

# MILITARY-CIVIL FUSION IN CHINA IN CONTEMPORARY TIMES

PRAHLAD KUMAR SINGH

## INTRODUCTION

The civil-military relationship aims to understand the dynamics of the relationship between the civilian government and the military in any society. It assumes that the civil and military domains are two separate domains, as well as the normative idea of civilian control over the military. For the democratic system, the civil-military relationship is dominated by the concept of 'objective control' and separation between the civilian and military domains.<sup>1</sup> The state aims to keep the military away from participating in political affairs. But in China, the military plays a dominant role in political affairs. The military's historical role in the revolutionary transformation and the notion of a Party army provided a significant role for the military in society and politics in the post-revolutionary period.<sup>2</sup>

---

**Prahlad Kumar Singh** is a Research Associate at the Centre for Air Power Studies, New Delhi.

1. Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge: Harvard University Press, 1957), p. 7.
2. David Shambaugh, "The Soldier and the State in China: The Political Work System in the People's Liberation Army," *The China Quarterly*, 127, 1991, pp. 527–68.

**Over a period, in its latest form, MCF has emerged as one of the main causes for large-scale structural and organisational reform within the military with the objective of defence modernisation.**

Therefore, any discussion on Civil-Military Integration (CMI) and Military-Civil Fusion (MCF) is founded on the assumptions of separation of these two domains in terms of norms, resources and organisational culture. CMI aims for the sharing of technology, personnel, and facilities between the military and commercial sectors. Since 1949, China has

also faced resource constraints while pursuing economic and military development. Due to the centralised political structure in China, historically, the central leadership played a prominent role in major policy direction and resource allocation. During the times of different leaderships, the idea of CMI in some or other form has been part of the Chinese economic planning and vision for modernisation. Over a period, in its latest form, MCF has emerged as one of the main causes for large-scale structural and organisational reform within the military with the objective of defence modernisation. This has raised concerns for other countries working with China that their commercial transactions may be subverted for defence purposes. Many countries, including India, also became concerned about Chinese investments in critical infrastructure like the electricity grid or surveillance equipment, that could be used by China for strategic advantage in case of a conflict.

In this context, this paper seeks to analyse MCF and its implications. The first section introduces the idea and theoretical assumptions about MCF. The second section explores the historical evolution of MCF in China, emphasising the contribution of different leaders. The third section of the paper elaborates on the role of Xi Jinping in promoting MCF. The following sections discuss MCF's integration with other plans and its role in military modernisation. The next section elaborates on the lessons and implications for India. In conclusion, the paper examines the key challenges and implications of China's MCF strategy.

**CIVIL-MILITARY INTEGRATION:  
THEORETICAL AND  
CONCEPTUAL UNDERSTANDING**

Civil-Military Integration (CMI) aims to share technology, personnel and facilities between the commercial and military sectors. The aim is to overcome resource constraints and use each other's advantages for mutual benefit.

In the United States, the emphasis on CMI emerged after the changing threat assessment after the demise of the Soviet Union. In the post-Cold War era, in the absence of an immediate military threat, US law-makers emphasised CMI to maintain military superiority and to consider budgetary constraints.<sup>3</sup> Segregated defence industries were becoming inefficient and resource-intensive. Therefore, the US Congress asked for a report from the Office of Technology Assessment (OTA) on the prospects of integrating the civilian and military sectors. In response, OTA released a report on "Assessing the Potential for Civil-Military Integration: Technologies, Processes, and Practices", outlining policies that could advance CMI. It defined CMI as "the process of uniting the Defence Technology and Industrial Base (DTIB) and the larger Commercial Technology and Industrial Base (CTIB) into a unified National Technology and Industrial Base (NTIB), under CMI ... common technologies, processes, labour, equipment, material, and/or facilities would be used to meet both defence and commercial needs".<sup>4</sup>

There is no singular way to look at the idea of CMI. Based on experience and need, countries have evolved their CMI priorities. Michel Brzoska, in his paper on "Trends in Global Military and Civilian Research and Development

**In the post-Cold War era, in the absence of an immediate military threat, US law-makers emphasised CMI to maintain military superiority and to consider budgetary constraints.**

---

3. Linda Brandt, "Defense Conversion and Dual Use Technology: The Push Toward Civil Military Integration," *Policy Studies Journal*, 22(2), 1994, pp. 359-70.

4. U.S. Congress, OTA, ed., *Assessing the Potential for Civil-Military Integration: Technologies, Processes, and Practices* (Washington DC: 1994), pp. 43-50.

(R&D) and their Changing Interface”, outlined in brief the different policy approaches of the government related to CMI:

- **Spin-off:** This approach was prevalent during the Cold War. R&D in the military sector dominated during this period. The government promoted the civilian application of military R&D achievements. Due to the centralised planning system, the technology transfer ratio was higher in the Soviet Union than in the Western countries.
- **Warfare and Welfare:** In this model, the government promoted civilian and military mutual interaction and equal emphasis on both—for example, France’s nuclear programme aimed at both the weapons and power sectors.
- **Dual Use:** This approach aims at developing generic knowledge and technology. The idea is to generate a common pool of knowledge for civilian and military users.
- **Civil-Military Integration:** In this approach, the civilian sector leads the R&D, and the military industry provides critical input into it. This model used the researcher and the research infrastructure for both civilian and military purposes.
- **Spin-in:** In this approach, civilian R&D became dominant. The shift in the funding pattern reduced military R&D to fill the gaps left by civilian research. The use of civilian technology for military purposes increased.<sup>5</sup>

