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New Quality Combat Forces: More Than Meets The Eye

by Arran Hope



Xi Jinping in military uniform at the plenary meeting of the delegation of the People's Liberation Army and the Armed Police Force at the Second Session of the Fourteenth National People's Congress (Source: [Lianghui](#))

Executive Summary:

- Conceptual framings from the military may be influencing how the CCP approaches its management of the economy.
- The phrase “New Quality Combat Forces” predates the phrase “New Quality Productive Forces” by several years. Now they are being linked as mutually self-reinforcing constructs.
- Both phrases refer to cutting-edge science and technology capabilities, enhancing efficiency through digitization, and cultivating and deploying highly trained talent in strategic sectors of the economy.
- The phrase ties in to the PRC’s Military Civil Fusion Development Strategy and approach to “systems warfare,” whereby the CCP is increasingly dissolving the distinction between the military and the state.

Recent media reports erroneously suggest that “New Quality Combat Forces (新质战斗力)” (hereafter NQCF) is a new buzzword coming out of the Two Sessions (两会) meetings that wrapped up on March 11 ([People's Daily](#), March 4). [1] The *South China Morning Post*, for instance, writes about the phrase's prevalence at the annual political event, and notes that Minister of Public Security Wang Xiaohong (王小洪) “was the first to use the phrase ‘new quality combat capacity’ during a nationwide meeting with the country's provincial police chiefs in January” ([SCMP](#), March 14). The phrase has newfound synergies with “New Productive Forces (新质生产力)”—the economic counterpart to NQCF—both of which relate to technological upgrading and integration. However, the origins of NQCF are much earlier. It seems likely that NQCF predates “New Productive Forces,” which suggests the possibility that conceptual framings emerging from the military complex within the People's Republic of China (PRC) could be informing emerging approaches to managing the economy.

An article in People's Republic of China (PRC) state media *Xinhua*, begins as follows: “The term ‘New Quality Combat Forces’ is heard with increasing frequency. But what does it actually refer to? (新质战斗力这个词越来越被叫响，新质战斗力到底指的是什么?)” This article, published almost nine years ago in 2015, gives the precise definition that it is a “system combat capability based on information systems (基于信息系统的体系作战能力)” ([Xinhua](#), November 29, 2015). This is a rather narrow definition. However, other articles from the last decade indicate that NQCF has been a reasonably stable concept throughout this period. [2]

A 2015 article appearing in *Study Times*, is titled “Reshaping the New-Quality Combat Force System to Deal with ‘Cyber War,’ (重塑新质作战力量体系应对‘网络战’)” ([Study Times](#), June 15, 2015). It highlights how the PLA has been focusing on new warfighting domains that require technological capabilities. Specifically mentioned are the development of NQCF “for future combat, including those tailored for special operations, cyber operations, and electronic countermeasures.” A brief search of articles on the *PLA Daily* website returns no fewer than 52 referencing NQCF. These date back to 2019, but this is likely due to the website's limited functionality. A citation in an academic paper by Dennis Blasko cites a *PLA Daily* article from October 2, 2017, headlined “New Quality Combat Force from the Army's Air Assault Brigade.” [3] This suggests that there is likely a degree of earlier commentary on the subject. Moreover, a recent CCTV report notes that in 2019, President Xi pointed out at the Central Military Commission's military work conference that it is “necessary to strengthen the construction of NQCF and increase the proportion of NQCF,” and that during his inspections of troops, he has “repeatedly spoken of the need to strengthen the construction of NQCF” ([CCTV](#), March 11).

This year's Two Sessions are not the first in which NQCF have been discussed. Six years ago, at a dialogue with group army chiefs, Political Commissar of the 81st Army Group Fang Yongxiang (方永祥) spoke about strengthening the army, arguing that “the increase in the proportion of NQCF are both a holistic reshaping of the Army's mobile combat forces and a key step in building a strong, modern and new type of army” ([Sohu](#), March 13, 2018). The following year, NPC Deputy Liu Jingju (刘京菊) was profiled in a *PLA Daily* article on

“Relying on Science and Technology to Enhance New Quality Combat Power (依靠科技提升新质战斗力)” ([81.cn](#), March 15, 2019). Liu, the head of a department at the National University of Defense Science and Technology, stated that she has been actively exploring the application of AI technology in the field of military equipment since as early as 2013. The article describes her research as largely focusing on “using new type equipment to directly serve NQCF (以新型装备居多，直接服务部队新质战斗力).” The piece finishes with an editorial flourish, insisting that “To win the future war and dominate the future battlefield, we need to rely on S&T to enhance the NQCF (需要依靠科技提升新质战斗力).”

The phrase has garnered a lot of attention over the last two weeks because of the prominence of the phrase “New Quality Productive Forces (新质生产力)” (sometimes translated as simply “New Productive Forces”) in both the government work report and the work report of the National Development and Reform Commission. “New Quality Productive Forces” appears to have first been used by President Xi Jinping last September during an inspection tour in the northern province of Heilongjiang ([Xinhua](#), September 8, 2023). It has been fleshed out over the intervening months, including at the Central Economic Work Conference in December, in the first group study session held by the Political Bureau of the Communist Party of China (CPC) Central Committee this year, and in particular during coverage of the Two Sessions ([Xinhua](#), December 12, 2023; [Xinhua](#), February 21). It refers to cutting-edge science and technology capabilities, enhancing efficiency through digitization, and cultivating and deploying the very best and most highly-trained talent in strategic sectors of the economy. Xi has emphasized that S&T innovation is a “key element,” and economists have argued variously that these new forces will raise total factor productivity and allow the country to pivot away from the PRC’s older, unsustainable development model ([China News](#), March 5; [Wechat](#), March 5; see also: [Ginger River Review](#), March 6). Meanwhile, as an explainer on a Party media site makes clear, NQCF is predicated on six core advances: advanced S&T, new types of talent, new equipment, a new structural formation, a dimensional expansion, and dynamic evolution ([RedNet.cn](#), March 12). There is much overlap between these and the characteristics of the New Productive Forces in the economy.

