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### Author

Cheung, Tai Ming

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# Inside China's Techno-Security State

Tai Ming Cheung

## Summary

Since coming to power, Xi Jinping has significantly elevated the importance of national security and technological innovation in the country's overall priorities. He has invested considerable time, effort, and political capital to establish an expansive techno-security state based upon his strategic and ideological vision. This brief examines the five major methods Xi's administration has undertaken to develop its techno-security state: developing a national security state, innovation-driven development, military strengthening, military-civilian fusion, and economic securitization.

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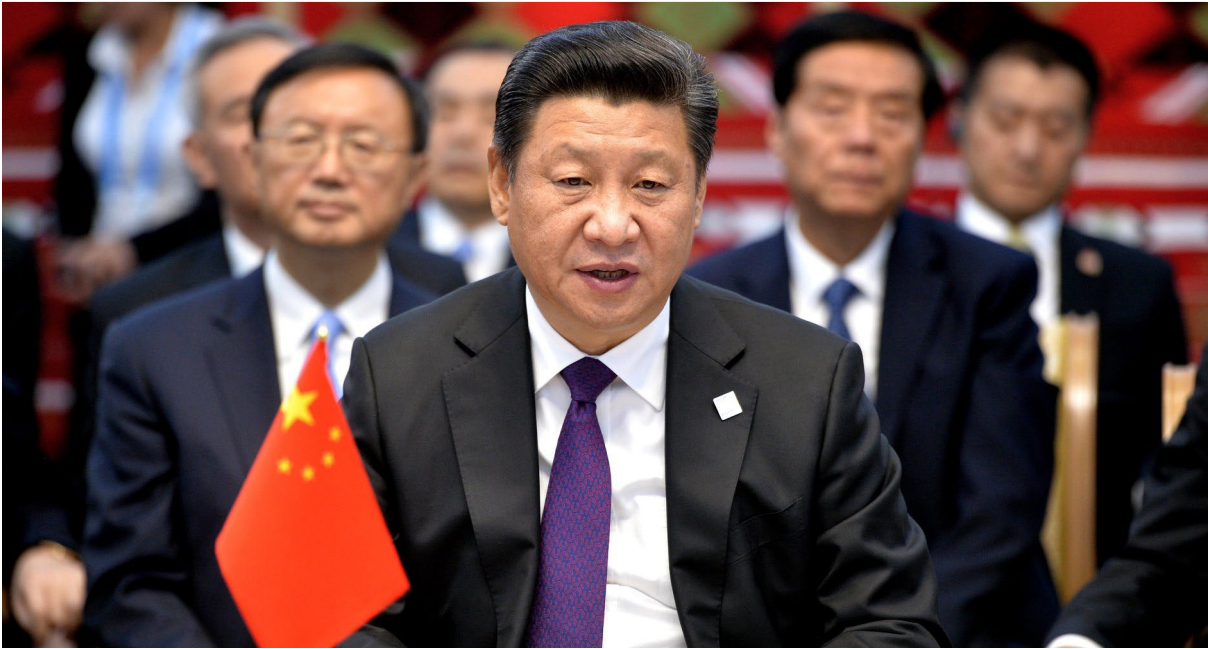


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## Introduction

Since coming to power at the 18th Party Congress in 2012, Xi Jinping has significantly elevated the importance of national security and technological innovation in the country's overall priorities. He has invested considerable time, effort, and political capital to establish an expansive techno-security state based upon his strategic and ideological vision under his close personal control through direct command of key institutions.

**This building of a techno-security state is being pursued through five major lines of effort:**

1. Developing a national security state
2. Innovation-driven development
3. Military strengthening
4. Military-civilian fusion
5. Economic securitization

These strategies are summarized in Table 1 and discussed in detail in this brief.

### WHAT IS A TECHNO-SECURITY STATE?

Techno-security state refers to an innovation-centered, security-maximizing regime that prioritizes the building of technological, defense, and national security capabilities to meet expansive national security requirements based on heightened threat perceptions and the powerful influence of domestic pro-security coalitions.