Brzoska argues that over the years, civilian technology became more important due to a relative increase in funding and structural reform related to the ease of secrecy and the growing cost consciousness in military R&D. This was different from the Cold War period when military R&D was separated and beyond the purview of cost considerations. Also, the similarities between civilian and military R&D are growing in many countries. He argues that the broader way of looking at the interaction between civilians and the military

---

5. Michael Brzoska, “Trends in Global Military and Civilian Research and Development (R&D) and Their Changing Interface,” January 1, 2006, [https://www.researchgate.net/publication/242726116\\_Trends\\_in\\_Global\\_Military\\_and\\_Civilian\\_Research\\_and\\_Development\\_RD\\_and\\_their\\_Changing\\_Interface](https://www.researchgate.net/publication/242726116_Trends_in_Global_Military_and_Civilian_Research_and_Development_RD_and_their_Changing_Interface). Accessed on January 27, 2025.

includes the production factor of knowledge and the degree of transferability, research methods and funding patterns.<sup>6</sup>

### **CHINA: FROM CIVIL-MILITARY INTEGRATION (*JUNMIN JIEHE*) TO MILITARY-CIVIL FUSION (*JUNMIN RONGHE*)**

The role of theory and the conceptual system is important to understanding the specific meaning of words in the Chinese context. Due to complex political ideas and contextually dependent meanings, the terms related to MCF cannot be translated straightforwardly into English. Therefore, disseminating the specific meaning of a term and describing it with the underlined conceptual system is important. The idea of MCF has been present in China in some other form for a long time. The terms *jun* and *min* comprise the building blocks of the various terms related to MCF. Depending upon the context, both terms could refer to multiple meanings, including security and development, military strength and civilian strength, military technology and commercial technology, the armed forces and the people, etc. Therefore, the English translation of *jun* and *min* as civil and military does not cover such broad meanings.<sup>7</sup>

In terms of strategy, during Mao's period, the idea of MCF was centred around the balancing approach as denoted by the term *junmin jiangou*, which means public-private balance or military-people balance. The focus changed during Deng's era to *junmin jiehe* as a guiding principle of military-civil integration in defence construction and the national economy. During this period, the focus was on combining the defence economy with the national economy and producing commercial and defence goods within the defence sector. Jiang Zemin promoted the strategy of *yu jun yu min*, which means locating military potential in civilian capabilities. This strategy focussed on the high degree of compatibility between defence and the national economy

---

6. Ibid.

7. Alex Stone, "Military-Civil Fusion Terminology: A Reference Guide," China Aerospace Studies Institute (CASI), February 2021, [https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/CASI%20Articles/2021-03-15%20MCF%20Lexicon.pdf?ver=ERteHVCsjK2IBa6\\_\\_DAldw%3D%3D](https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/CASI%20Articles/2021-03-15%20MCF%20Lexicon.pdf?ver=ERteHVCsjK2IBa6__DAldw%3D%3D). Accessed on January 15, 2025.

and developed the capacity to transition between peace-time and war-time operations. During Hu Jintao's period, the term shifted from *jiehe* to *ronghe*, which means from combination to fusion. An MCF strategist considers this shift as being from mechanical integration to organic fusion. *Junmin ronghe* incorporates the broadest possible meaning of the characters *jun* and *min*.<sup>8</sup>

Guo Xifeng, while explaining the military-civil relations in China, provides some insights on close relationships and integration. He argues that the military implementing the Party's mass line is to secure the people's interest. The closeness of military-civil relations can be defined as a "fish and water" and "flesh and blood" relationship. He suggests that the military should obtain power and wisdom from the people. Further, he calls for military-civil integration in equipment, scientific research, production systems, legal construction and military training to achieve the goal of a prosperous country and a strong military.<sup>9</sup>

The Chinese Communist Party (CCP), through CMI, aims to fulfil the need for national defence and economic development. It is a measure for the CCP to "accelerate the process of socialist modernisation and provide the fundamental basis for realising a prosperous country and a strong military". Some of the principles that played a crucial role in the development of civil-military integration include the part of advanced scientific theory, the Party's leading role, the reform spirit, and the coordinated development of the defence and social economy.<sup>10</sup>

To explain China's military-civil fusion strategy, M. Can, and A. Viera applied a neoclassical international theoretical framework and state action theory perspective. They observed that emerging technologies like Artificial Intelligence (AI), big data, Internet of Things (IoT), quantum computing, etc., have amplified the state's extraction capability to increase military and economic power. Looking at the level of coordination between State Owned

---

8. Ibid.

9. Guo Xifeng "Thoughts on Adhering to the Mass Line and Close Military-Civil Relations", *The Life of the Military Party*, 10(53), 2013.

10. Fang Wei and Feng Qiliang, "The Experience and Enlightenment of the Communist Party of China in Promoting the Coordinated Development of Economy and National Defense Construction," *Science & Technology Progress and Policy*, 38(17), 2021, pp. 10-18.

