

TIMOTHY R. HEATH

# U.S. Strategic Competition with China

## A RAND Research Primer

**F**or the first time since contending with the Soviet Union in the Cold War, the United States faces the prospect of a long-term competition with a near-peer great power: the People's Republic of China.<sup>1</sup> China's economy has become the second-largest in the world, and its companies compete with U.S. counterparts for markets and resources. The People's Liberation Army (PLA) has become the "pacing threat" to U.S. military operations in Asia, and China's diplomatic influence rivals that of the United States in many parts of the world. The narrowing gap in national strength has coincided with an intensification of bilateral disputes over trade, technology transfer, cyber espionage, human rights, and other issues. Even the shared threat of the coronavirus disease 2019 (COVID-19) has proved an occasion for the two sides to trade accusations and compete for influence.<sup>2</sup> Tensions have grown around smoldering hot-spot issues, such as Taiwan and the East and South China Seas.

This rapid unraveling of the U.S.-China relationship—which had been widely viewed as stable and mutually profitable despite long-standing disputes—has unsettled global politics. Although both capitals appear committed to peacefully resolving their differences, the intensifying acrimony and distrust have raised fears among many observers that the two countries could be headed toward confrontation.

U.S. policymakers continue to grapple with how best to manage a strategic challenge that is strikingly different from those of the past half century. Unlike the Soviet Union, China is a formidable challenger that has remained a top trading partner despite disputes over tariffs and other issues. China and the United States also occasionally cooperate on shared concerns, such as maritime piracy and research for the COVID-19 pandemic, albeit, perhaps, on a primarily nongovernment basis.<sup>3</sup> Moreover, today's competition occurs against a backdrop of persistently sluggish growth in the world economy, a fragmenting international order, and significant domestic challenges within both China and the United States.

These unusual features of the contemporary situation limit the applicability of lessons that can be applied from past strategic competitions. In the intensely ideological 1950s and 1960s, for example, an immensely prosperous and confident United States feuded with an impoverished, fervently Maoist China primarily over developments in East Asia. Although the two occasionally clashed in violent, large-scale wars, as happened in the Korean War, China's

weakness limited its ability to challenge U.S. leadership beyond its immediate periphery.

RAND Corporation research over the past few years sheds light on many aspects of the enormously complex and important U.S.-China strategic competition. This Perspective reviews more than 60 RAND reports on relevant topics, primarily from the past five years and extending to the middle of 2020. It covers various issues pertaining to the competition, including China's strategic goals and priorities, the policies and measures through which China attempts to fulfill these goals, how China's actions affect U.S. strategic interests, and what additional steps might further protect U.S. interests. This review also encompasses studies that take a broader view of the competitive international environment and consider how the competition might differ from U.S. strategic competition with Russia. This review excluded tactical-level studies that offer detailed comparisons of U.S. and Chinese military capabilities or examine the value of specific assets or systems under certain warfighting conditions.

This review first highlights major findings across the RAND studies, then discusses key themes that RAND researchers have found particularly relevant in the context of U.S.-China strategic competition. A concluding section outlines topics for additional research that could further inform the work of strategy and policy development.

## Major Findings

Using various methodological approaches and theoretical perspectives, the RAND studies have coalesced around a set of seven relatively consistent findings:

### Abbreviations

A2/AD	anti-access/area denial
ADIZ	Air Defense Identification Zone
AI	artificial intelligence
BRI	Belt and Road Initiative
COVID-19	coronavirus disease 2019
PLA	People's Liberation Army

1. the high stakes in the United States' most important competition
2. the central roles of economics, diplomacy, and technology
3. the fact that the United States has the upper hand in comprehensive national power, but China is narrowing the gap
4. the perilous erosion of the U.S. security position in Asia as a result of PLA advances
5. the growing uncertainty, but still low risk, of a catastrophic U.S.-China war
6. the potential key statecraft challenge of managing alliances and partnerships
7. the intensifying struggle through measures other than war.

## High Stakes in United States' Most Important Competition

The significance of the U.S. competition with China has been emphatically underscored in RAND research. Various past studies have concluded that the outcome of the competition could affect the economic prospects for the United States and also carry profound implications for the future of the international order and prospects for international peace and stability. As one 2019 study by James Dobbins, Howard J. Shatz, and Ali Wyne put it, "China is a peer competitor that wants to shape an international order that it can aspire to dominate." Noting the possibility that Beijing might shape an international order to its economic benefit and to the detriment of U.S. economic prospects, the report described China as posing a "less immediate threat, but a much greater long-term threat." By compari-

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son, the authors characterized Russia, widely regarded as the United States' second most-important competitor, as more akin to that of a "rogue" state capable of disruption and subversion but not seriously contesting the position of the United States as a global leader.<sup>4</sup>

A 2018 RAND report by Michael J. Mazarr, Timothy R. Heath, and Astrid Stuth Cevallos similarly examined the implications for global peace from the deepening U.S.-China competition for influence within the international order. As that report noted, "Whether a growing competition for influence and leadership with the United States in shaping the terms of the international order escalates into dynamics that become destructive of that order remains to be determined."<sup>5</sup>