NQCF and New Productive Forces are explicitly linked in Party discourse. A CCTV report puts them side by side: “The high-quality development of the economy and society requires the development of new-quality productive forces; the construction of a world-class army also requires the enhancement of new-quality combat capabilities” ([CCTV](#), March 11). Other coverage directly links the two, including a Huaxia piece titled “Enabling ‘new quality combat power’ through ‘new quality productivity’ (以“新质生产力”赋能“新质战斗力”)” and a *Qiushi* article ([Huaxia](#), March 15; [Qiushi](#), March 10). Linking efficiencies and technological innovation in the economic domain with the same in the military domain is connected to the Military-Civil Fusion Development Strategy (展军融合发战略; MCF). Much of the discussion on NQCF, both by Xi and in the surrounding commentary, echoes the language used to discuss MCF. For instance, in an important speech Xi made at the plenary meeting of PLA and Armed Police Force delegation, Xi announced that “we have coordinated the promotion of strategic emerging industries and the development of NQCF, and

achieved a series of significant results ... new quality productive forces (新质生产力) ... promote the efficient integration and two-way pull of new productivity and new combat power (推动新质生产力同新质战斗力高效融合、双向拉动)” ([People’s Daily](#), March 8). One piece goes so far as to suggest New Productive Forces are subordinate to NQCF: “Treat advanced technology as the new productive force and combat capability of national security organs (将先进技术作为国家安全机关新质生产力、战斗力)” ([China Peace](#), March 14).

Links between both the high-tech economy and the military are deepening as part of a concerted effort to build the PLA into a force capable of waging fully-integrated, multidomain systems warfare ([RAND](#), February 1, 2018). That the phrase “NQCF” appears to predate “New Productive Forces” could suggest that the linkages are bidirectional. Not only are advances in S&T being leveraged to support the military, but perhaps the military is also contributing to the shaping of general economic policy and strategy at the same time. There has been an increase in power of the Chinese Communist Party (CCP) over the government, especially in the shaping of policy. This is in part evidenced by the newly revised State Council Organic Law (国务院组织法) ([NPC Observer](#), March 11). Xi Jinping, as Chairman of the Party-run Central Military Commission, oversees the PLA—a Party institution, not a civil one. The possibility of organizational concepts originating in the military before being transposed into the economic domain is at the very least a process of conceptual cross-pollination. It also suggests that the CCP, which supervenes both the military and the state, sees little difference between its approaches to each domain. Hence the drive to fuse the two and the drive to manage both in similar ways. [4] The extent to which this can be corroborated, and the implications for any growing militarization of the PRC are therefore worthy of further research.

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Notes

[1] The Two Sessions (两会) are the annual plenary meetings of the National People’s Congress (NPC; effectively the PRC’s parliament), and the Chinese People’s Political Consultative Conference (CPPCC; a Party United Front organization).

[2] In a 2019 white paper, “Chinese National Defense in the New Era (新时代的中国国防),” a similar phrase was used. “New Quality Combat Capabilities (新质作战能力)” uses “作战” (literally “making war”) instead of “战斗” (literally “war and struggle”) and uses “能力” (literally “capability”) instead of “力” (literally

“force”). This alternative formulation is highlighted as an “important emerging point,” but it is unclear whether it is intended to refer to the same concept as NQCF.

[3] Dennis J. Blasko (2021) The PLA army after ‘below the neck’ reforms: contributing to China’s joint warfighting, deterrence and MOOTW Posture, *Journal of Strategic Studies*, 44:2, 149-183.

[4] It is worth noting that the first of three images that appear at the top of the website for this year’s Two Sessions portrays Xi in military uniform ([Lianghui](#), accessed March 15).

National Defense Mobilization: Toward A Clear Division of Labor between the PLA and Civilian Bureaucracies

by Yu-Ping Chang



Insignia of the National Defense Mobilization Commission. (Source: [Wikipedia](#))

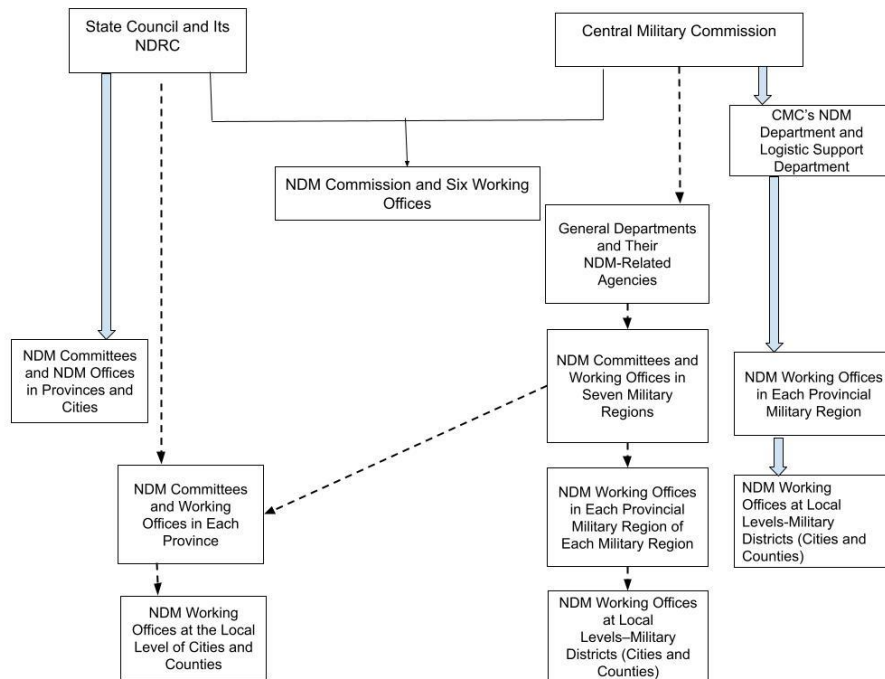
Executive Summary:

- As the result of the ongoing military reform, the military's guiding and leadership role over civilian bureaucracies seems to be strengthened. Meanwhile, the responsibilities of the State Council and local governments on NDM have been substantiated, and the administrative work which the PLA used to undertake has been transferred to local governments.
- A clearer division of labor between the military and civilian bureaucracies allows the PLA to focus on the development of combat capabilities without being distracted by administrative work, while more attention and resources devoted to national defense projects by civilian bureaucracies are likely to improve NDM work.
- National defense mobilization is an area where the PLA and civilian bureaucracies need to cooperate closely during peacetime to allow an effective generation and mobilization of national resources during wartime.
- The national defense mobilization system (NDM system), composed of civilian bureaucracies and the PLA bureaucracies, used to be characterized by a bureaucratic structure in which the military sat above local governments and both guided and administered a significant portion of administrative work related to national defense development.

On March 5 in his report to the National People’s Congress (NPC), Premier Li Qiang of the People’s Republic of China (PRC) said that governments at different administrative levels are to fully support national defense development this year ([People’s Daily](#), March 6). National defense development is an area where cooperation between civilian bureaucracies and the military is required during peacetime to ensure that effective generation and mobilization of national resources is possible to sustain the People’s Liberation Army (PLA) during wartime. However, developments at this year’s Two Sessions meetings further underlined the civilian governments’ diminished role in designing policies, including on matters related to national development and governance. For instance, a revision (Art. 3) to the extant Organic Law of the State Council placing the State Council under the leadership of the Chinese Communist Party ([PLA Daily](#), March 12; [PLA Daily](#), March 6; [Lianghui](#), March 4). This emerging power structure is likely to produce a dynamic in which the State Council and local governments simply execute policies devised by Xi so that the PLA can concentrate on the development of combat capabilities.

The PLA’s involvement in matters of national defense mobilization (NDM) distracts from developing its combat abilities. Much peacetime administrative work needs to be conducted to allow resources provided by civilian economic sectors to be used by the military during wartime. The ongoing military reforms, begun in 2015, have ushered in institutional and legal changes to further professionalize the military by removing its NDM administrative duties and substantiating civilian bureaucracies’ responsibilities.

Fig. 1: Schema showing the structure of NDM Organizations. (Source: the author) [1]



- Solid thin black arrows show the structure that applies to situations before and following the reforms.
- Dotted black arrows show the structure before the reforms.
- Blue thick arrows reflect the current structure following the reforms

The Structure of NDM Organizations

The National Defense Mobilization Commission (NDM Commission), established in 1994, is co-led by the State Council and the Central Military Commission (CMC). The Commission has six Offices: The People's Armed Forces Mobilization Office (人民武装动员办公室), the Economic Mobilization Office (经济动员办公室), the Civil Air Defense Office (人民防空办公室), the Traffic and Transport Readiness Office (交通战备办公室), the National Defense Education Office (国防教育办公室), and the General and Coordination Office (综合办公室). Both the NDM Commission and these six working offices have branches in local governments and each of the PLA's military regions ([State Council](#), 1994; [State Council](#), 1998; [People's Daily](#), March 22, 2013; [Yazhou Zhoukan](#), August, 2004). Each NDM organization is separated into two systems: civilian bureaucracies (State Council agencies and local governments) and PLA bureaucracies (the CMC and the four general departments at the central level; and the military regions, provincial military regions, and military districts at the subnational level). The capacity for peacetime collaboration by these two is indicative of the ability of the PRC to mobilize for war. In an ideal scenario for the PLA, peacetime preparations would allow domestic industries to generate supplies of ammunition, hardware, and subsistence provisions by using energy reserves, which would then be safely delivered through protected air, rail, road, and/or riverine or marine transport to the front lines.

The NDM Commission and its local branches (known as NDM Committees) are designed to bridge communication between bureaucracies so that civilian sectors know what the military needs and can plan and implement national defense projects accordingly. Its enforcement authority, however, is limited. Its responsibilities are mainly confined to research and coordination matters ([State Council](#), 1994). Instead, it is the civilian and military bureaucracies which have the authority to decide whether and how to execute national defense development. In reality, however, the military sits above the civilian bureaucracies and undertakes a significant portion of national defense administration (国防行政), rather than leaving it to civilian bureaucracies.

Pre-Reforms: PLA Administration and Guidance of NDM

The NDM's institutional setup departed from the standard civilian administrative hierarchy. Five of the six NDM working offices were established within the PLA's general staff and general logistics departments (the Economic Mobilization Office is subordinated to the National Development and Reform Commission (NDRC)). Military regions also had their own working offices. At the province level and below, only the People's Armed Forces Mobilization and General and Coordination Offices were established within provincial military regions, while the others formed part of local governments. This created a situation where only economic mobilization had its civilian supervisory administrative office at the national level, whereas the other civilian NDM working offices at the level of the provinces and below were supervised by the military (the military regions, general departments, and the CMC). In effect, the PLA presided over civilian local

agencies—a structure referred to as “the military above, the people below (上军下民).” [2] This technically violates the PRC’s Constitution, under which the PLA has no legal authority over civilian bureaucracies.

The CMC and its working agencies often drafted relevant national defense development regulations rather than the State Council, even though both entities then jointly issue regulations. [3] Much additional NDM work that civilian governments should have been responsible for was undertaken by the provincial military regions, a phenomenon the PLA describes as “the army handles national defense (军队办国防).” This was based on the erroneous notion that national defense is the exclusive preserve of the military establishment ([PLA Daily](#), February 24, 2023).