Enterprises (SOEs), private companies and the People's Liberation Army (PLA), they termed MCF as a "comprehensive strategy for mobilisation and extraction". According to them, two major factors responsible for the MCF strategy are the domestic factor of rapid progress in the emerging technology, leading to a new quality of mobilisation and the systemic factor of increasing strategic competition with the US.<sup>11</sup>

### **HISTORICAL EVOLUTION OF MCF IN CHINA**

In China's Party-state system, the role of the central leadership, from Mao to Xi, remains crucial in defining major policies, including an approach to defence modernisation. Since the Chinese Army is a Party-army there is always contestation among different leaderships on what should be prioritised within the military: political work or professionalism. There are also debates on how modernisation can impact the military's political role. Therefore, we can observe that any drive for modernisation or increasing professionalism in the military needs to ensure the primacy of the political work of the military. In this context, the following section discusses different policy measures such as the third front movement, the commercialisation of the defence sector, and then, the evolution from integration to fusion.

### **THIRD FRONT MOVEMENT AND ITS LEGACY**

The third front movement aimed at creating defence infrastructure in remote areas. It got national priority between 1964 and 1971. Mao's decision to build defence infrastructure in isolated areas arose from geopolitical concerns related to the US presence in the Vietnam War. In addition, the drive for self-sufficiency also emerged due to the Sino-Soviet border conflict in 1969. It transferred the technologies from the existing industrial facility in the urban centres to develop the defence industrial base in strategically secure areas. This was one of the classic examples of how economic considerations did not restrain China's centrally planned system

---

11. Muhammed Can and Alena Vieira, "The Chinese Military-Civil Fusion Strategy: A State Action Theory Perspective," *The International Spectator*, 57, no. 3, 2022, pp. 85–102.

**Since the late 1990s, China has focussed on organisational and operational reforms to advance basic research and innovation capabilities. This process aimed to foster linkages between defence R&D and civilian research institutes and universities.**

in resource mobilisation for industrial development. From the mid-1960s to 1980, China invested around Yuan 200 billion in the third front area.<sup>12</sup> Deng Xiaoping used the advancement of defence technology gained during this reform period.

#### REFORMS AND INTEGRATION

The greater PLA involvement in commercial operations resulted in increased corruption within the military. To combat this, Jiang ordered the PLA to divest from business activity in 1998, except for successful firms.<sup>13</sup> Even after divesting the military from commercial activities, Jiang continued Deng's legacy CMI to prioritise projects intended to serve peace-time and war-time preparations.<sup>14</sup>

Since the late 1990s, China has focussed on organisational and operational reforms to advance basic research and innovation capabilities. This process aimed to foster linkages between defence R&D and civilian research institutes and universities. In the second half of the 2000s, China started prioritising establishing high-end research facilities and basic research centres at the defence and national levels. In his central work report of the government in 2008, Wen Jiabao also mentioned the objective of China's innovation plan as the creation of national-level engineering centres, state laboratories and enterprise-oriented innovation support systems.<sup>15</sup>

During the Hu Jintao period, the idea of CMI changed into MCF. At the 17th Party Congress in 2007, Hu proposed the concept of a "military-civil

---

12. Naughton, n. 12, pp. 351–86.

13. Li Cheng and Lynn White, "The Fifteenth Central Committee of the Chinese Communist Party: Full-Fledged Technocratic Leadership with Partial Control by Jiang Zemin," *Asian Survey*, 38, no. 3, 1998, pp. 231–64.

14. Andrew Scobell, "Playing to Win: Chinese Army Building in the Era of Jiang Zemin," *Asian Perspective*, 25, 2001, pp. 73–105.

15. Tai Ming Cheung, "The Chinese Defense Economy's Long March from Imitation to Innovation," *Journal of Strategic Studies*, 34, no. 3, 2011, pp. 325–54.

fusion path with Chinese characteristics".<sup>16</sup> This fusion can be seen as the widening and deepening of the scope of CMI. Hu Jintao's report at the 18th Party Congress in 2012 also called for continued MCF with Chinese characteristics to achieve the goal of prosperity and strong armed forces.<sup>17</sup>

The Commission for Science, Technology, and Industry for National Defence (COSTIND) issued the "Defence Industry 2006-2020 Medium and Long-Term Science and Technology Development Plan" (MLTP) in 2007. The central principle of MLTP was to achieve *Zizhu Chuangxin*, which can be translated as indigenous innovation, independent innovation or innovation with Chinese characteristics. The plan aimed to promote corporatisation and convert R&D institutes into share-holding entities, develop a defence laboratories system, create a primary innovation fund and call for a research institute to invest 3 per cent of sales into R&D.<sup>18</sup>

From the policy-making perspective, the MLTP did not come up with any radical shift in the government's approach toward innovation. It continued the legacy of the policy-makers' belief that innovation can be achieved under the government's guidance. The plan excessively focussed on the technologically driven innovation approach while ignoring the complex issue of social capital, institution building and an innovation-friendly environment. There was also apprehension that focus on "indigenous" innovation may lead to the rise of "techno-nationalism".<sup>19</sup>

**The central principle of MLTP was to achieve *Zizhu Chuangxin*, which can be translated as indigenous innovation, independent innovation or innovation with Chinese characteristics.**

---

16. Alex Stone and Peter Woods, "China's Military-Civil Fusion Strategy a View from Chinese Strategists," *China Aerospace Studies Institute*, June 15, 2020, [https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/Other-Topics/2020-06-15%20CASI\\_China\\_Military\\_Civil\\_Fusion\\_Strategy.pdf](https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/Other-Topics/2020-06-15%20CASI_China_Military_Civil_Fusion_Strategy.pdf). Accessed on January 15, 2025.