**TABLE 1****Chinese techno-security state development strategies**

Strategy	Goals
<b>Developing a national security state</b>	The national security state integrates the domestic and external security arenas and emphasizes the development of internal security and information control capabilities across a wide array of domains under the watchful eye of the party-state. Upon taking office, Xi quickly reframed the country's national security posture through ideological purification and the building up of a repressive national security state.
<b>Innovation-driven development strategy (IDDS)</b>	This strategy represents a new comprehensive model of national economic development that is closely coordinated with military and security goals. It is state-directed but market-supported and seeks a seamless integration of the civilian and military domains.
<b>Military-civil fusion (MCF) strategy</b>	This strategy aims to integrate the compartmentalized civilian and defense portions of the Chinese economy into a seamless, cohesive dual-use system better able to cater to the needs of the military and national security apparatuses. With Xi in charge of MCF affairs, the MCF community has access to and the attention of the highest levels of the leadership and resources.
<b>Military strengthening</b>	The MCF is a strategy designed to turn the People's Liberation Army (PLA) into a top-tier global military power by the mid-2030s and able to compete for overall dominance by mid-century by reducing reliance on foreign technology and promoting indigenous technological development and improved combat readiness.
<b>Economic securitization</b>	The securitization of the national economy aims to protect against external threats, insulating China from international disruptions, especially in key industries, strategic resources, and supply chains.

**STRATEGY 1****Developing the National Security State: Xi Jinping's Ideological Formation**

Xi brought to office a set of assumptions and viewpoints that were very different from his predecessors regarding what constituted the most worrying sources of dangers to the party and the country and how they should be addressed. As a long-time provincial apparatchik, Xi's worldview was dominated by domestic and party concerns.

Xi was haunted by the collapse of the Soviet Union<sup>1</sup> and was determined that the Chinese Communist Party (CCP) should avoid the same fate. His answer was a hand-in-glove strategy of hard-hitting ideological purification and the building up of a repressive national security state.

This need to prepare for danger in times of peace and to be ready for sudden incidents became important components in what would eventually become known as the Holistic National Security Outlook (HNSO; 总体国家安全观). Unveiled in April 2014, the HNSO has become the overarching conceptual framework for Xi's national security state. A central argument of the HNSO is that "China now faces the most complicated internal and external factors in [its] history."<sup>2</sup>

Based on Xi's reconceptualization of national security, the most dangerous threats are internal, non-traditional, political, and emerging. From this vantage point, the world is a far darker and more menacing place, thus justifying the establishment of a strong national security state. Although the concrete security environment that China faced in the early 2010s had not radically deteriorated, the way its new leaders perceived the situation had changed significantly.

Core national interests, the balance between development, security, and sovereignty, has also been revised under Xi's tenure. Xi has elevated security to the same level as development, if not higher. "We not only emphasize development issues but also security issues," Xi said at a meeting of the Central National Security Commission in April 2014.<sup>3</sup> Moreover, Xi said that national security and development are deeply intertwined with each other. "Security and development are two sides of the same issue, two wheels in the same driving mechanism. Security guarantees development, and development is the goal of security."<sup>4</sup> What this means is that China needs to pursue a more proactive and assertive approach in shaping and protecting its security environment to promote development rather than its previously more reactive and low-key posture.

<sup>1</sup> See Evan Osnos, "How Xi Jinping Took Control of China," *The New Yorker*, April 6, 2015. <https://www.newyorker.com/magazine/2015/04/06/born-red>

<sup>2</sup> "National Security Matter of Prime Importance: President Xi," *Xinhua News Agency*, April 15, 2014. [http://www.xinhuanet.com/politics/2014-04/15/c\\_1110253910.htm](http://www.xinhuanet.com/politics/2014-04/15/c_1110253910.htm)

<sup>3</sup> "Xi Jinping Chairs First NSC Meeting, Stresses National Security with Chinese Characteristics," *Xinhua News Agency*, April 15, 2014. [http://www.xinhuanet.com/politics/2014-04/15/c\\_1110253910.htm](http://www.xinhuanet.com/politics/2014-04/15/c_1110253910.htm)

<sup>4</sup> "Xi Jinping's Speech at Opening of Second World Internet Conference," *Xinhua News Agency*, December 16, 2015. [http://www.xinhuanet.com/politics/2015-12/16/c\\_1117481089.htm](http://www.xinhuanet.com/politics/2015-12/16/c_1117481089.htm)

<sup>5</sup> *13th Five-Year National Science and Technology Innovation Plan*, State Council, July 28, 2016.