Local governments had more autonomy and were less inclined to prioritize national defense projects because they did not contribute to GDP growth—the key criterion for officials’ promotion. [4] [5] Their less active role is evidenced in NDM institutions’ structure. At the provincial level and below, many working offices were not set up to have their formal local agencies and were instead created under certain local PLA or civilian departments. Because these hosting departments are more likely to be occupied with their own regulated administrative responsibilities, local NDM matters would receive less attention from local governments. (This contrasts with the People’s Armed Forces Office and in some cases the Civil Air Defense Office, which are formal working institutions at the local level.) [6] A single NDM working office can be subject to various local agencies. [7]

Decentralized authority created coordination and implementation problems. Different working offices’ host agencies are likely to make different decisions. Furthermore, many local civilian working offices at the city and county levels were understaffed and/or had staff who only worked on NDM matters on a part-time basis. [8] Accordingly, although local governments were supposed to provide instrumental support for the realization of NDM projects, the weak institutional foundation at the local level impacted the implementation of NDM projects.

Without cooperation from local governments, the results of the military’s NDM work have been unsatisfactory. Many places still do not have the required equipment, platforms, and facilities to pull off a swift transfer of heavy cargo from one mode of transport to another. [9] Incompatibility between the military’s needs and civilian technical standards for transport, specifically as regards the capacity, size, and weight of railways, highways, ports, and tunnels, is a further issue. [10]

Ongoing Reforms Provide Legal Enforcement and Strengthen PLA Guidance

The reforms initiated in 2015 have substantiated the responsibilities of the State Council and local governments on NDM through legal means. Changes to the structure and functions of PLA organizations have strengthened the military’s guidance and leadership over civilian bureaucracies, while administrative work which the PLA previously undertook has now been transferred to local governments. These changes, conducted based on the differentiated functions of the military and civilian governments, indicate a likely increase in the PLA’s professionalism if institutionalization efforts continue.

Civilian Bureaucracies' Substantiated Administration Responsibilities

Part of the reforms affirmed that civilian bureaucracies should shoulder more responsibilities for peacetime NDM preparation work. The 2020 revisions to the National Defense Law (NDL) exemplify this. In its description of the responsibilities of the State Council, the updated version replaces “directs and administers” NDM-related work with “develops, organizes, and implements” ([NPC](#), December 26, 2020; Art. 14). In other words, the State Council cannot nominally direct NDM matters without making sure that policies and plans are carried out to meet military purposes. Another revision concerns the use of national resources for defense development. It specifies the need to establish a “coordination mechanism” on “major” issues of national defense between the CMC and the State Council (Art. 17).

At the end of 2022, NDM Offices based on the Civil Air Defense Office (CADO) were established within local governments at the provincial and city levels. These Offices have taken over administrative matters from the provincial military region system. During peacetime, they conduct administrative work based on requirements detailed by the PLA and in such a way that allows the military to mobilize resources in the event of a conflict ([MOD](#), December 15, 2023; [The People's Forum](#), October 18, 2023; [CPC News](#), February 5, 2023; [MOD](#), April 14, 2023; [PLA Daily](#), February 24, 2023). Establishing NDM Offices in local governments addresses the problem that the military have hitherto conducted most tasks related to NDM ([PLA Daily](#), February 24, 2023). Previously, it was difficult for local General and Coordination Offices, which were mostly established within local PLA units and had a lower bureaucratic status, to coordinate with many different civilian superiors who had authority over these local NDM working offices. This was because of the dispersion of NDM working offices across different local civilian agencies. [11] The transfer of administrative work from provincial military regions to NDM Offices within local governments will therefore likely mitigate coordination problems, as these Offices constitute a single authority on NDM matters within civilian bureaucracies. Local NDM Offices are now directly subject to the NDRC, emphasizing state agencies' responsibilities in ensuring that national economic development addresses military needs ([Shanghai City Government](#), February 9, 2023).

Legal measures bind the State Council's agencies and local governments' responsibilities. The National Defense Transport Act (NDTA), passed in 2017, stipulates these entities' responsibilities for realizing defense needs ([People's Daily](#), January 12, 2017). Owing to its status as a law, it has more binding authority on enforcement than the previous Regulation on National Defense Transport (RNDT), which was an executive order (行政命令) ([State Council](#), January 2011). The RNDT merely stated that transport projects for national defense needed to meet economic needs (Art. 17). The new act preserves this principle (Art. 14) but also requires that local governments at the county level and above incorporate defense transport needs into their economic and social plans—including their industrial policies (Art. 15). In the RNDT, the State Council's transport departments were responsible for national defense transport planning and technical standards for the construction of facilities and infrastructure (Art. 8). But it did not specify how this would be carried out. The Act now stipulates that for these two tasks state agencies need to consult with the military (Art. 15). In addition, although there has been communication and coordination between local governments and local military units (at the levels of military regions and county governments and above), sustained effort

in this regard is lacking. Without legal endorsement their work outcomes are not binding on the local governments ([NPC](#), October 12, 2016). The Act addresses this by specifying that consultation mechanisms are to be established between governments and military units at the provincial level and above (i.e. each theater command that has more than one province answering to its military order). These mechanisms entail reporting any plans for transport projects and national defense needs to each other (Art. 4).

The Military's Strengthened Guidance Role

The PLA's organizational makeover appears to have enhanced the military's guiding role while reducing its administrative burden. After the system of four general departments and military regions was dismantled, five of the NDM working offices which were under the general staff and general logistics departments are now subject to the CMC's functional organizations (the NDM Department and perhaps the Logistic Support Department). NDM matters that used to fall under the scope of military regions' duties were also transferred to the CMC's NDM Department ([State Council](#), July 24, 2019). Provincial military regions still maintain the two NDM working offices as mentioned above, and are no longer subjugated to theater commands (previously military regions) ([Sina](#), November 22, 2016; [NetEase](#), December 8, 2022). (The only exceptions to this are the Beijing Garrison, Xinjiang, and Tibet, which are subject to ground forces.) The elevation of the PLA's NDM leadership from general departments and military regions up to the CMC—which answers directly to Xi Jinping—reinforces the CMC's leadership on NDM. The PLA's role in providing guidance to civilian bureaucracies on national defense projects is likely to be strengthened, since the military is the beneficiary of these projects.