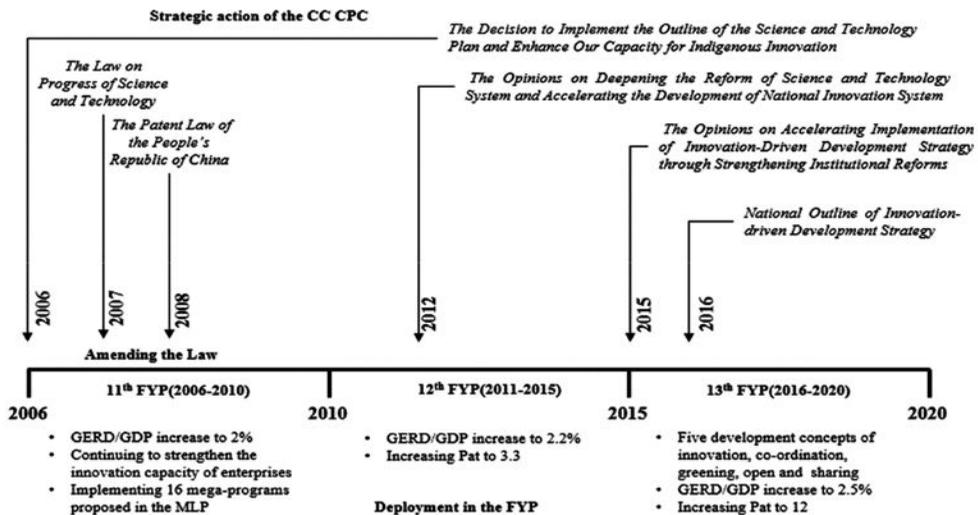
17. "Full Text of Hu Jintao's Report at 18th Party Congress," November 18, 2012, [http://np.china-embassy.gov.cn/eng/Diplomacy/201211/t20121118\\_1586373.htm](http://np.china-embassy.gov.cn/eng/Diplomacy/201211/t20121118_1586373.htm). Accessed on January 24, 2025.

18. Cheung, n. 15, pp. 325-54.

19. Sylvia Schwaag Serger and Magnus Bredne, "China's Fifteen-Year Plan for Science and Technology: An Assessment," *Asia Policy*, 1, no. 1, 2007, pp. 135-64.

Sun and Cao (2021), while assessing the implementation and achievement after the assigned period of MLTP 2006-20, observed that the Party-state acted as a critical driver and the central leadership as a facilitator.<sup>20</sup> The Five-Year Plan (FYP) vehicle for MLTP implementation, as shown in Fig 1 below prepared by the authors, offers policy measures and amendments taken to implement the MLTP and facilitate Research and Development (R&D):

Fig 1



Source: Sun and Cao (2021) URL: [https://media.springernature.com/full/springer-static/image/art%3A10.1057%2Fs41599-021-00895-7/MediaObjects/41599\\_2021\\_895\\_Fig1\\_HTML.png?as=webp](https://media.springernature.com/full/springer-static/image/art%3A10.1057%2Fs41599-021-00895-7/MediaObjects/41599_2021_895_Fig1_HTML.png?as=webp)

In the plan, China set the target for increasing Gross Expenditure on R&D (GERD) as a percentage of GDP at 2.5 per cent. In 2019, China's GERD as a percentage of GDP was 2.4 per cent. Regarding the Global Innovation Index, China moved from 29th place in 2007 to 14th place in 2020. The term R&D, as defined by the Organisation for Economic Cooperation and Development

20. Yutao Sun and Cong Cao, "Planning for Science: China's 'Grand Experiment' and Global Implications," *Humanities and Social Sciences Communications*, 8, no. 1, September 20, 2021, pp. 2-8.

(OECD), consists of three aspects: basic research, applied research, and experimental development. In the case of China, the share of basic research in GERD during the MLTP period was stagnant at around 5 per cent and able to reach 6 per cent in 2019.<sup>21</sup>

In comparison, in 2018, the primary research share in GERD for the UK was 18.6 per cent, and 16.6 per cent for the US. The share of applied research in GERD was also low and declined to 11.3 per cent in 2019, compared to 19.15 for the US in 2018. Sun and Cao argue that overspending the R&D proportion on experimental development at the cost of basic and applied research may hamper the long-term prospect of scientific and economic development. They have also highlighted that the policy of commercialisation of R&D may have adversely affected the development of basic research as many private companies reported varying numbers of taking advantage of the government incentives.<sup>22</sup>

## **ORGANISATIONAL DEVELOPMENTS**

At different times, departments were created to implement the MCF policies. The creation and reorganisation of departments must also be considered in managing conflictual organisational interests. In 1998, the General Armament Department (GAD) was created for a centralised military procurement system. The PLA got primacy through GAD, and limited the role of COSTIND in defence firms' administration.

The Chinese State Administration for Science, Technology and Industry for National Defence (SASTIND) and Civil-Military Integration Promotion Department (CMIPD) were created in 2008. SASTIND has the mandate to maintain the core capability of the defence industries. CMPID's responsibility was to develop a standard for civilian and military products. This bureaucratic reorganisation was interpreted as a victory for GAD and a progressive move in the direction of CMI.<sup>23</sup> Over the years, SASTIND's influence increased

---

21. *Ibid.*

22. *Ibid.*, pp. 2–3.

