTo7zQw6vgKmJSMXEiE_EPAOi8AES8KErof_Sybo8j1Z0pVFW21KBdJL0im8AUNxujQPCsIr_bQR_C.

[74] Ibid.

[75] Ibid.

funding more domestic research, development, and production of advanced semiconductor chips.[76]

China is involved in numerous supply chains beyond the semiconductor industry that affect U.S. companies and the American consumer; it is now the dominant supplier of solar panels and is looking to duplicate its success in the clean hydrogen energy market.[77] Another area is lithium; China is the world's largest producer of lithium batteries, which are key components in electric vehicles. As sales of electric vehicles increase due to a growing desire to transition from fossil fuels, as well as U.S. and European policies that seek to increase the use of electric vehicles,[78] China occupies an advantageous position as the world's main supplier of relatively low-cost lithium batteries.[79] However, Australia, Chile, and Argentina are the world's largest suppliers of lithium,[80] and the prospect of restricting the supply of lithium to China could provide useful leverage as part of an overall economic strategy to bolster deterrence, although Beijing's economic investments in Australia and South America could complicate this strategy.[81]

In addition, China has a near monopoly in some rare earth minerals such as dysprosium and neodymium, which are key components of electric vehicle motors.[82] Rare earth minerals are also critical elements in consumer electronics like smartphones as well as military equipment, including missile defense systems.[83] In February 2021, the Biden Administration

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[76] Mark Granahan, "All talk and no action keeps the U.S. in last place on semiconductors," *VentureBeat*, November 24, 2021, available at https://venturebeat.com/2021/11/24/all-talk-and-no-action-keeps-the-us-in-last-place-on-semiconductors/.

[77] "China's Solar Giants Make a Bid to Dominate Hydrogen Power," *Bloomberg News*, December 12, 2021, available at https://www.bloomberg.com/news/articles/2021-12-12/china-s-solar-giants-make-a-bid-to-dominate-hydrogen-power.

[78] For example, President Biden has stated that "we have hundreds—we have thousands and thousands of vehicles in the federal fleet. They're going to all go electric—all of them—down the road, supporting electric transit systems, electric school buses." See Blog Post, "2021 Congressional Activity & Anticipated 2022 Action," *Amentum*, December 7, 2021, available at https://www.amentum.com/blog/2021-congressional-activity-anticipated-2022-action/. Also see The White House, "FACT SHEET: The Biden-Harris Electric Vehicle Charging Action Plan," December 13, 2021, available at https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/13/fact-sheet-the-biden-harris-electric-vehicle-charging-action-plan/.

[79] Amrith Ramkumar, "Lithium prices soar, turbocharged by electric-vehicle demand and scant supply," *The Wall Street Journal*, December 13, 2021, available at https://www.wsj.com/articles/lithium-prices-soar-turbocharged-by-electric-vehicle-demand-and-scant-supply-11639334956?reflink=share_mobilewebshare (paywall), and https://www.foxbusiness.com/markets/lithium-prices-soar-turbocharged-by-electric-vehicle-demand-and-scant-supply.

[80] Emmanuel Latham and Ben Kilbey, "Lithium supply is set to triple by 2025. Will it be enough?," *S&P Global*, October 24, 2019, available at https://www.spglobal.com/en/research-insights/articles/lithium-supply-is-set-to-triple-by-2025-will-it-be-enough.

[81] For example, China operates a lithium plant in western Australia and China's Tianqi Lithium Corporation recently recorded record quarterly profits as a result of high lithium prices. See "China's Tianqi Lithium posts best profit in almost 3 yrs," *Reuters*, October 29, 2021, available at https://www.reuters.com/world/china/chinas-tianqi-lithium-posts-best-profit-almost-3-yrs-2021-10-29/. Also see, Ibid. Chinese companies have also invested approximately $4.5 billion in lithium ventures in Mexico and South America over the past three years. See Clifford Krauss, "Green-Energy Race Draws an American Underdog to Bolivia's Lithium," *The New York Times*, December 16, 2021, available at https://www.nytimes.com/2021/12/16/business/energy-environment/bolivia-lithium-electric-cars.html.