Other studies have likewise highlighted the significance of the U.S.-China competition for shaping the evolution of the international system. A 2019 RAND study by Michael J. Mazarr and his colleagues characterized the current era as one featuring "an overarching competition with China, with secondary, largely regional contestations with other actors, including Russia."<sup>6</sup> The study called the

U.S.-China contest “decisive” for the overall character of international competition.<sup>7</sup>

## Central Roles of Economics, Diplomacy, and Technology

RAND researchers have stressed the centrality of economics, technology, and diplomacy in the current contest—in contrast to the importance of ideology and conflict along China’s periphery during the Cold War. The 2019 study led by Mazarr charted the possible trajectory of the competition, based on patterns from historical rivalries and theoretical analysis. The study concluded that the competition will not determine the survival of nations or systems but rather their “relative strength and success.” Accordingly, major investments and national strategies will likely be focused on “dominating certain industries, attracting investment, making innovative breakthroughs, and enhancing domestic growth rates and social prosperity.”<sup>8</sup> The 2019 study led by Dobbins similarly emphasized the centrality of diplomacy, industry, trade, innovation, and leadership in international organizations in the U.S.-China competition.<sup>9</sup>

RAND researchers have paid particular attention to China’s economic prowess and its willingness to exert diplomatic influence to strengthen its position. The 2019 report led by Dobbins concluded as follows: “It is geoeconomics, rather than geopolitics, in which the contest for world leadership will play out.” Specifically, “The principal Chinese challenge is not that it will impose authoritarian governments on its trading partners but that, over time, it will skew global standards for trade and investment in its favor to the disadvantage of its competitors.”<sup>10</sup> A 2020 study by Shatz similarly noted China’s willingness to use economic tools to compete in the security and geopolitical domains.<sup>11</sup>

RAND researchers have also focused on the country’s ambitious Belt and Road Initiative (BRI), a massive trade and infrastructure endeavor aimed at integrating the economies of Asia and Europe. A 2018 study led by Hui Lu concluded that improvements in infrastructure and connectivity along the BRI routes could increase the total trade volumes within and beyond the BRI regions (such as the European Union), attract foreign direct investment, speed up the industrialization process, enable more-efficient production networks, and facilitate regional integration.<sup>12</sup> A 2020 study led by Andrew Scobell went further, noting

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the importance of China's economic prospects for competition with the United States and outlining different possible future trajectories of the U.S.-China relationship: one of "parallel partners" (in which the two grow in parallel), one of "colliding competitors" (featuring conflict), and one of "diverging directions" (in which China becomes distracted by domestic woes).<sup>13</sup>

With respect to technology, RAND researchers have emphasized the importance of leadership in the development and manufacturing of advanced technologies. Technological leadership could not only enable rapid economic growth but also allow a country's military to gain an edge on the battlefield.<sup>14</sup>

RAND researchers have begun to examine particular technological sectors to investigate how much of a threat China's pursuit of technological advantage poses to U.S. industry. For example, a 2017 study led by Chad J. R. Ohlandt judged that China's unambiguous policy drives "a whole-of-government effort to develop a globally competitive aviation industry." The study detected "few technology-transfer concerns" for the sector, noting that Chinese investments have been limited to "companies with technologies not particularly relevant to commercial or military aircraft." Nonetheless, the study recommended that export controls remain in place, given China's "aggressive aviation industrial policies" and clear intent to compete in the sector.<sup>15</sup>

Forrest E. Morgan led a 2020 study on the military application of artificial intelligence (AI). The study assessed China's development of military technologies with AI and warned that relevant technologies raised ethical, operational, and strategic risks.<sup>16</sup> Rand Waltzman and other RAND researchers, who examined the state of U.S.-China competition in AI, concluded that China has

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an advantage over the United States in the area of big data sets but that the United States has retained a modest lead in AI technology development because of its substantial advantage in the advanced semiconductor sector.<sup>17</sup> A 2020 study led by Derek Grossman echoed the conclusion about big data analytics, noting that Beijing has a whole-of-government strategy for applying the technology.<sup>18</sup>

### **The United States Has Upper Hand in Comprehensive National Power; China Narrowing the Gap**

RAND studies generally characterize the United States as retaining considerable advantages diplomatically, economically, technologically, and militarily. However, a consensus

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in the research is that China continues to narrow the gap in comprehensive national power. The 2018 Hui Lu study on China and the international order indicated that China seeks to renovate, rather than overthrow, the existing U.S.-led order; however, the report noted that China’s long-term ambitions remain less clear.<sup>19</sup>

RAND studies have recognized enduring U.S. strengths in its alliances and partnerships around the world. A 2019 study led by Scott W. Harold drew attention to the strong support for U.S. leadership in Asia. The study also described how Asian countries have increased their defense cooperation with other regional powers, including those not allied with the United States (such as India, Indonesia, and Vietnam). The report concluded that perceptions of a potential threat from a rising China provided a major impetus to increased regional security cooperation.<sup>20</sup> RAND researchers have also examined how U.S. allies and partners can collaborate to compete with China’s efforts to lead the Asia-Pacific region. RAND has published several conference volumes on regional perspectives on the Free and Open Indo-Pacific strategy, with contributions from scholars in the United States, Japan Australia, India, and other nations.<sup>21</sup>