23. Ed Francis and Susan M. Puska, "Contemporary Chinese Defense Industry Reforms and Civil-Military Integration in Three Key Organizations," SITC, no. 5, September 1, 2010, pp. 1–4.

in the implementation of the vision of Hu Jintao for MCF. Later, SASTIND became a launching pad to high profile CCP posts for defence industry executives.<sup>24</sup> Xi continued this legacy and created a new institution to oversee the implementation of the MCF strategy.

Zhao Yang argues that the integration of the socialist military and civilian domains is to “integrate modernisation of national defence and the armed forces into the economic and social development system to realise the organic unity of the rich country and strong army”. Yang has highlighted some of the development strategies and ideological theories applied throughout military-civil integration, such as Mao’s “military-civilian consideration thought”, Deng Xiaoping’s “military-civilian combination thought”, Jiang Zemin’s “military-civilian combination thought”, and Hu Jintao’s “military-civilian integration thought”. Yang also contends that the theoretical basis of CMI is constituted by the Marxist military approach and China’s traditional culture. The Marxist theory provides the economic explanation for war and violent revolution as a means for social change. The proletarian army is considered crucial for maintaining the people’s dictatorship. The traditional Chinese culture exemplifies military-civil integration as a “mixed-soldier-peasant” system.<sup>25</sup>

### **UNDERSTANDING THE ROLE OF XI JINPING IN MCF**

When Xi Jinping came to power, he emphasised the achieving of the “Chinese Dream”. A prosperous country and a strong military were the two main targets for achieving the Chinese Dream.<sup>26</sup> Xi promoted MCF as the main technique through which both could be achieved. As explained above, MCF is not new; there are historical continuities and reforms. Under

---

24. Greg Levesque and Mark Stokes, “Blurred Lines: Military-Civil Fusion and the ‘Going Out’ of China’s Defense Industry,” *Pointe Bello*, December 2016, [https://toinformistoinfluence.wordpress.com/wp-content/uploads/2017/07/2613c-062017\\_pointebello\\_militarycivilfusionreport.pdf](https://toinformistoinfluence.wordpress.com/wp-content/uploads/2017/07/2613c-062017_pointebello_militarycivilfusionreport.pdf). Accessed on January 22, 2025.

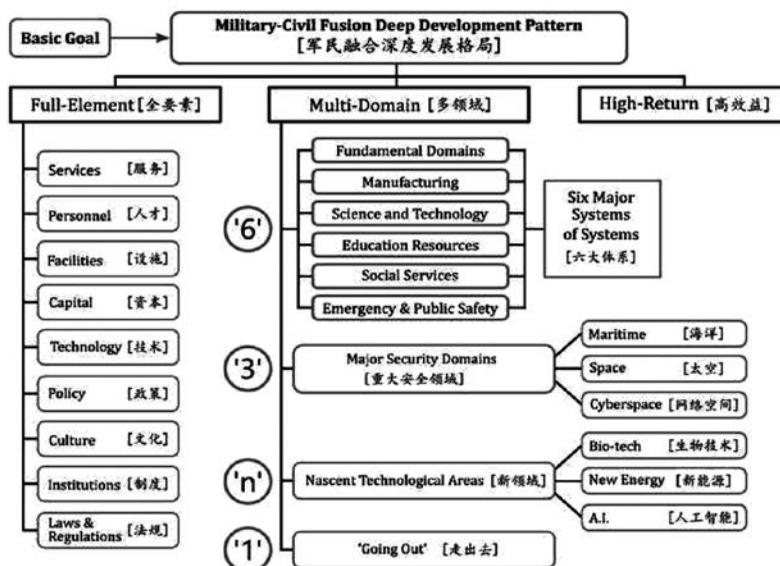
25. Zhao Yang, “Tracing Back to the Origin and Practice of the Thought of Military and Civilian Integration of the Communist Party of China,” *Journal of Sichuan University of Science & Engineering (Social Sciences Edition)*, 34(4), 2019, pp. 35-44.

26. Winberg Chai and May-lee Chai, “The Meaning of Xi Jinping’s Chinese Dream,” *American Journal of Chinese Studies*, 20, no. 2, 2013, pp. 95–97.

the leadership of Xi Jinping, MCF has become a crucial aspect of military modernisation and overcoming resource constraints for developmental needs. It has been integrated with some of the significant ongoing plans. Also, the people involved at different levels in implementing MCF have continuously conveyed what is to be done and why it is crucial. Still, the problem with the project is its aim for a more significant role for private players and dependence on state financing and centralised instruction. While reaffirming the overall goal of his predecessors, Xi Jinping was dissatisfied with the slow progress and implementation. He called for transitioning from “early-state fusion” to “deep-fusion”.<sup>27</sup>

Based on their survey of the available literature, Alex Stone and Peter Woods (2020) have illustrated MCF. Here complete elements denote resource sharing; and multi-domain indicates area priorities and high return as the expected outcome of MCF, as shown in Fig 2 below:

Fig 2



Source: Stone and Woods (2020).

27. Stone and Woods, n. 16.

**China's 13th Five-Year Plan (2016-20), in the chapter on CMI, discusses the need to create a framework to support integrated military-civilian development projects in domains such as the oceans, space, and cyberspace.**

In March 2015, military-civil fusion was elevated into a national strategy. In January 2017, the Central Commission for Integrated Military and Civilian Development Committee (CCIMCDC), headed by Xi Jinping, was established to overcome institutional barriers.<sup>28</sup> China's 13th Five-Year Plan (2016-20), in the chapter on CMI, discusses the need to create a framework to support integrated military-civilian development projects in domains such as the oceans, space, and cyberspace. Other policy goals are institutional reforms, opening military industries to competition, and fostering private actors with an advantage in research and development in manufacturing and maintaining military products. Xi provided the impetus and leadership support from the highest level to military-civil fusion.