The revisions to the NDL, the passage of the NDTA, and the transfer of administrative work from provincial military regions to local governments have not made the State Council the highest authority on NDM. They substantiate the State Council's administrative role in leading civilian bureaucracies to faithfully execute projects to meet the military's needs. This is further confirmed by the revision to the extant Organic Law of the State Council in the annual meeting of the NPC on March 5 this year. Article 15 now states that the State Council “exercises unified leadership over the work of local state administrative organs at all levels nationwide” ([PLA Daily](#), March 12; [PLA Daily](#) March 6). Local governments are also local state administrative organizations. However, it is the military which will guide and perhaps oversee the planning, coordination, and implementation of NDM work performed by the civilian bureaucracies ([PLA Daily](#), February 24, 2023; [The People's Forum](#), October 18, 2023). In other words, successful administration of NDM by civilian bureaucracies requires close cooperation with the military to understand the latter's needs. The CMC acts as a primary contact for the State Council, and provincial military regions for provincial governments. Civilian bureaucracies are therefore functioning as the working institutions of the CMC and the PLA. They may also provide recommendations, as they have more expertise on the national economic situation and technological development.

Conclusion

The ongoing reforms substantiate civilian bureaucracies' duties, remove the military's administrative responsibilities, and strengthen the PLA's role in providing guidance for national defense development. A clear division of labor along the lines of different sectors' capacities and functionalities is a step toward professionalizing the PLA. With civilian bureaucratic efforts dedicated to national defense development, improvements on NDM projects are likely. While Xi Jinping's personalized and concentrated power provides top-level leadership to both the PLA and civilian bureaucracies, the functions of the state and military bureaucracies have become more institutionalized. Further refinement is a possibility, as reforms are not yet complete (NPC, October 23, 2021). Revisions to and passage of NDM-relevant laws, transfer of administrative work from provincial military regions to local governments, and institutional changes to the PLA organization are simply the first moves of many. Continued observation is thus necessary to draw accurate conclusions about the new pattern of civil-military relations and their effects on the PLA's combat capabilities.

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Notes

[1] Lin Chuming, "guofang dongyuan weiyuanhui jianshe shang cunzai de wenti yu duice," *National Defense*, No. 11, 1999, 8-9; State Council, National Defense Mobilization Act, 2010, https://www.gov.cn/fffg/2010-02/26/content_1544415.htm; Fu Dalin, 2010, 84; State Council, Regulations on National Defense Transport, 1995 and 2011, http://big5.www.gov.cn/gate/big5/www.gov.cn/gongbao/content/2011/content_1860778.htm; Guojia Guofang Dongyuan Weiyuanhui Zonghebangongshi, "youguan guofang dongyuan weiyuanhui de zhiquan ji qi banshi jigou de zhize guiding," *National Defense*, No. 5, 2011, 70-71; Zhou Jingjing, Li Zuxian, Liu Shitong, and Wang Kaiyong, "shengang diqu junmin yitihua jiaotong yunshu dongyuan tixi goujian," *JMTU*, Vol. 19, No. 1, 2017, 15-9; Chen Yongjiang, "jiaqiang guofang dongyuan tizhi jianshe xu jiejuehao de jige wenti," *National Defense*, No. 3, 2005, 45-6; Hu Shaoping, "shenhua guofang dongyuan zhuanxing jianshe sikao," *National Defense*, No. 11, 2015, 38-42; Yu Wending and Jin Ou, "dangqian guofang dongyuan jigou mianlin de zhuyao wenti yu duice," *National Defense*, No. 1, 2003, 30-1; Qi Zhangsheng and Zhang Jianlong, "guodongwei banshijigou shezhi cunzai de zhuyao wenti ji duice jianyi," *National Defense*, No. 1, 2010, 34; also see note 2.

[2] Xu Zhanghui, "guofang dongyuan zuzhi jigou jianshe yao jinkuai shixian wuge zhuanbian," *National Defense*, No. 1, 2003, pp. 28-29; Qi Zhangsheng and Zhang Jianlong, 2010; Liu Guojing, "woguo guofang dongyuan tizhi wenti tantao." *Military Economics Research* (MER), No. 3, 2012, pp. 30-31; Du Jiahao,

“anzhao neng dazhang zhiyuan baozhang dashengzhang yaoqiu diaozheng jiaqiang guofang dongyuan tizhi jizhi jianshe,” *National Defense*, No. 1, 2014, pp. 9-12; Kou Zhanying & Shi Lihui, “shenru guanche junmin ronghe fazhan zhanlue jianquan wanshan guofang dongyuan lingdao zhihui tizhi,” *National Defense*, No.10, 2015, pp. 38-40; Su Wei and Fan Kaixue, “jiaqiang yanhai chengshi renmin fangkong nengli jianshe qianxi,” *National Defense*, No. 5, 2016, pp. 64-65.

[3] Fu Dalin, “guowuyuan yu zhongyang junwei guofang junshi quan de huafen,” *Law Science*, No. 9, 2015, pp. 16-25.

[4] Fu Dalin, “guofang dongyuan tizhi de queli yu fazhan,” *Journal of Xi'an Politics Institute*, Vol. 23, No. 2, 2010, pp. 82-84.

[5] Weijie Luo & Shikun Qin, “China’s Local Political Turnover in the Twenty-First Century,” *Journal of Chinese Political Science*, 26, 2021, pp. 651–674; Zhou Qiyao and Zeng Jiangnan, “Promotion Incentives, GDP Manipulation and Economic Growth in China: How Does Sub-National Officials Behave When They Have Performance Pressure?,” 19 October 2018, <http://dx.doi.org/10.2139/ssrn.3269645>.

[6] Yu Wending and Jin Ou, “dangqian guofang dongyuan jigou mianlin de zhuyao wenti yu duice,” *National Defense*, No. 1, 2003, pp. 30-31; Qi Zhangsheng and Zhang Jianlong, 2010; Liu Guojing, “woguo guofang dongyuan tizhi wenti tantao,” *MER* No. 3, 2012, pp. 30-31; Li Wutian, “wanshan guofang dongyuan tizhi ying shixian sige zhuanbian,” *National Defense*, No. 5, 2004, pp. 35-37.