At the same time, studies have noted China’s regional gains in economic and diplomatic influence. A 2020 study led by Bonny Lin concluded that countries in Asia regarded China as having more economic influence, although less diplomatic and military influence, than the United States.<sup>22</sup> The 2018 Hui Lu study on China and the international order observed that China “as an increasingly powerful nation has also demonstrated a willingness to challenge and revise aspects of the existing order.”<sup>23</sup>

RAND researchers have compared China’s deepening relationships with Southeast Asia, Central and South Asia, and Oceania. A 2019 study led by Scobell found that Beijing had prioritized, from among all developing countries, those of Southeast Asia and had increased its influence in that region accordingly.<sup>24</sup> A 2014 study by Scobell, Ely Ratner, and Michael Beckley examined the implications of China’s deepening involvement in Central and South Asia. One conclusion from that study was that, although weak then, China’s influence would grow in coming years.<sup>25</sup> Derek Grossman led a team that researched U.S.-China competition in the U.S.-allied Freely Associated States in the Pacific. That 2019 study called the islands a “power

projection superhighway” and detailed China’s growing diplomatic and economic influence in the islands.<sup>26</sup>

China has also narrowed the gap in influence in multilateral organizations, such as the United Nations and other international institutions.<sup>27</sup> China’s influence on multilateral trade regimes also has expanded, as Shatz noted in a 2016 study.<sup>28</sup> RAND researchers have also noted the way in which Chinese economic statecraft has resulted in strategic advantage. A 2013 study, led by Richard Silbergitt, on the competition for critical materials noted that China had become the controlling producer of 11 raw and semi-finished materials “critical to U.S. manufacturing.”<sup>29</sup>

## Perilous Erosion of the U.S. Security Position in Asia

RAND studies have drawn attention to the erosion of the U.S. security position in the Asia-Pacific region, owing to the rapid advances in the PLA’s capabilities. A 2015 report led by Eric Heginbotham concluded that the “the net change in capabilities is moving in favor of China.” It noted that some aspects of Chinese military modernization, such as improvements to PLA ballistic missiles, fighter aircraft, and attack submarines, have come “extraordinarily quickly by any reasonable historical standard.” It noted, however, that the PLA’s ability to influence events and win battles “diminishes rapidly beyond the unrefueled range of jet fighters and diesel submarines.”<sup>30</sup>

The challenge posed by China’s counterintervention capabilities has been flagged in other RAND research. A 2017 study edited by Duncan Long, Terrence K. Kelly, and David C. Gompert outlined several major conflict scenarios involving China and the United States to test the

hypothesis that anti-access/area denial (A2/AD) capabilities pose a threat to U.S. force projection. According to the study, the threat posed by these systems is “growing more severe in critical regions,” and the threat is “likely to increase in significant ways over time.”<sup>31</sup>

The narrowing gap in military power occurs at a time of constrained U.S. resources. A 2020 study led by Timothy M. Bonds warned of “significant gaps” in the ability of the United States and its allies to deter and defeat aggression that could threaten national interests.<sup>32</sup> RAND researchers have investigated the mismatch between global threats and the U.S. military resources to address them. A 2015 study led by David Ochmanek warned of a “security deficit,” concluding that “currently projected levels of defense spending are insufficient to meet the demands of an ambitious national security strategy.” Consequently, the United States will “require substantial and sustained investments in a wide range of programs and initiatives” to adequately address the “disparate challenges faced by

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the United States.”<sup>33</sup> Likewise, Shatz and Nathan Chandler concluded that the United States and its allies may face growing challenges to maintain their defense industries if defense budgets decline, especially if China’s defense budget continues to rise concurrently.<sup>34</sup>

### **Growing Uncertainty, but Still Low Risk, of Catastrophic U.S.-China War**

RAND researchers have noted how the intensifying rivalry between China and the United States has exacerbated tensions over such flash points as Taiwan and the South China Sea, even if the overall risk of war remains low. A 2017 study led by James Dobbins reviewed a 2011 judgment

that a U.S.-China war had remained “unlikely.” The study upheld that judgment but acknowledged that the “margin of confidence is somewhat lower than it was six years ago.” To explain why, the study cited a weakening conviction that the United States would “avoid unnecessary provocations” and “retain the capacity to deter Chinese behavior.”<sup>35</sup>

RAND research on the possibilities of a military clash has concluded that escalation of any such event may prove difficult to control. A 2016 RAND study by Gompert, Cevallos, and Cristina L. Garafola concluded that a U.S.-China war not only carried a high risk of escalation but would likely engulf much of the Western Pacific.<sup>36</sup> The 2017 study from Long, Kelly, and Gompert warned that U.S. military strikes against the PLA’s counterintervention capabilities on China’s homeland could trigger a nuclear war. Likewise, a U.S. reliance on extensive conventional strikes against China’s homeland as part of a Taiwan-related conflict “could lead to conflict escalation and, in some cases, increased risk of nuclear war.”<sup>37</sup>