**STRATEGY 2****Innovation-Driven Development Strategy (IDDS)**

The Innovation-Driven Development Strategy (IDDS; 国家创新驱动发展战略) represents the Xi administration's bold overarching development strategy of realizing China's long-term ambition of becoming a world power by mid-century. The strategy is state-directed but market-supported, globally engaged but framed by techno-nationalist motivations. It seeks a seamless integration of the civilian and military domains and employs a selective authoritarian mobilization approach targeted at core and emerging critical technologies.

The principal task of the IDDS and its constellation of associated plans and strategies is to support China's overall development, of which integral elements are national security and defense. While defense-related matters are only briefly touched upon in the IDDS, they are referred to throughout the outline, which suggests that they are important but should not draw too much attention.

The IDDS represents a whole-of-nation effort in the pursuit of technological innovation. This allows the authorities access to enormous institutional and material resources that can be applied to critical objectives. This selective authoritarian mobilization model is what Xi calls the superiority of the socialist system and has been successfully used on a number of pivotal science and technology projects in the past. One example of how China is developing its global innovation reach is through the Belt and Road Initiative, which Xi says should be used to build science and technology innovation alliances, bases, and common platforms. Moreover, Xi says that it is important to enhance China's influence and rulemaking ability in global science and technology governance, for example, through standards setting.

The IDDS put forward a two-step development approach to indigenously develop strategic and core technologies—those that are crucial for

national security and long-term competitiveness—the first near-to-medium stage up to 2020 and the second long-term stage to 2030 (since extended to 2035). In the first step, the focus was on accelerating the implementation of mega projects already underway. This includes high-end universal chips, 5G mobile communications technology, high-grade numerical control machinery, and high-resolution earth observation systems. Another area of national security focus in the IDDS is the development of technologies for public security and social governance applications.

A key measure of the ability of the IDDS to guide China's development is the extent and long-term commitment of top-level leadership support. Xi's strong commitment to the IDDS sends a clear signal to the administrative bureaucracy to vigorously implement the strategy and associated policies and plans or suffer the consequences. Further, the lifting of term limits in 2018 on Xi's tenure in power means that the IDDS can expect to enjoy an extended life, which is important because of its long-term focus.

A fundamental issue that will determine the overall effectiveness of the IDDS in driving China's long-term development is the evolving role of the state and its relationship with the market. The state remains of central importance in the IDDS umbrella, but its functions and responsibilities are being redrawn. The IDDS talks about building a modern innovation governance system with a more pluralistic, decentralized, streamlined, expert-informed, enterprise-focused, and indirect governance approach that has a clearer division of labor between the state and market. In this reconfiguration of the state's guiding hand, some functions and responsibilities are being enhanced while others are being curtailed or eliminated. Areas being strengthened include strategic planning, policy formulation, supervision and evaluation, the implementation of major and strategic tasks, and supporting fundamental research.<sup>5</sup>

**STRATEGY 3****Military Strengthening**

The possession of a strong, vibrant, and technologically advanced military and defense economic apparatus is pivotal to the forging of a potent techno-security state. Xi's thinking on the building of China's military power is formally known as "Military Strengthening in the New Era" (新时期的强军) and calls for a three-step transformation of Chinese military power to the middle of the twenty-first century.<sup>6</sup> The first step was to achieve the mechanization of the People's Liberation Army (PLA) by 2020 and make major progress in the development of "informatization" and strategic capabilities. This has largely been accomplished. The second more ambitious phase is to "basically" complete defense modernization by 2035, which would mean that the PLA and the defense science, technology, and industrial base would have finally caught up with the world's top tier of advanced defense countries. The third and most challenging stage is for China to become a comprehensive world-leading military power by 2050, in which it would overtake the United States in global superiority.