[82] Robert Bryce, "The Electric-Vehicle Push Empowers China," *The Wall Street Journal*, December 23, 2021, available at https://www.wsj.com/articles/the-electric-vehicle-push-empowers-china-rare-earths-mining-motors-rivals-11640290395. (paywall)

[83] Keith Zhai, "China Set to Create New State-Owned Rare-Earths Giant," *The Wall Street Journal*, December 3, 2021, available at https://www.wsj.com/articles/china-set-to-create-new-state-owned-rare-earths-giant-11638545586. (paywall)

issued an Executive Order requiring the Secretary of Defense to report on supply chain risks for rare earth elements and how to mitigate them.[84] A White House report in June 2021 noted that China's policies, including massive subsidies to producers, have created "a distorted supply chain landscape" and noted, "Given the similar history of Chinese non-market intervention in the solar and rare earth industries…there is cause for concern that, without a proactive response from the United States, this growing field will face those same challenges."[85] Consequently, the report recommended that the United States "increase the resilience of strategic and critical material supply chains."[86] China has hinted that it may retaliate if the United States takes actions that "hurt China's interests,"[87] threatening that "if China is severely hurt, its powerful revenge will be inevitable."[88]

Pharmaceuticals is another major area of concern. Even if the medications themselves are manufactured outside of China, Beijing may supply the precursor ingredients needed to manufacture them. Animal feed is a similar case in point, and actions by China could disrupt the U.S. agriculture industry, at least until alternative sources of supply are procured. Although China's actions would not be detrimental to the U.S. economy as a whole—which remains hugely productive and robust despite the impact of a global pandemic[89]—prolonged supply shortages that affect Americans personally could occur.

In the interim, shortages could continue to impact the American consumer due to supply chain vulnerabilities. Given the American penchant for prompt consumer satisfaction, such disruptions may trigger greater near-term hardship for the American consumer than for China's population and may be seen by Americans as unacceptable. Tariffs on imports from China would also affect consumer prices; indeed, in certain areas, U.S. policies are creating greater dependencies on China. However, to strengthen the credibility of economically-oriented U.S. deterrence threats, the United States should seek *in advance* to prepare for such disruptions and to convince China's leaders that market disruptions will be more painful for Beijing than for Washington. Some of these actions could include the use of legislative tools like the Defense Production Act and the Trade Expansion Act of 1962; these could restrict the amount of content from China that is in imported products, particularly including those used by the U.S. military.[90]

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[84] The White House, "Executive Order on America's Supply Chains," February 24, 2021, available at https://www.whitehouse.gov/briefing-room/presidential-actions/2021/02/24/executive-order-on-americas-supply-chains/.

[85] The White House, *Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth*, June 2021, pp. 92-93, available at https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf.

[86] Ibid.

[87] GT Staff Reporters, "China not targeting US in rare-earth exports, but option remains," *Global Times*, February 17, 2021, available at https://www.globaltimes.cn/page/202102/1215758.shtml.

[88] Hu Xijin, "Whether China plays 'rare-earth card', there will be no winner in China-US decoupling," *Global Times*, February 17, 2021, available at https://www.globaltimes.cn/page/202102/1215748.shtml.

[89] Martin Crutsinger and the Associated Press, "U.S. economy is bigger than it was pre-COVID after quarter of booming consumer spending," *Fortune*, July 29, 2021, available at https://fortune.com/2021/07/29/us-economy-bigger-than-pre-covid-quarter-booming-consumer-spending/.

[90] Derek Scissors, "Partial Decoupling from China: A Brief Guide," American Enterprise Institute, July 2020, p. 4, available at https://www.aei.org/wp-content/uploads/2020/07/Partial-decoupling-from-China.pdf?x91208.

Conclusion

The application of economic tools—in addition to military, political, and diplomatic—can enhance the prospects for success of a victory denial deterrent. The use of economic, financial, trade, and investment tools, including the use of export controls and sanctions, could be useful instruments for applying pressure on Beijing's economy and for penalizing aggressive behavior. Adopting a proactive rather than reactive approach in this regard by planning and communicating the reality of prospective sanctions as part of a broader deterrence strategy could yield important deterrence benefits.

To maximize the chance of success, sanctions would likely need to be imposed over the long term, targeting what China's leadership values most. This is necessary to convince the CCP that the United States is serious and that the threatened imposition of sanctions is not empty and, if implemented, would not be transitory.

Financial sanctions may be more effective than trade-related measures and may also have the most impact on the CCP's decision-making calculus. Such sanctions could be part of an integrated approach to deter China from engaging in military aggression against Taiwan. In addition, any sanctions strategy should counter China's efforts to attract foreign investment by providing disincentives for investment in its market while offering prudent alternatives. The goal is to place the United States and its allies in a position that threatens greater economic discomfort to China than to themselves. Moreover, because China relies heavily on exports to the United States, this dependency on the U.S. market should be leveraged as part of a coordinated strategy to bolster a victory denial deterrent.