Although conflict between the two great powers is regarded as unlikely, RAND researchers have investigated potential pathways toward such a conflict in hopes of better managing the risks. Noting that a dramatic shift in the global distribution of power could increase the risk of conflict, according to numerous theories of great power war, researchers have developed ways to measure comprehensive national power. A 2020 study by Jacob L. Heim and Benjamin M. Miller proposed a metric that incorporated measures of a country’s military, economic, technological, political, and demographic strength. Using this metric, the authors found a narrowing gap in comprehensive national power between China and the United States. Although the authors did not detect a significant risk of warfare in the near



term, they did offer several scenarios involving trends that could either raise or lower the risk in coming years, depending on changes in the balance of power.<sup>38</sup> A 2020 study by Heath and Matthew Lane proposed ways to formulate more rigorously designed scenarios involving U.S.-China conflict. Drawing from scientific findings about the causes of war, the study highlighted factors—such as rapid changes in the balance of power, serial militarized crises, arms-racing behavior, and the onset of acute threat perceptions—that could indicate an elevated risk of conflict.<sup>39</sup>

As tensions intensify and distrust deepens, the risk of a miscalculation or misjudgment in a crisis or confrontation grows. To better gauge the risks of misjudgment and misperceptions, RAND researchers investigated historical precedents of disastrous military decisions. One study by Gompert, Hans Binnendijk, and Lin revealed a common theme in past strategic blunders: a tendency by individuals and institutions to rely on simplified representations of reality, or “cognitive models.” According to the authors, “the more these models diverge from objective reality, the more decisionmakers are prone to blunder, including on matters of war and peace.” The authors noted that leaders and staffs with great confidence in their cognitive models “tend to dismiss or discount new information that would threaten—and improve—those models.”<sup>40</sup>

## Potential Key Statecraft Challenge of Managing Alliances and Partnerships

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minate the threat that China’s military power poses to U.S. allies and partners and to improve their readiness.

Regarding Taiwan, RAND researchers have analyzed various aspects of the island’s defenses and weighed options for the island to improve its air defenses. A 2016 study by Michael J. Lustombo, David R. Frelinger, James Williams, and Barry Wilson concluded that investments in mobile and short-range air defense missiles could significantly improve air defense capabilities.<sup>41</sup> A 2017 study by Ian Easton, Mark Stokes, Cortez A. Cooper, and Arthur Chan concluded that the current approach to Taiwan’s reserve force training may be appropriate for many non-combat support personnel in the system, but it might prove inadequate for maintaining the readiness of units responsible for facing an all-out Chinese invasion.<sup>42</sup> Beyond assessing the requirements to deter major attacks, RAND researchers also have studied more-subtle efforts to coerce the island. An analysis of China’s bomber flights around Taiwan, for example, suggests that the flights are designed,

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in part, to apply psychological coercion on Taipei. According to a 2018 study by Derek Grossman, Nathan Beauchamp-Mustafaga, Logan Ma, and Michael S. Chase, the flights also allow the PLA Air Force to send deterrence signals, train air crews, and promote patriotic propaganda to domestic audiences.<sup>43</sup>

RAND researchers have worked with international researchers to explore some of the challenges posed by China to Japan and other partner nations. In 2017, RAND published a series of papers from a conference, held with Japanese scholars, focusing on U.S. and Japanese cooperation against Chinese coercion in the maritime, cyber, and space domains. The authors recommended strategies to impose costs and deny Chinese gains through “gray zone” tactics in the maritime domain, to harden critical cyber infrastructure, and to impose costs on and deter Chinese cyber coercion.<sup>44</sup> In 2018, a RAND team led by Edmund J. Burke studied China’s and Japan’s military aviation patrols near the Senkaku Islands and warned that the pace of activity risked eroding the combat readiness of Japanese Air Self Defense Force aviation units.<sup>45</sup>

Regarding disputes in the South China Sea, RAND researchers have developed scenario analyses of conflict situations in both Taiwan and the South China Sea to better understand how China could employ counterintervention capabilities against U.S. forces.<sup>46</sup> RAND researchers also examined China’s 2013 announcement of the Air Defense Identification Zone (ADIZ) in the East China Sea for insight into the potential issuance of an ADIZ in the South China Sea. The researchers, Burke and Cevallos, concluded that China had strong incentives to avoid declaring a similar ADIZ in the South China Sea.<sup>47</sup>

### **Intensifying Struggle Through Measures Short of War**

Given the potentially catastrophic risks and costs of conventional war between China and the United States, RAND researchers have generally concluded that both countries face a growing incentive to employ measures other than war to advance their interests. RAND researchers have accordingly carried out research on “measures short of

war” and related concepts, such as “hybrid war” and gray zone tactics. A 2016 study by Ben Connable, Jason H. Campbell, and Dan Madden pointed out that such tactics are not new but have become increasingly effective against the United States due to its attachment to “outdated” paradigms of linear escalation compounded by the difficulties of addressing diverse challenges simultaneously worldwide.<sup>48</sup> A 2020 study by Morgan and Raphael S. Cohen similarly concluded that China would likely continue to rely on gray zone tactics as a preferred means of achieving its objectives in a manner that minimizes military risk.<sup>49</sup>

Also in 2020, RAND released a series of reports on the future of warfare through 2030. These studies examined economic, geopolitical, military, and other trends that could bear on the prospects of international peace and war, including between the United States and China. Led by Cohen, the studies highlighted counterterrorism, gray zone conflicts, asymmetric fights, and high-end fights as four archetypes of future conflict.<sup>50</sup> A report by Shira Efron, Kurt Klein, and Cohen on the environmental and geographic drivers of conflict concluded that China’s presence in the Arctic would likely increase as maritime access through that area grows. Although full-fledged conflict

is unlikely, the U.S. military could find itself responding to situations short of war involving Russian and Chinese military forces in that area.<sup>51</sup>