One of the chief purposes of the Chinese techno-security state is to enable the development of a strong, technologically advanced, and politically reliable military establishment that is able to meet an expanding portfolio of missions and responsibilities. However, the PLA has rarely had

the luxury of enjoying high-end military technological self-reliance. For the most part, the conventional weapons system has struggled because of chronic early dependence on imported Soviet technologies and deep-seated structural barriers that stymied coordination and development.<sup>7</sup>

Xi began to put forward his ideas and thinking on military strengthening immediately upon becoming party general secretary and Central Military Commission chairman at the 18th Party Congress in November 2012. At an expanded Central Military Commission meeting following the congress, the new commander-in-chief instructed the assembled military chiefs that the PLA needed to step up its deterrent and combat readiness, be prepared for military struggle, and embrace a revolution in military affairs with Chinese characteristics.<sup>8</sup>

The application of Xi's high-level military thinking into the duties, missions, and responsibilities of the military establishment is the domain of the Military Strategic Guidelines (MSG), which is the Chinese version of a national military strategy and constitutes the PLA's "programs and principles for planning and guiding the overall situation of war in a given period," or how the PLA would prepare to fight a future war.<sup>9</sup> As the MSG is classified, any examination of its nature and contents is limited to circumstantial openly available information.

<sup>6</sup> Xi Jinping, "Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era," *19th Chinese Communist Party National Congress*, October 18, 2017, [http://www.gov.cn/zhuanti/2017-10/27/content\\_5234876.htm](http://www.gov.cn/zhuanti/2017-10/27/content_5234876.htm).

<sup>7</sup> Tai Ming Cheung, *Fortifying China* (Ithaca, N.Y.: Cornell University Press, 2009).

<sup>8</sup> "Hu Jintao, Xi Jinping Attend Enlarged Meeting of Central Military Commission, Deliver Important Speeches," *Xinhua News Agency*, November 17, 2012.

<sup>9</sup> Taylor Fravel, *Active Defense: China's Military Strategy Since 1949* (Princeton, N.J.: Princeton University Press, 2019), 28. See also David M. Finkelstein, "China's National Military Strategy: An Overview of the 'Military Strategic Guidelines,'" in Roy Kamphausen and Andrew Scobell (Eds.), *Right Sizing the People's Liberation Army: Exploring the Contours of China's Military* (Carlisle, P.A.: Army War College, 2007), 67–140.

The Chinese government issued a 2015 defense whitepaper on “China’s Military Strategy” that can be viewed as a circumscribed de facto public outline of the MSG carefully edited to avoid disclosing any sensitive information.

The white paper spelled out noteworthy adjustments to the country’s military strategy, especially the need for heightened preparations for maritime conflict, information-era warfare, and the prioritization of the oceans, outer space, and cyberspace as the new “critical security domains.”<sup>10</sup>

Several of the key components of the 2014 MSG show signs of major alterations that cumulatively point to a consequential change in China’s thinking and approach to future war. First is the concept of military struggle. From solely a war-fighting prism, the 2014 MSG made what appears to be a modest amendment, from winning local wars under informatized conditions to winning informatized local wars.

Second is the identification of the strategic opponent. At the time that the 2014 MSG was being drawn up, military-strategic competition between the United States and China was still in its infancy and the two countries continued to pursue cooperative working relations. From the mid-2010s, however, and especially with the arrival of the Trump administration in 2016, the pace, scale, and intensity of bilateral military rivalry escalated across the defense spectrum from defense technological competition to contested forward military deployments in the Asia-Pacific region.



Photo: Public Domain, CCO

The PLA had been very careful in its official public assessments of the United States as a military and strategic threat, but this began to change in the second half of the 2010s. While the 2015 Chinese defense white paper made only mild and indirect comments about the United States, the 2019 version is more pointed and direct in identifying the United States as the main culprit in undermining stability and challenging China’s national security through “growing hegemonism, power politics, unilateralism, and constant regional conflicts and war.”<sup>11</sup> The white paper adds that the United States “has provoked and intensified competition among major countries, significantly increased defense expenditures, pushed for additional capacity in nuclear, outer space, cyber, and missile defense, and undermined global strategic stability.”