The role of Xi in promoting MCF can be located in setting priorities and overcoming some of the barriers faced by the policy during previous periods. The 2010 State Council-CMC directive on integrating military and civilian weapon systems research, development, and production, also known as *Document No 37*, identifies six barriers to military-civil fusion: poor CMI coordination, barriers for the civilian market to participate in the defence sector, resource sharing, incomplete institutional reform, underdeveloped CMI industries and poorly designed policy guidelines.<sup>29</sup> And some of the initiatives taken by Xi can be seen as the means to overcome these barriers. Reform, innovation and modernisation are the three strategies through which Xi is trying to change the defence industries "from big to powerful".<sup>30</sup>

---

28. Amrita Jash, "China's Military-Civil Fusion Strategy: Building a Strong Nation with a Strong Military," *CLAWS Journal*, no. 13, 2020, pp. 42–62.

29. Levesque and Stokes, n. 24.

30. Tai Ming Cheung, "From Big to Powerful: China's Quest for Security and Power in the Age of Innovation," *East Asia Institute*, April 2019), [https://www.eai.or.kr/new/en/etc/search\\_view.asp?intSeq=18589&board=eng\\_workingpaper](https://www.eai.or.kr/new/en/etc/search_view.asp?intSeq=18589&board=eng_workingpaper). Accessed on January 25, 2025.

In 2015, Xi upgraded MCF as a national strategy; this can be considered one of the most important steps in promoting MCF. It provided signalling to different organisations working for this to overcome their sectoral interest, as it is now part of

**In 2015, Xi upgraded MCF as a national strategy; this can be considered one of the most important steps in promoting MCF.**

the national priority.<sup>31</sup> Xi continuously conveys the importance of MCF at various fora. At the 13th National People's Congress, he said, "Implementing the strategy of military-civilian integration is a prerequisite for building integrated national strategies and strategic capabilities, and for realising the Party's goal of building a strong military in the new era".<sup>32</sup> China's 2015 White Paper on Military Strategy and the 19th Party Congress in October 2017 reaffirmed the priority of the MCF strategy.<sup>33</sup>

At the first plenary meeting held on June 20, 2017, Xi said, "The ideas, decisions and plans of military and civilian integration must be fully implemented in all fields of national economic and defence construction and the whole processes". So, the idea is that rather than looking at it as a separate policy, it should be integrated with the overall development plan so that the resources can be used efficiently. He also mentioned expanding MCF in strategically significant areas such as the sea, outer space, cyberspace, biology and new energy.<sup>34</sup>

Apart from this, MCF has been integrated with China's economic and technological development plans such as the Five-Year Plans, AI development plans and military modernisation plans. The following section discusses MCF's integration with the other plans.

---

31. Tai Ming Cheung, et al., "Chinese Defense Industry Reforms and Their Implications for US-China Military Technological Competition," *SITC Research Briefs*, Series 9, no. 4, February 28, 2017, <https://escholarship.org/uc/item/84v3d66k>. Accessed on January 24, 2025.

32. "Xi Calls for Deepened Military-Civilian Integration", *Xinhua*, March 12, 2018, [http://www.xinhuanet.com/english/2018-03/12/c\\_137034168.htm](http://www.xinhuanet.com/english/2018-03/12/c_137034168.htm). Accessed on January 26, 2025.

33. Richard A. Bitzinger, "China's Shift from Civil-Military Integration to Military-Civil Fusion," *Asia Policy*, 16, no. 1, January 2021, pp. 5-24.

34. "Xi Urges Efforts to Boost Integrated Military and Civilian Development " *Xinhua*, June 21, 2017, [http://www.xinhuanet.com/english/2017-06/21/c\\_136381507.htm](http://www.xinhuanet.com/english/2017-06/21/c_136381507.htm). Accessed on January 27, 2025.

### MCF'S INTEGRATION WITH DIFFERENT PLANS

After getting the status of a national strategy, MCF also became a crucial part of other developmental plans. It became one of the central themes of economic planning within China. For example, MCF is part of China's 13th Five-Year Plan (2016-20), which aims at building a moderately prosperous society in all respects. The plan emphasises achieving integration for efficiency in various sectors. The chapter on CMI talks about the aim of establishing a mechanism to fund integrated military-civilian development projects, including in areas like the oceans, space and cyberspace. Other policy aims include institutional reforms, opening military industries for competition and promoting private players with an advantage in research and development in producing and maintaining military products. It also talks about using patriotism-related teaching as a pivot to make people understand the need for strong defence.<sup>35</sup>

To reduce dependence on foreign technology, China launched the industrial policy of 'Made in China 2025' in 2015, and there is consistency in the implementation of the policy in the form of investment in strategically important sectors.<sup>36</sup> Integration of military-civilian technology is also part of China's 2017 Artificial Intelligence Development Plan. It has mentioned the dual transformation of AI technology and quickly embedding all kinds of AI technology into national defence construction.<sup>37</sup> In 2018, the AI Development Report noted that innovation in military-civilian integration is helping various sectors of the economy, including agriculture, manufacturing and finance (CSITP 2018).<sup>38</sup> Science parks also play an important role in terms of coming

---

35 National Development and Reform Commission (NDRC), "The 13th Five Year Plan For Economic And Social Development of People's Republic of China", 2016, <https://en.ndrc.gov.cn/policies/202105/P020210527785800103339.pdf>. Accessed on January 27, 2025.