RAND researchers have pointed out that the escalation thresholds of measures short of war remain poorly understood. A 2019 study led by Lyle J. Morris on China’s use of gray zone tactics—i.e., activities to alter the status quo through coercive military or political means below a threshold that would elicit a military response—warned that the “greatest danger” in the future may be when China’s “impulse to achieve aggressive gains short of major war is married to dramatically improved means of doing so.”<sup>52</sup> To help U.S. policymakers manage such risks, RAND researchers have begun to propose ways that the United States could respond to China’s gray zone operations. In 2019, for example, Morris authored a report outlining possible response options for pre-crisis and crisis situations involving China’s efforts to seize Scarborough Shoal.<sup>53</sup>

RAND researchers also have investigated potential U.S. options for using nonwar methods to manage provocative behavior from China. A 2016 study by Gompert and Binnendijk noted that U.S. “power to coerce is increasing even as the utility of U.S. offensive military force is dimin-

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ishing.” The study singled out financial sanctions, support for nonviolent political opposition, and offensive cyber operations as the “most cost-effective” nonmilitary coercive policy instruments available to the United States. However, the study noted that financial sanctions against China would be “complex, difficult to implement and maintain, and perilous for the world economy.” The study also deemed support for democratic opposition as unlikely to work against China. Regarding potential offensive cyber operations against China, the study cautioned that the “risks and costs of retaliation and escalation are considerable.”<sup>54</sup>

## Major Themes

Beyond the individual findings, RAND research on strategic competition with China points to six broader themes about what this dynamic means for the United States:

1. the competition for regional leadership
2. the competition for global influence

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3. China’s ambitious military modernization
4. a need to bolster the U.S. security position
5. an intensifying information, cyber, and space competition
6. the importance of cooperation amid competition.

## Competition for Regional Leadership

A 2020 study led by Lin compared U.S. and Chinese influence in the Indo-Pacific region. The study concluded that Southeast Asian countries ranked economic development over security concerns and felt more threatened by China’s economic influence than by its military threats. The study also concluded that regional countries shared more interests with the United States than with China, but preferred not to choose between the two.<sup>55</sup> A 2016 study by Heath, Kristen Gunness, and Cooper examined how China’s strategic ambitions required some form of primacy in Asia.<sup>56</sup> Similarly, a 2015 study led by Ochmanek identified the pursuit of regional leadership as a key strategic driver underpinning the military competition between China and the United States.<sup>57</sup> The aforementioned 2018 study on China and the international order similarly concluded that China’s “determination to become Asia’s paramount power will unavoidably entail an intensifying competition for influence with the United States.” The study judged that China’s effort to “shape Asia’s economic and security order is likely to be the most contentious part of its foreign policy in the future.”<sup>58</sup> What China might seek in terms of “primacy” remains in debate, but, at the very least, RAND researchers have determined that Beijing seeks a greater role in deciding issues of regional politics, economics, and security affairs.

A 2018 study on China's relationship with BRI countries listed the "pivotal" partner countries within Asia, Africa, and Latin America that Beijing appears to have identified as critical to its ambitions. The authors judged that Beijing had five important partners—specifically, Russia, Pakistan, Iran, South Africa, and Venezuela. The study also noted that China had multiple pivotal partners in Southeast Asia.<sup>59</sup>

## Competition for Global Influence

RAND researchers have generally concluded that the U.S.-China competition extends well beyond the Asia-Pacific region. A 2019 study characterized China's support for the existing order as "conditional," judging that China will support the existing international order so long as China can ensure changes to accommodate its preferences.<sup>60</sup> RAND researchers also have examined the interaction between Chinese efforts to selectively revise elements of the international order and the U.S. response to such efforts. The 2019 study led by Mazarr and Blake underscored that the "hinge point" of the competition will be the "relationship between the architect of the rules-based order"—i.e., the United States—and the "leading revisionist peer competitor that is involved in the most specific disputes"—i.e., China.<sup>61</sup>

In terms of geopolitics, RAND studies have emphasized both the competition for diplomatic partners around the world and the battle for ideas and influence over global norms and values. The researchers have noted how a global network of alliances and partnerships confers on the United States a tremendous source of strength in the global competition for influence<sup>62</sup>—and how that strength could also be extended to partners. For instance, a 2019 study by Harold, Morris, and Ma examined China's efforts

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Experts have also pointed to a sharpening contest over the role of democratic ideals in international norms and rules.

to isolate Taiwan diplomatically in Latin America and the Caribbean. The study lauded the effectiveness of Taiwan's aid and assistance programs, especially when they can be integrated more explicitly into broader diplomatic relationships.<sup>63</sup>

Although the competition for ideas and values may be less intense than in the Cold War, a study by Stephen Watts, Beauchamp-Mustafaga, Benjamin N. Harris, and Clint Reach described how the United States and China compete for influence in shaping international norms and values in the information domain.<sup>64</sup> Experts have also pointed to a sharpening contest over the role of democratic ideals in international norms and rules. A 2019 report noted that Beijing's opposition to liberal democratic values and human rights remained key friction points between the countries, as did the competition to shape global trade and technology norms and standards.<sup>65</sup>