<sup>10</sup> State Council Information Office, *China’s Military Strategy*, May 25, 2015.

<sup>11</sup> *China’s National Defense in the New Era* (Beijing: People’s Republic of China State Council Information Office, 2019).



**STRATEGY 4****Military-Civil Fusion**

At the heart of the Chinese techno-security state is the grandiose idea of a strategic economy that seamlessly serves civilian and military needs that Xi has vowed to create. In a keynote address at the 19th Party Congress in 2017, Xi called for the building of an “integrated national strategic system.” This is a daunting challenge because of the long-standing and deeply entrenched separation between the civilian and defense sectors.

The means to achieve this integrated national strategic system is through military-civil fusion (MCF; 军民融合), which Xi has pursued since the mid-2010s. Before Xi took office, MCF was a mid-level policy priority that vied for attention with other issues. In 2015, Xi elevated MCF to a national-level priority.

His rationale for a fundamentally different way of pursuing MCF compared with prior administrations was that the relationship between economic development and national security had significantly altered. The Xi regime now viewed military/security priorities as equally, if not more, important as economic priorities. The formulation of the MCF development strategy took more than five years and steadily grew bolder and bigger over time. This can be largely attributed to Xi's increasing interest and involvement in MCF-related matters. This is most evident in Xi's appointment as the head of the Central Military-Civil Fusion Development Commission (CMCFDC), which was established in January 2017 to manage the MCF effort.

The MCF development strategy was formally approved in March 2018 and is officially known as the “Military-Civil Fusion Development Strategy Outline” (军民融合发展战略纲要). While this development strategy has not been publicly released, it is clear that MCF is a top priority for the Chinese civilian and military authorities.<sup>12</sup>

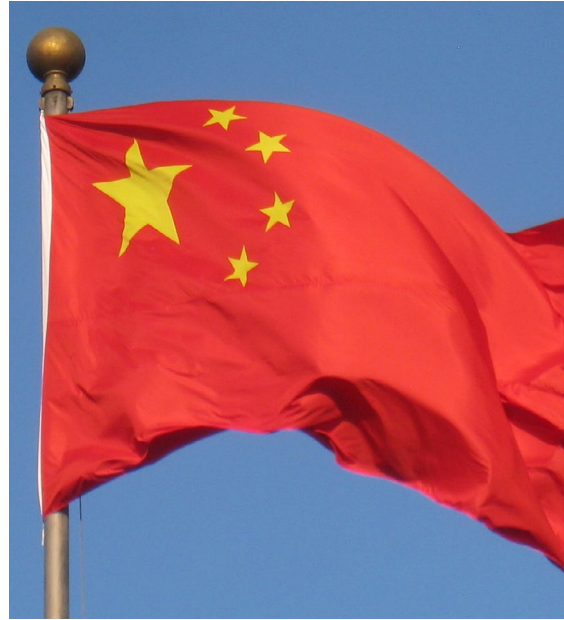


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The MCF development strategy represents a crucial link in Xi's efforts to coordinate between national security, economic development, and technological innovation.

The strategy is the last piece in the jigsaw puzzle of national strategies that Xi has drawn up spanning from the IDDS to the HNSO.

With Xi in personal charge of MCF affairs, the MCF community has access to and the attention of the highest levels of the leadership that it has not previously enjoyed. Moreover, MCF has been enshrined in the party constitution as a national priority, which means that it will likely retain this status for the duration of Xi's rule.

<sup>12</sup> Jin Zhuanglong, “Opening Up a New Era for a New Situation for In-Depth Military-Civil Fusion Development,” *Qiushi* (求是), July 16, 2018.

**STRATEGY 5****Economic Securitization**

In the late 2010s, Xi and the Chinese leadership determined that a fifth component was urgently needed in the wake of rising geoeconomic threats to further fortify the techno-security state, which was the securitization of the domestic foundations of the Chinese economy. Economic securitization aims to insulate China from international disruptions, “strengthening economic risk early warning, prevention, and control mechanisms and capabilities, achieving security and controllability of key industries, infrastructure, strategic resources, science and technology, and other key areas, and improving the secure development of food, energy, finance and other fields.”<sup>13</sup>

The leadership’s attention since the late 2010s has turned to the macro foundations of economic securitization. This has meant the safeguarding of the Chinese economy by ensuring resilience, economic and technological self-reliance, and the ability to prevent external shocks from causing severe internal disruptions. Economic securitization was elevated to a first-order priority because of a profound reevaluation by the Chinese leadership of the international geostrategic and geoeconomic environment surrounding China from the late 2010s.