Sanctions will have a greater impact if implemented multilaterally. However, regional political and economic dynamics may complicate the effort to achieve concurrence among Asian allies and strategic partners on a multilateral approach. Nevertheless, a U.S. policy that encourages greater trade and economic ties with other countries that currently have strong economic ties with China can mitigate the risk that secondary sanctions could pose to U.S. allies and strategic partners. Congress can also craft legislation tailoring the imposition of sanctions to specific actions by China, e.g., the manner and degree to which it violates Taiwanese sovereignty.

Importantly, an increase in U.S., allied, and partner engagement with Taiwan may contribute to deterring a CCP move against Taiwan's autonomy. Growing European and Asian recognition of the danger posed by China may also be useful in leveraging support for prospective sanctions and economic penalties on China.

As part of an integrated strategy, the United States should work with private sector entities to mitigate the impact on U.S. economic interests of any retaliatory actions by China. By seeking to minimize U.S. economic vulnerabilities, the credibility of U.S. deterrent threats would likely be strengthened. Moreover, the development of alternative supply chains that reduce dependence on Chinese sources, including lithium, rare earth minerals, agricultural products, and pharmaceuticals, could cushion the impact of China's retaliatory measures.

In addition, because China imports more semiconductor chips than any other country, its reliance on external sources of supply—including Taiwan—may be an exploitable vulnerability for deterrence purposes. Denying China access to semiconductor chips as part of a cost-imposition strategy to deter Chinese aggression against Taiwan would be devastating to China's high-tech industries and would impose severe, long-term economic costs on China.

The United States should take action to reduce its economic dependence on China and bolster deterrence by preparing for supply chain disruptions and taking steps to convince the Chinese leadership that market disruptions would be more painful for Beijing than for Washington. Legislative tools like the Defense Production Act and the Trade Expansion Act of 1962 could restrict the amount of content from China in imported products.

The bottom line is that the United States must develop policies that make the consequences of China's aggression more intolerable than enduring a continuation of the political status quo on Taiwan. In other words, the objective is to convince China that any action to eliminate Taiwan's autonomy will carry greater risks than allowing the status quo to continue. As noted above, one former U.S. State Department official stated, "The most powerful weapon America has to reverse Xi Jinping's march to global domination is economic."[91]

Above all, it is necessary to formulate proactively a broad deterrence strategy that capitalizes on the strength and resiliency of the U.S. economy, which remains a more productive engine of economic, technological, and social progress than that of China. A victory denial deterrence strategy that includes the various measures discussed above could make integrated deterrence a reality and contribute to the deterrence of a CCP decision to attack Taiwan.

Recommendations

- Convey to CCP authorities well in advance of a crisis that any use of force against Taiwan will carry economic consequences that would contribute significantly to the cost of aggression.
- Transition from a reactive to a proactive approach regarding sanctions by clearly communicating in advance of aggression U.S. intentions and capabilities to impose economic penalties on Beijing.
- Consider measures to reduce investments in China's economy, reduce supply chain dependence on Beijing, punish China's intellectual property theft, and map the economic interests of those who are part of the CCP leadership and tailor sanctions and economic tools to those individuals and their personal economic interests.
- Consider financial sanctions, which may be more effective than trade-related measures, and may provide the most important leverage by targeting a vulnerable sector of China's economy.
- Assess the effectiveness of sanctions on China's financial sector through the imposition of so-called secondary sanctions. This involves imposing penalties not only on Chinese companies but on domestic and foreign entities that do business with China. Mitigate risk and negative international reaction by encouraging greater trade and economic ties with other countries that currently have strong economic ties with China.

[91] Len Khodorkovsky, quoted in Gordon G. Chang, op. cit.

- Coordinate actions with strategic partners to apply sanctions multilaterally as well as unilaterally. Although the United States has the ability to implement sweeping sanctions on China unilaterally, the effect of sanctions will be magnified if more U.S. allies and partners join in this approach.
- Leverage China's dependency on the U.S. market as part of a coordinated strategy to bolster deterrence.
- Adopt a sanctions strategy that provides disincentives for Western companies to invest in China's market while offering prudent alternatives that cause greater economic discomfort to China than to Western companies.
- Consider the imposition of targeted sanctions against China's oil industry, along with secondary sanctions that impose costs on supplier states, including Russia.
- Discuss with Taiwan the "broken nest" option of threatening to destroy its own semiconductor chip facilities if China attacks, essentially immobilizing China's high-tech industries.
- Work with private sector entities in the United States and American companies operating abroad to mitigate in advance the impact of China's retaliatory actions directed against U.S. economic interests. Minimizing U.S. economic vulnerabilities can help strengthen the credibility of overall U.S. deterrent threats.