RAND researchers have examined how the contest for influence may be playing out in regions outside Asia. A 2014 study by Scobell and Alireza Nader on China's relationship with the Middle East judged Beijing's domi-

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A 2015 study similarly noted that the “United States and China share a fundamental interest in the stability of Africa.”

nance of the region to be unlikely, even as regional tensions with the United States increase, because of Beijing’s fear of becoming embroiled in regional tensions and conflict. The study also saw “no signs that Beijing is committed to building an alliance with Tehran,” despite signs of warming ties.<sup>66</sup> A 2019 study led by Efron on China’s relationship with Israel noted expanding cooperation in diplomacy, trade, investment, construction, educational partnerships, and scientific collaboration. The study recommended that the United States work closely with Israel to “deconflict, shape, and advance a mutually agreed upon China-related agenda.”<sup>67</sup>

RAND researchers also have studied China’s growing relationship with Africa. A 2014 study by Larry Hanauer and Morris noted that, at least at that time, Africans “overwhelmingly” viewed China’s engagement with the continent positively (though this may be changing in some ways). They concluded that China’s engagement on the continent “does not fundamentally undermine U.S. economic and political goals on the continent.” However, Hanauer and Morris anticipated that the two countries

would step up competition for commercial opportunities in Africa.<sup>68</sup> A 2015 study by Lloyd Thrall similarly noted that the “United States and China share a fundamental interest in the stability of Africa,” but that their “interests diverge most seriously over the role of foreign powers in supporting good governance and human rights norms in Africa,” particularly regarding pariah states.<sup>69</sup>

### China’s Ambitious Military Modernization

Another theme in RAND research on China centers on Beijing’s ambitious military modernization. A 2019 study by Jeffrey Engstrom outlined the PLA’s emerging doctrine of “systems confrontation,” which the study called the PLA’s “theory of victory.” The language of “systems confrontation” pervades “virtually every aspect of the PLA’s approach to training, organizing, and equipping for modern warfare.”<sup>70</sup> A report by Burke, Gunness, Cooper, and Mark Cozad on key operational concepts of the PLA described three interrelated concepts: war control, the changing dynamics of war, and target-centric warfare.<sup>71</sup>

RAND researchers also have examined the PLA’s evolving nuclear deterrence policy. A 2017 study led by Heginbotham found considerable consistency in China’s approach to nuclear deterrence, but also concluded that China may be “moving toward a more calculated strategy of assured retaliation.” The authors suggested that China may develop some limited counterforce capability.<sup>72</sup> In 2016, a study by Chase and Chan described how PLA thinkers had begun to articulate a new approach to strategic deterrence, featuring a “multidimensional set of military and nonmilitary capabilities.” The report explored how PLA writings regarded the coordinated employment

of nuclear, space, cyber, and conventional weapons as “essential components of a credible strategic deterrent.”<sup>73</sup> As China continues to modernize its nuclear forces amid a deepening competition with the United States, issues of arms control and the management of threats in the nuclear, space, and cyber domains will likely grow in importance.

Other RAND researchers have examined the PLA Strategic Support Force, PLA overseas operations, PLA potential contingencies, and developments in the PLA Air Force, improvements to each of which has resulted in a cumulatively more-capable military competitor to the United States in Asia.<sup>74</sup> RAND researchers have also analyzed the PLA’s development of unmanned systems, with a 2015 study led by Chase assessing China’s research and development of unmanned air, surface, and underwater vehicles. The authors noted that intelligence, surveillance, and reconnaissance remain a “primary focus of Chinese industries” for unmanned platforms. In addition, however, China may become a significant proliferator of such systems, because it seeks “exports of unmanned systems as a profitable way of improving its position in the global arms market” and as a means of “strengthening its diplomatic and security ties with recipient countries.”<sup>75</sup>

Although the PLA has made considerable progress, RAND researchers also have analyzed the military’s persistent liabilities. A 2015 study noted various shortfalls: organizational features incompatible with the military’s aspirations, corruption, quality control issues in the defense industry, and shortcomings in training and combat support functions.<sup>76</sup> China also continues to face constraints on its ability to field military forces beyond Asia. A 2018 study by Heath questioned whether China would seek to imitate the U.S. approach to power projection,

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given resource and other limitations. Rather, Beijing would likely find it more appealing to protect interests abroad by using an “overlapping mixture of People’s Liberation Army troops, paramilitary forces, civilian contractors, and local security forces provided by nations hosting major Chinese assets.”<sup>77</sup>

### **A Need to Bolster the U.S. Military Position**

China’s military modernization signals the need for new concepts, technologies, and approaches to bolster the U.S. security position in Asia.<sup>78</sup> A 2017 study led by John

Gordon IV concluded that the U.S. Army would require longer-range artillery systems and anti-ship capabilities for most conceivable conflict scenarios involving China.<sup>79</sup> RAND researchers also have studied how the United States might collaborate with allies and partners to employ land-based A2/AD systems. A 2019 study led by Bonds determined that land-based A2/AD systems would shift the burden of deterrence onto the shoulders of allies and partners—and that this shift could provide an effective deterrent against Chinese aggression.<sup>80</sup> In light of the PLA's growing inventory of ballistic and cruise missiles, a 2016 study by Heim on the U.S. commitment to the Intermediate-Range Nuclear Forces Treaty found that the United States should examine the benefits and risks of adding conventional land-based theater ballistic missiles to the U.S. force structure.<sup>81</sup>