Concern that China’s economic rise could be thwarted by external forces quickly gained currency from 2018 as the Trump administration undertook a concerted and expansive economic and technological campaign to impose costly sanctions, tariffs, and other restraints against China and its companies.

The United States’ imposition of crippling sanctions in May 2018 on ZTE Corporation, a Chinese technology national champion, was a major wake-up call for Beijing.

The Chinese macro-economic strategic response began to crystalize in 2020 under the rubric of the “dual circulation” (双循环) economy. The dual circulation approach was first publicly raised in a speech by Xi at a meeting of the Central Financial and Economic Commission in April 2020. Xi pointed out the need to establish a complete system of domestic demand that would have a crucial bearing on China’s long-term development and stability. Building up domestic economic resilience was essential, Xi explained, because the external environment was experiencing far-reaching changes, especially the accelerating trend of de-globalization.<sup>14</sup>

In August 2020, Xi said that in recent years domestic markets had become the main engine of the country’s overall economic growth while access to international markets and resources had significantly weakened. Xi said that the downturn in the global economy was caused by noneconomic factors and that the headwinds were likely to worsen in coming years, and so “we must be prepared to deal with a series of new risks and challenges.”<sup>15</sup>

<sup>13</sup> Barry Naughton, “Grand Steerage,” in Thomas Fingar and Jean C. Oi (Eds), *Fateful Decisions: Choices That Will Shape China's Future* (Stanford, C.A.: Stanford University Press, 2020), 54.

<sup>14</sup> Xi Jinping, “Several Major Issues in the National Medium and Long-term Economic and Social Development Strategy” (国家中长期经济社会发展战略若干重大问题), *Qiushi*, October 31, 2020, [http://www.qstheory.cn/dukan/qs/2020-10/31/c\\_1126680390.htm](http://www.qstheory.cn/dukan/qs/2020-10/31/c_1126680390.htm).

<sup>15</sup> “Xi Jinping: Correctly Understand and Grasp the Major Issues of Medium and Long-Term Economic and Social Development,” *Qiushi*, January 15, 2021, [http://www.xinhuanet.com/politics/leaders/2021-01/15/c\\_1126987023.htm](http://www.xinhuanet.com/politics/leaders/2021-01/15/c_1126987023.htm).

Constituencies advocating for national security, protectionist, techno-nationalist, and mercantilist interests undoubtedly view the dual circulation strategy as a siren call to safeguard and promote the building up of a securitized and self-reliant domestic economic base, especially sectors deemed to be of critical and strategic importance, against the escalating risks posed by de-globalization and decoupling with the West. The security of supply chains has received special prominence. Xi talked about the importance of supply chains at an April 2020 Central Economic and Financial Commission meeting, pointing out that “in order to safeguard China’s industrial security and national security, we must focus on building production chains and supply chains that are independently controllable, secure and reliable.”<sup>16</sup>

The 5th Plenum in the run-up to the finalization of the 14th Five-Year Plan in October 2020 made clear that there was increasing awareness that “national security is the prerequisite for development and development is the guarantee of security,” and risk factors are “increasing significantly.”<sup>17</sup> This required adopting a more security-minded, risk-based, and preemptive mindset to “effectively prevent and resolve various risks and challenges.”

The Chinese economy’s rapid response to the COVID-19 pandemic is held up as a prime example of the importance of possessing a self-sufficient and comprehensive industrial supply chain for ensuring the country’s national security.<sup>18</sup>

Russia’s war of conquest and destruction against Ukraine in 2022 has provided the most compelling case to Chinese leaders about the need to urgently step up this strengthening of economic securitization measures in the event of a full-blown economic war with the United States and the West. While the United States and its allies have refrained from direct military intervention (while providing extensive military assistance to Ukraine), they have been willing to engage in high-intensity economic warfare against Russia through the use of wide-ranging economic sanctions, especially tough financial and trade sanctions and export controls and the exit of foreign companies from Russia.