[7] Li Yuanxing, Mei Qianghua, and He Guoben, “guofang jiaotong junmin ronghe fazhan tizhi jizhi de jianshe,” *Journal of Military Transportation University (JMTU)*, Vol. 17, No. 8, 2015, pp. 26-30.

[8] Xu Zhanghui, 2003; Yan Feng, “weirao pojie maodun wenti gaige guofang dongyuan jigou,” *National Defense*, No. 2015, pp. 15-16; Wang Zuosen, “jiaqiang guomin jingji dongyuan jianshe wenti yanjiu,” *National Defense*, No. 9, 2018, pp. 36-38.

[9] Wang Jingtao, Hai Jun, and Xu Yuexian, “yiju guofang jiaotong fa tuijin xinshiqi guofang jiaotong jianshe fazhan,” *JMTU*, Vol. 19, No. 9, 2017, pp. 1-5.

[10] Chang Chunwei, Li Suiru, and Zhang Yanping, “jiaotong jianshe guanche guofang yaoqiu cunzai de wenti yu duice,” *JMTU*, Vol. 18, No. 12, 2016, pp. 9-13; Hubeisheng jiaotong zhanbei bangongshi, 2017; Yu Chao, “zai shenhua junmin ronghe zhong tisheng lianhe tousong nengli,” *National Defense*, No. 3, 2019, pp. 37-41.

[11] Yu Wending and Jin Ou, “dangqian guofang dongyuan jigou mianlin de zhuyao wenti yu duice,” *National Defense*, No. 1, 2003, pp. 30-31; Yan Feng, “weirao pojie maodun wenti gaige guofang dongyuan jigou,” *National Defense*, No. 2015, pp. 15-16.

‘From Chancay to Shanghai’: Peru’s Strategic Role in PRC Maritime Strategy

by Sergey Sukhankin



A digital rendering of Chancay Port (Source: [Belt and Road Portal](#))

Executive Summary:

- Majority ownership by state-owned Cosco Shipping, and involvement of companies like ZPMC which is closely linked to China's Military-Civil Fusion strategy, raises concerns about the dual-use nature of infrastructure projects and potential military implications.
- The PRC has become Peru's main trading partner and investor, exerting significant influence over strategic sectors like energy, mining, and construction, thereby amplifying security concerns.
- Chancay megaport in Peru signifies a major shift in the region's trade and infrastructure dynamics. President Xi Jinping's upcoming visit underscores the strategic importance attached to this project.
- The megaport mostly welcomed in Peru, where it will boost the country's trade capabilities, create thousands of jobs, and improve its status as a regional hub.
- Chancay megaport exemplifies China's broader strategy of acquiring ports globally to enhance trade dominance and military presence, posing long-term challenges for regional security and stability.

In late January 2024, Peru officially announced that President Xi Jinping of the Peoples Republic of China (PRC) would visit to participate in the APEC summit. Xi's visit will also include the opening ceremony of the first phase of the Chancay megaport (Larepublica.pe, January 23). Peru's President Dina Boluarte has emphasized the port as part of the country's involvement in the Belt and Road Initiative (BRI). This has been extensively discussed in bilateral communications and is likely to result in new projects to enhance the construction of international trade infrastructure (Andina.pe, November 16, 2023).

The Chancay megaport is set to begin operations later this year (Andina.pe, December 28, 2023). The port, in which PRC state-owned Cosco Shipping Ports Limited (中遠海運港口有限公司) has a 60 percent stake (the other 40 percent is owned by local firm Volcan Compañía Minera), is located 80 kilometers from Metropolitan Lima, and is expected to cost over \$3.5 billion to complete (COSCO, January 23, 2019). The benefits to Peru in terms of increased trade and job creation will have a positive effects on perceptions and the creation of a major artery between the broader LAC region and Asia (chiefly through the Shanghai Port) will strengthen commercial ties. In the words of PRC Ambassador to Peru Song Yang (宋揚), "China is betting on Chancay to become the Shanghai of Peru," in turn transforming the landscape for the region's shipping and trade networks (Cechap.up.edu.pe, October, 2022). However, the economic benefits also come with security risks, both to Peru, but also to the extent that the port constitutes an additional and significant node in the PRC's global maritime strategy.

PRC–Peru Economic Ties

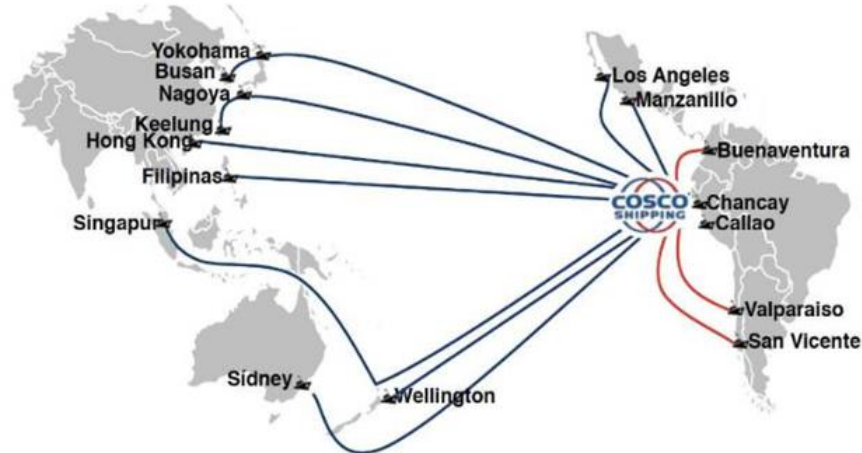
The most significant recent upgrade in bilateral ties came in 2009, when the two countries signed a free trade agreement (Fta.mofcom.gov.cn, May 9, 2009). The PRC is now Peru's main trading partner and largest investor, with more than \$13 billion flowing into the local economy over the course of two decades and 18,000 jobs being created across 32 major projects (Infobae.com, October 10, 2023).