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## Intensifying Information, Cyber, and Space Competition

RAND researchers have explored how the U.S.-China competition could intensify in cyberspace. A 2018 study led by Christopher Paul concluded that the electronic information environment had become “more complicated, more extensive, more ubiquitous, and more important to the outcomes of military operations than ever before.” The study noted that such countries as China have advantages in the domain, owing in part to a “focus on maintaining the support of domestic audiences by any means necessary,” “a lack of compunction about falsehood or manipulation,” and the reliance on “censorship and information control.”<sup>82</sup> A 2019 Mazarr study warned that the effectiveness and reach of such efforts to “gain competitive advantage by manipulating political, social, and economic conditions in target countries by various informational means” could “vastly increase” over time, owing to persistent vulnerabilities in America's open society, China's hostile intentions, and the increasing capability of relevant technologies.<sup>83</sup> RAND researchers also have studied China's social media to better understand the perspectives of its citizens. A study by Douglas Yeung and Cevallos found variations in how Chinese-language users of social media on the Twitter and Weibo platforms regarded controversies, such as food safety.<sup>84</sup>

A 2019 study by Quentin E. Hodgson, Logan Ma, Krystyna Marcinek, and Karen Schwindt found that, although state-backed Chinese actors preferred to use cyber operations for espionage purposes, those actors had also engaged in cyber coercion against neighboring states, most notably against South Korea in response to the



deployment of a Theater High Altitude Area Defense missile system in 2016. Despite the low success rate of cyber coercion operations, the authors concluded that China would likely increase its use of these efforts because of their deniability and relatively low cost.<sup>85</sup> The risks of cyberwar have spurred research into the possibilities for negotiating cyberspace norms and agreements. A 2016 study by Harold, Martin C. Libicki, and Cevallos suggested that shared concerns about the vulnerability of critical infrastructure could provide a foundation for talks on norms for cyber espionage and targeting.<sup>86</sup>

The competition in space is also likely to intensify. A 2017 report by Kevin L. Pollpeter, Chase, and Heginbotham noted how China has already increased its capacity for military space operations through the creation of a Strategic Support Force.<sup>87</sup> RAND teams have researched how the United States also might increase its capacity for military space operations. A 2020 study led by Michael Spirtas analyzed how the U.S. Space Force could manage combat missions and support missions.<sup>88</sup> RAND also established a Space Enterprise Initiative in 2020 to serve as a one-stop shop for space research and related activities.<sup>89</sup>

## Cooperation Required Amid Competition

Although competition between China and the United States will likely tighten in coming years, strong incentives will remain for the world's two most powerful nations to cooperate on shared concerns. The U.S.-China rivalry's unusual features, including economic interdependence and mutual vulnerability to shared threats, have raised the imperative to cooperate even as the two sides compete.

A 2018 study recommended that the United States “use expanded cooperation” to stabilize the international order and to constrain China’s ambitions.<sup>90</sup>

RAND researchers also have examined more-specific topics that underscore the need for collaboration. Jennifer Bouey has analyzed the possibilities for scientific cooperation between the United States and China against common health threats, including pandemics.<sup>91</sup> A 2017 study led by Richard H. Speier highlighted the perils of hypersonic weapons and the need to control the dissemination of weapons capable of striking vast distances with minimal warning. Among its recommendations, the study proposed that the United States and China cooperate to establish a multilateral export control regime with the participation of

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other nations capable of producing the weapons.<sup>92</sup> Cortney Weinbaum led a 2019 study that explored the possibilities for building ethical norms in scientific research involving China and the United States.<sup>93</sup> RAND researchers also have examined possible modes of cooperation with China to manage the security challenges posed by North Korea.<sup>94</sup>

## Recommendations

The RAND reports also featured policy recommendations on how best to respond to these issues. These recommendations span issues of technology competition, diplomacy, deterrence, and many others. Just a few of the recommendations found in the reports include the following:

- In the technology competition, the United States should track developments in individual fields and sectors and build a prospectus for examining China's system for generating innovation.<sup>95</sup>
- U.S. policy should focus on understanding and supporting important partner nations—such as Indonesia, the Philippines, and Vietnam—whenever their efforts to develop ties with other Indo-Pacific nations can be additive to U.S. aims of building partner capacity.<sup>96</sup>
- In the competition for AI, the United States should manage expectations by developing and maintaining a forward-looking AI roadmap, highlighting realistic goals for Department of Defense AI employment for the near (one to two years), middle (three to five years) and far (six to ten years) terms.<sup>97</sup>
- On nuclear deterrence issues, the United States and China should deepen their dialogue on strategic issues to better understand where restraint might have the greatest positive impact.<sup>98</sup>

## Conclusion: Areas for Further Research

The complexity of a strategic competition between two countries that remain key trading partners and occasionally cooperate against shared threats suggests the need for a sophisticated and careful strategy to navigate potential perils and protect U.S. interests. RAND studies, thus far, indicate six important topics for further research that could further inform the work of strategy and policy development:

1. ways to improve coordination across domains, levels, alliances, and partnerships
2. the best ways to compete
3. measures other than war
4. technological aspects of the competition
5. mechanisms of cooperation amid the competition
6. geopolitical opportunities.