The freezing of Russian-owned foreign currency assets by Western central and commercial banks and excluding Russian banks from the international banking system are some of the key measures that Chinese analysts have highlighted for the Chinese authorities to prepare for should China find itself in a similar situation in the future.<sup>19</sup>

<sup>16</sup> Xi Jinping, “Several Major Issues.”

<sup>17</sup> “Xi Jinping: Explanation of the ‘Recommendations of the Chinese Communist Party Central Committee on Formulating the 14th Five-Year Plan for National Economic and Social Development and Long-Term Goals for 2035,’” *Xinhua News Agency*, November 3, 2020, [http://www.xinhuanet.com/politics/leaders/2020-11/03/c\\_1126693341.htm](http://www.xinhuanet.com/politics/leaders/2020-11/03/c_1126693341.htm).

<sup>18</sup> Xue Zhiliang, “Fight the ‘Pandemic’ and Refresh Thinking on National Defense Mobilization,” *China National Defense News* (中国国防报), April 2, 2020, [http://www.gfdy.gov.cn/topnews/2020-04/02/content\\_9783197.htm](http://www.gfdy.gov.cn/topnews/2020-04/02/content_9783197.htm).

<sup>19</sup> See, for example, Gao Ge, “Chinese Think Tank Releases assessment on US Sanctions against Russia,” *People’s Net* (人民网), April 6, 2022, <http://world.people.com.cn/n1/2022/0406/c1002-32392375.html>.

## CONCLUSION

### The Bottom Line

China is making steadfast progress in its efforts to build a world-class techno-security state, but faces stiff challenges ahead. Externally, the United States is stirring to thwart China's techno-security rise while endeavouring to preserve its own long-cherished dominance. Moreover, the far-reaching geopolitical fallout from Russia's February 2022 invasion of Ukraine that has plunged the world into another dangerous Cold War stand-off is further deepening the rift between China and the West.

Domestically, the Chinese techno-security state along with the rest of the country is scrambling to turn from being a dependent follower into an advanced and self-reliant science, technology, and innovation power. But the prolonged COVID-19 pandemic lockdown and abrupt regulatory and political crackdowns against big tech companies and the private sector threaten to disrupt this transformation. The road ahead in the building of an increasingly muscular and assertive Chinese techno-security state is bumpy and full of potholes.



Photo: Paul Kagame, CC BY-NC-ND 2.0

For discussion on how these strategies and factors compare with the United States, see [Will China Become the World's Technology and Security Superpower?](#)

## Author

Tai Ming Cheung is director of the University of California Institute on Global Conflict and Cooperation (IGCC) and a professor at the School of Global Policy and Strategy at UC San Diego, where he teaches courses on the international relations and national security of China and Chinese security and technology policy. Among the areas of his research focus include China's efforts to become a world-class science and technology power, and the relationship between geoeconomics, innovation, and national security. Dr. Cheung is a long-time analyst of Chinese and East Asian defense and national security affairs, especially defense economic, industrial and science and technological issues.

Dr. Cheung is the author of *Innovate to Dominate: The Rise of the Chinese Techno-Security State* (Cornell University Press, 2022), and *Fortifying China: The Struggle to Build a Modern Defense Economy* (Cornell University Press, 2009); editor of *Forging China's Military Might: A New Framework for Assessing Innovation* (Johns Hopkins University Press, 2014); and co-editor of *The Gathering Pacific Storm: Emerging U.S.-China Strategic Competition in Defense Technological and Industrial Development* (Cambria Press, 2018). He was based Hong Kong, China, and Japan from the mid-1980s to 2002 covering political, economic, and strategic developments in Greater China and East Asia, first as a journalist for the Far Eastern Economic Review from 1988–1993 and subsequently as a political and business risk consultant for a number of companies, including PricewaterhouseCoopers. Dr. Cheung has a Ph.D. in war studies from King's College, London.

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