The PRC now has significant stakes in strategic sectors of Peru's economy. Last year, China Southern Power Grid International (中国南方电网) acquired two Peruvian assets from Italian energy company Enel for \$2.9 billion by (Enel, April 7, 2023). The PRC now *de facto* controls almost the entire Peruvian electricity grid. PRC firms are also heavily involved in Peru's financial, mining (the Río Blanco mines), and construction sectors. In the latter, such businesses are involved in Pampa de Pongo (one of the largest iron ore projects in Peru), and the Amazon Waterway (la Hidrovía amazónica) (Infobae.com, October 10, 2023). Chancay megaport, however, puts bilateral relations on a qualitatively new level. Peru is now a critical node for BRI and, in Ambassador Song's words, the "most important logistics center on the coast of the Pacific" (Portalportuario.cl, October 24, 2022).

Local mainstream business and political-diplomatic elite are fully supportive of the venture. For instance, Minister of Economy and Finances Alex Contreras has claimed that the PRC's investments—particularly in seaport infrastructure—creates the potential for Peru to emerge as "the port power of Latin America" (Gob.pe, January 24, 2023). The combination of the PRC's strengths in building logistical networks and

supply chain mechanisms with LAC countries and its worsening ties with Argentina could put Peru on track to becoming (alongside Brazil and Chile) one of the PRC's top three strategic regional trade partners ([Oxford Business Group](#), June 19, 2023).

RUTAS MARÍTIMAS CONSIDERADAS
POR COSCO SHIPPING PORTS
Fuente: Elaboración propia



Maritime routes used by COSCO (Source: [Marine and Naval Engineering](#))

Chancay Port's Strategic Importance Beyond Peru

Chancay is a deep-water port. When complete, it will be able to host the world's largest cargo ships with a maximum capacity of up to more than 18,000 containers each—and by extension many naval vessels too ([CFR](#), November 6, 2023). Cargo will then have direct access to the Pan-American Highway that unites North and South America ([Larepublica.pe](#), September 9, 2022). It will also provide a boost to the port of Callao (as of now Peru's main seaport and the main airport).

The port will have two main economic effects. First, it will be transformative for Peru's position in global trade. Increased exports of copper, grains, and other commodities will help to improve the country's general macro-economic climate, create up to 1,500 jobs directly and 7,500 indirectly ([Andina.pe](#), January 11; [Larepublica.pe](#), September 9, 2022). Second, it will reduce shipping time by a third for PRC-based producers down to 23 days ([Andina.pe](#), December 28, 2023). This will in turn reduce costs. As Minister Contreras has noted: "Not only Peru can export its own products, but also become the exports center for Brazil, Bolivia, Ecuador, Chile, and other countries." He heralded a coming "productivity shock," hinting at the possibility of consolidation of the Chancay-Callao axis, which would be transformative for Peru's development ([Andina.pe](#), January 12).

Brazil is also increasingly interested in the development. The BRICS country would benefit from this trade route ([Ensegundos.com.pa](#), January 19). Brazil's ambassador to Peru, Clemente Baena Suárez, recently stated that the Brazilian side will be seeking prompt solutions to logistical, sanitary, and administrative obstacles in the border area near Peru to facilitate the travel of Brazilian trucks to Chancay in particular. He

also noted that “[Brazilian companies] are happy that it will be possible to ship their goods to Asia without having to go through the Panama Canal” ([Sohu.com](https://www.sohu.com), January 22). Agricultural exports increasingly underpin many Latin American economies, and Brazil’s in particular, with most destined for the PRC, leading to possible dependency dynamics and the vulnerabilities that come with it. Today, the sector accounts for a quarter of Brazil’s GDP, up from 18 percent in 2014. 70 percent of the country’s soybean exports were shipped to the PRC in 2023 ([Financial Times](https://www.ft.com), March 10).

Chancay: Concerns, Issues, and Criticism

Domestic and foreign voices of discontent about the port are present and audible, even if most Peruvians appear supportive. There are three main constituencies for these voices: United States security experts, grassroots Peruvian community and environmental groups, and neighboring Chile’s business community.

Local Concerns

Some groups in Peru oppose the port due to environmental risks and the prospects of displacement of local residents. These concerns have been voiced by, among others, the Environmental Surveillance Committee of the Santa Rosa Chancay Wetland and the Association in Defense of Housing and Environment of Chancay ([Dialogo-americas.com](https://www.dialogo-americas.com), March 16, 2022). Yet, local authorities have not shared or addressed these concerns. Local activists and investigative journalists have also documented multiple “irregularities or omissions [and] manipulations” that took place during the building of the first stage of the Chancay Multipurpose Port Terminal ([Infobae.com](https://www.infobae.com), September 28, 2023). These include technological-engineering mistakes that resulted in the disappearance of nearly 200 meters of local beach area, which poses risks to the local residential area; and the “poor measurement of the registration of toxic dust” due to construction activities.

In neighboring Chile, the business community feels ill at ease. The megaport challenges Chile’s place in regional trade networks and some believe it could lead to the marginalization of Chilean facilities ([Rumbominero.com](https://www.rumbominero.com), September 27, 2022; [Dfsud.com](https://www.dfsud.com), March 25, 2022). Former Chilean president Eduardo Frei has even spoken out to criticize the port ([VOA](https://www.voanews.com), August 28, 2023). Chancay megaport might also exacerbate Chinese illegal, unregulated, and unreported fishing in the region. Every year, nearly 600 Chinese fishing vessels fish illegally in and around Peru, Ecuador, and Argentina. The town of Chancay is a key fishing village, but local fishermen may be deprived of their livelihoods due to the presence of Chinese vessels ([New York Times](https://www.nytimes.com), September 26, 2022). The Peruvian government is nevertheless committed to the project and is eager to welcome further PRC initiatives in trade and infrastructure development.