First, RAND studies emphasize the multidomain and multilevel nature of the competition. China and the United States compete across economic, security, technological, and political domains. The competition is unfolding simultaneously at the regional and global levels. *Finding ways to improve coordination across U.S. domains, across regional and global levels, and across alliances and partnerships will likely remain a critical challenge for U.S. policymakers.*

Second, RAND research has consistently highlighted enduring U.S. strengths, including the strength of the domestic economy, a global network of alliances and partnerships, a proven ability to innovate, and the world's most powerful military. The openness of the U.S. economy and the size of the domestic market remain important assets.

The United States also retains an impressive array of allies and partners while China's coalition of partners remains relatively limited. Despite the U.S. advantages, the studies underscore the severity of the challenge facing the United States. U.S. alliances and partnerships are less cohesive than before; and the international order is more fragmented. A slow-growing economy and competing domestic demands constrain defense spending. By all measures, the relative U.S. advantage in national power ebbs as China grows more quickly. *Future research could explore ways in which the United States could best position itself to compete.* Recent studies have highlighted the challenge of balancing security concerns with the needs of an advanced economy and liberal democratic values. The potential devastation of cyberattacks, the vulnerability of financial systems, and the deepening concern about technology transfers and espionage provide compelling incentives to increase security across many domains. Finding ways to manage the threats while upholding the freedoms and rights of American citizens will also remain an important task for policymakers.

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Third, RAND research has highlighted the growing importance of paramilitary, proxy, and nonmilitary assets in the U.S.-China competition. Both sides face growing incentives to deploy a variety of military and nonmilitary forces in confrontations below the threshold of war, whether called “measures other than war,” “gray zone tactics,” or “hybrid war.” Such methods could be useful for protecting U.S. interests, blunting threats from China, and incrementally securing advantages in the greater competition for influence and leadership. Yet the escalation risk of any incident involving such forces remains poorly understood. *Given the stakes, a stronger understanding of how U.S. decisionmakers should employ measures other than war to protect U.S. interests remains imperative.*

Fourth, the importance of technology in the competition also has gained considerable attention in RAND research. The competition for technological leadership not only offers the potential prizes of economic gain and corporate profits but also carries strong implications for military modernization. Advanced technologies could dramatically reshape how wars are fought and confer a significant advantage on the side that masters the technologies. Technological advances will also factor into how societies interact with their governments—and the risks posed by increasingly sophisticated digital media manipulated by foreign governments. A potential digital divide pitting U.S.-led technological ecosystems against Chinese-led ones also could profoundly affect the global economy. Successful competition in scientific fields carries important implications for domestic policies, such as those that incentivize global talent to study and work in the United States. *Insights into how the U.S. government can effectively manage the technological aspect of the competi-*

*tion could prove an important determinant in the outcome of the competition.*

Fifth, RAND researchers have noted that the U.S. competition with China occurs simultaneously with imperatives to cooperate. Both China and the United States face the international challenges of pandemics, global terror groups, mass migration, and the effects of climate change. Yet, as the example of the COVID-19 pandemic has shown, the competitive impulse can undermine cooperation on shared concerns. *Additional research could be helpful in building mechanisms of cooperation while sustaining the competition.*

Sixth, and finally, RAND research has underscored the importance of other countries in what appears on the surface to be a U.S.-China competition. Other nations, especially in the Asia-Pacific region, play important roles in setting the terms of the competition. The shifting struggle for geopolitical advantage raises the risks of miscalculation and of potential crises in countries partnered with either the United States or China. The contest for advantage is also reshaping multilateral institutions, resulting in politicization and polarization within organizations. *A stronger grasp of how the U.S.-China contest is reshaping international politics and opening new opportunities will likely remain a topic of critical importance for U.S. decisionmakers in coming years.*

Were these understudied questions to receive more attention, they could lead to new or improved ways for the United States to reassure other countries in the Asia-Pacific region, mitigate China’s ability to do harm, and strengthen its own position in the competition.

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## About This Perspective

This research primer presents key findings and themes from past RAND Corporation research on the strategic competition between China and the United States. This review of RAND reports, mostly from the past five years, highlights seven major findings: (1) China is the United States' most important strategic competitor; (2) economics, diplomacy, and technology play central roles in the competition; (3) China is narrowing the gap in national power; (4) the U.S. security position in Asia is eroding; (5) the risk of a catastrophic U.S.-China war is low; (6) a key challenge will be to manage U.S. alliances and partnerships; and (7) the struggle is intensifying through measures other than war.

The findings and themes suggest several topics for further research, such as ways to improve coordination across domains, levels, alliances, and partnerships; the best ways to compete, including the role of measures other than war; technological aspects of the competition; measures of cooperation amid the competition; and geopolitical opportunities.

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## About the Author

**Timothy R. Heath** is a senior international and defense researcher at the RAND Corporation, where his primary research areas include Chinese political-military strategy and other Asian military, strategic, and political topics. He has an M.A. in Asian Studies from George Washington University and a B.A. in Philosophy from the College of William and Mary.

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