36. Max J Zenglein and Anna Holzmann, "Evolving Made in China 2025: Priority Adjustments," *MERICs*, November 2018, <https://asiasociety.org/sites/default/files/2019-01/MERICs%20Evolving%20Made%20in%20China%202025%20Preview.pdf>. Accessed on January 25, 2025.

37. Graham Webster, et al., "Full Translation: China's 'New Generation Artificial Intelligence Development Plan' (2017)," *DigiChina*, August 1, 2017, <https://digichina.stanford.edu/work/full-translation-chinas-new-generation-artificial-intelligence-development-plan-2017/>. Accessed on January 26, 2025.

38. China Institute for Science and Technology Policy at Tsinghua University (CISTP), "China AI Development Report 2018", 2018, <https://www.sppm.tsinghua.edu.cn/english/info/1032/1601.htm>. Accessed on January 20, 2025.

up with targets to be achieved and guiding plans for CMI. For example, the Zhongguancun Science Park, in the *Opinion on Promoting the Construction of Science Parks Featuring Military and Civilian Integration*, proposes to build over 20 civilian-military parks with more than 500 civilian-owned military enterprises producing military and civilian technology.<sup>39</sup>

Overall, the policies need to be understood in the context of Xi's ability to undertake organisational reform in the PLA's core interest areas, and his consolidation of power. The scrapping of the PLA's four headquarters, General Staff, General Political, General Logistics and General Armaments, is aimed at structural reform and consolidation of Xi's political power.<sup>40</sup>

### **MCF'S ROLE IN MILITARY MODERNISATION**

Military modernisation is one of the recurring themes of China's defence planning. One of the critical dimensions of China's military modernisation is to win war under informationised conditions. As mentioned in the 2006 White Paper on National Defence, the strategic goal of the national defence policy is to build informationised armed forces by the mid-21st century.<sup>41</sup> Brian Lafferty has identified four characteristics arising out of modern informationised warfare that incentivise civil-military integration: first, the Chinese leadership's consensus about military development and economic development are mutually dependent; second, increasing use of dual-use technology; third, intensive resource demand providing the incentive for eliminating the distinction between war-time and peace-time development; and, fourth, emphasis on quality over quantity.<sup>42</sup>

---

39. "Zhongguancun Facilitates Development of Military-Civilian Integration Parks," *China Daily*, January 28, 2019, [https://www.chinadaily.com.cn/m/beijing/zhongguancun/2019-01/28/content\\_37432578.htm](https://www.chinadaily.com.cn/m/beijing/zhongguancun/2019-01/28/content_37432578.htm). Accessed on January 25, 2025.

40. Minnie Chan, "What's Driving Chinese President Xi Jinping's Military Modernisation Push," *South China Morning Post*, August 1, 2017, <https://www.scmp.com/news/china/diplomacy-defence/article/2104915/whats-driving-chinese-president-xi-jinpings-military>. Accessed January 25, 2025.

41. "China's National Defense in 2006" *China.Org.Cn*, December 2006, <http://www.china.org.cn/english/features/book/194421.htm>. Accessed on January 26, 2025.

42. Brian Lafferty, "Civil-Military Integration and PLA Reforms," in Joel Wuthnow and Phillip C. Saunders, eds., *Chairman Xi Remakes the PLA* (National Defence University Press, 2019), pp. 627-60.

## LESSONS AND IMPLICATIONS FOR INDIA

China, due to the size of its economy and defence-industrial base, is well ahead of India in terms of military capability.<sup>43</sup> The MCF strategy is going to further increase the military capability gap between India and China. Under the MCF strategy, China is also creating 'dual-use' infrastructure in the region bordering India. Since 2019, China has been constructing around 628 'Xiaokang' or "well-off villages" along the Line of Actual Control (LAC) in the Tibet Autonomous Region (TAR).<sup>44</sup> Such dual-use infrastructure comprises important "gray zone" tools for China to assert and defend its claims in the disputed region.<sup>45</sup> India has also initiated a vibrant village programme to create infrastructure and opportunities in the bordering villages.<sup>46</sup> India's need to adopt the "civil-military fusion and whole of government approach" was also highlighted last year by the Chief of Defence Staff (CDS) General Anil Chauhan at the Confederation of Indian Industries-Society of Indian Defence Manufacturers (CII-SIDM) annual meet.<sup>47</sup>

As we have seen in our analysis, the dividend from the reform of opening up contributed significantly to the economic advancement and creation of a technological base in the civilian sector. India should also promote its private sector to invest more in R&D and international collaboration. The Indian government has taken several initiatives to increase private companies' participation in the defence sector. The procurement reforms have taken place to incentivise indigenous development of defence equipment. In April 2018, the Innovations for Defence Excellence (iDEX) innovation ecosystem

---

43. Divyam Sharma "India vs China: Explaining Military Strength Beyond Numbers," *NDTV*, January 19, 2024, <https://www.ndtv.com/india-news/india-vs-china-explaining-military-strength-beyond-numbers-4888129>. Accessed on January 26, 2025.

44. "Explained: China's 'Xiaokang' Border Defence Villages along the LAC, Now Being Occupied," *The Indian Express*, February 15, 2024, <https://indianexpress.com/article/explained/china-xiaokang-border-defence-villages-lac-9163202/>. Accessed on January 27, 2025.

45. "China Is Upgrading Dual-Use Villages along Its Disputed Indian Border," *China Power Project* (blog), <https://chinapower.csis.org/analysis/china-upgrading-dual-use-xiaokang-villages-india-border/>. Accessed on January 26, 2025.

46. "Vibrant Village Programme," *PIB*, December 13, 2023, <https://pib.gov.in/pib.gov.in/Pressreleaseshare.aspx?PRID=1942876>. Accessed on January 26, 2025.

47. "Civil-Military Fusion & Whole of Government Approach Is Needed, Says CDS Gen Anil Chauhan," *The Print*, October 4, 2024, <https://www.youtube.com/watch?v=d1sM0yRPBjs>. Accessed on January 27, 2025.

was launched. The iDex aims to create an innovation support ecosystem by involving industries such as Micro, Small and Medium Enterprises (MSMEs), start-ups, individual innovators, R&D institutes, and academia to support technological development in the fields of defence and aerospace. It does this by giving these organisations grants, funding, and other forms of support so that they can conduct research and development that could be adopted in the future to meet Indian defence and aerospace needs.<sup>48</sup>

Over the period, China has also taken several initiatives to reverse the brain drain. Initiatives like Project 211, Project 985 and the Thousand Talent Programme have significantly contributed to technological and military advancement.<sup>49</sup> India also has the advantage in terms of a large number of Indian-origin people doing well across various sectors in different countries. Through incentives and the creation of an attractive environment in the domestic sector, India can attract these talented people back to the country.

## CONCLUSION

The role of Xi Jinping in promoting MCF can be seen in terms of both continued legacy and changes. The significant differences are in upgrading priority and reform to make the system efficient. However, the most crucial requirement for its successful implementation would be financial resources for the project. If we analyse the funding issue, China is trying to emulate the US model of opening up the defence industry for the capital market. In the US, the percentage of defence industrial assets listed in the share market is around 70 per cent but in China, it was approximately 25 per cent for 10 big companies as of March 2016.<sup>50</sup> China has initiated the Mixed Ownership Reform (MOR) to move progressively toward privatisation, but direct and indirect state control makes it challenging to implement

---

48. "Private Players in Defence Manufacturing Sector," *PIB*, July 26, 2021, <https://pib.gov.in/pib.gov.in/Pressreleaseshare.aspx?PRID=1739049>. Accessed on January 27, 2025.

49. David Zweig, "Competing for Talent: China's Strategies to Reverse the Brain Drain," *International Labour Review*, 145, no. 1-2, March 2006, pp. 65-90.

50. Cheung, et al., n. 31.

**The national-level vision documents and plans provide a coherent picture of China's science and technology developments, but these cannot capture the bureaucratic complexities and contentions between different interest groups.**

the required changes.<sup>51</sup> Therefore, financial innovation in market diversification for funding MCF is considered one of the critical challenges restricting the military enterprise's development.

Second, changes in the opaque working culture of the military bureaucracy will be crucial for implementing the programme. As mentioned above, there is some progress in the direction of conveying ideas behind CMI, but that does not suggest cultural

changes. The innovation plan in China is caught between the requirement of market participation and the centrality of state planning, interest in the assimilation of foreign technology and the need to develop indigenous technology. The national-level vision documents and plans provide a coherent picture of China's science and technology developments, but these cannot capture the bureaucratic complexities and contentions between different interest groups. For example, in China's civil nuclear programme, the debate between indigenous development and foreign procurement of next-generation technology is driven by diverse bureaucratic interest groups.<sup>52</sup>

Third, there is a need to adequately respond to reports on China's MCF diverting civilian collaborating research to the defence sector. One of the recent reports on the activities of Chinese civilian universities claimed that they had close ties with the defence industries and were involved in cyber attacks and espionage.<sup>53</sup>

---

51. Zi Yang, "Privatizing China's Defense Industry," *The Diplomat*, June 7, 2017, <https://thediplomat.com/2017/06/privatizing-chinas-defense-industry/>. Accessed on January 25, 2025.

52. Micah Springut, et. al., "China's Program for Science and Technology Modernization: Implications for American Competitiveness," *U.S.-China Economic and Security Review Commission*, 2011, [https://china-us.uoregon.edu/pdf/uscc\\_report.pdf](https://china-us.uoregon.edu/pdf/uscc_report.pdf). Accessed on January 26, 2025.

53. Alex Joske, "The China Defence Universities Tracker," *ASPI*, 2019, <http://www.aspi.org.au/report/china-defence-universities-tracker>.

Finally, India can draw important lessons from the MCF strategy for its long-term scientific and technological development. India, being a democratic country, cannot follow the MCF strategy like China. The Chinese approach is based on large-scale mobilisation from all sectors of society which is difficult for the democratic system to emulate. However, it can draw a lesson about focussing on strategically important sectors from the long-term perspective. India can also draw lessons from the CMI experiences of countries like Japan.<sup>54</sup> The resource and focus should not be directed towards matching quantity but toward quality advancement through basic research.

---

54. U.S. Congress, Office of Technology Assessment, *Other Approaches to Civil-Military Integration: The Chinese and Japanese Arms Industries* (Washington, DC: March 1995), pp. 21–29.