A map of PRC projects in Latin America. (Source: [Dialogo Americas](#))

Security Concerns

United States has expressed concerns over the PRC's growing influence in the region. Gen. Laura Richardson, head of US Southern Command recently warned that the PRC is “on the 20-yard line, in the red zone to our homeland” ([Newsweek.com](#), October 5, 2023). Within the region, Daniel Pou, director of the Citizen Security Data Analysis Center of the Dominican Republic, has asserted that Beijing’s port infrastructure are “pieces of its economic, political, and military expansion strategy, to become the great global hoarder of raw materials, especially the resources of Latin America.” He argues the investments “carry a marked seal of military hegemony” ([Dialogo-americas.com](#), January 23, 2023). Leland Lazarus, associate director of National Security at the Florida International University’s Jack Gordon Institute for Public Policy, concurs with this view, arguing that “one of the most concerning trends is how certain Chinese SOE ports ... are allegedly being altered to serve Chinese military purposes ... [the PLA Navy] could surveil and potentially deny US naval and commercial ships transiting major bodies of water,” due to COSCO’s majority ownership. [2]

On a technical level, one cause for concern is the involvement of Shanghai Zhenhua Heavy Industries Co., Ltd. (ZPMC) ([ZPMC](#), December 28, 2023). ZPMC is the world’s premier builder of cranes for port terminals. The company was designated a “single champion (单项冠军企业)” in 2018—a program designed to cultivate manufacturing enterprises in key links in the industrial chain to help “accelerate the advancement of new-type industrialisation” ([MIIT](#), August 29, 2023). The White House has recently expressed concern that ZPMC cranes constitute 80 percent of cranes in US ports ([The White House](#), February 21). ZPMC has

denied that it poses any risks, but its own statements contradict this. An article on the “party-building work” section of ZPMC’s website from the People’s Daily makes the case that companies such as ZPMC should:

“stand on the height of integrating the overall situation of the strategy for the great rejuvenation of the Chinese nation and the great changes that the world has not seen in a hundred years, integrating the two major situations at home and abroad, and the two major events of development and security, and give full play to the advantages of huge amounts of data and rich application scenarios to promote the deep fusion of digital technology and the real economy, empower the transformation and upgrading of traditional industries, and give rise to new industries, new forms and new modes, so as to continuously make China’s digital economy stronger, better, and bigger” ([ZPMC](#), October 28, 2021).

More directly, a 2017 interview saw ZPMC’s Chairman Zhu Lianyu (朱连宇) say:

“The report of the 19th National Congress mentioned that ‘we should form a pattern of in-depth development of military-civil fusion,’ and Zhenhua immediately set up a leading group and a working group for military-civil fusion, and we are comprehensively analyzing the army’s industrial chain, and analyzing which ones are more relevant to Zhenhua Heavy Industry. In fact, Zhenhua and the military have already had some cases of cooperation, in addition, if the army needs to divest some subsidiary functions, where to divest? I think Zhenhua should take responsibility at this time. This new combination may not only be able to better meet the needs of the military in the future, but also provide great support for Zhenhua to expand some of the civilian business” ([Huangjiu](#), December 19, 2017).

Chancay megaport, through COSCO’s ownership and ZPMC’s involvement, is thus closely linked to the PRC’s Military-Civil Fusion development strategy. The incorporation of COSCO as a limited company in early 2016 was praised by the Hubei Military-Civil Fusion Development Committee ([HBJMRH](#), February 23, 2016). Both companies attended a 2020 forum on “National ocean strategy,” which one speaker said was “aimed at forming an atmosphere of civil-military co-construction to safeguard the country’s maritime rights and interests, and realising the synergistic innovation of civil-military science and technology” ([SJTU](#), December 11, 2020). A 2019 paper in *Cyberspace Military-Civil Fusion* magazine details an “intelligent ocean” strategy that integrates military strategy with commercial shipping, vast data resources, sensors and monitoring, and the BRI ([SECRSS](#), April 9, 2019).

The leverage the PRC state holds on account of this is growing at an alarming rate. The state-supported National Public Information Platform for Transportation and Logistics (LOGINK; 全国物流公共信息平台) aggregates data along the lines of the magazine article above, provides the most comprehensive picture available of global logistics activities, and represents a powerful tool to monitor and shape the international logistics market and increase foreign strategic dependency on the PRC ([Baker Institute](#), April 25, 2023). The PRC’s Ministry of Transport has promoted the platform overseas, and publicly available documents suggest

that the PRC government has access to all the data collected ([CEEC](#), June 15, 2018). This imposes considerable vulnerabilities and dangers for other countries, which are likely to be exploited—RC cyber-attacks have already successfully targeted US critical infrastructure and Australian ports ([Carnegie](#), February 28).

Conclusion.

Peru is likely to acquire a qualitatively new role in the hierarchy of the PRC's strategic priorities in the LAC macro-region once Chancay megaport commences operations. This, along with the revival of other regional logistics infrastructure initiatives, will further PRC influence in the region, where 21 countries have signed on to over 192 BRI-related infrastructure projects. There is little scope for its presence to reduce in the years ahead ([Larepublica.pe](#), November 7, 2023). Acquiring ports is a crucial aspect of the PRC's strategy. PRC firms have also acquired stakes in other ports in the region, such as Paranaguá on Brazil's Atlantic coast, which is currently Latin America's biggest port ([Espanol.cgtn.com](#), May 23, 2022). Eight other seaports in Central America have Chinese stakeholders. Given the PRC's stated strategy of enhancing its dominant grip on global trade and logistics, as well as to provide avenues for a greater military presence overseas, Chancay megaport is a reminder that many of the PRC's overseas investments are often conceived and executed with dual-use motivations in mind.

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Notes

[1] For more on Sendero Luminoso's links to the CPP, see Julia Lovell, *Maoism: A Global History*, Vintage: 2020. pp 306–346. See also Lurgio Gavilán Sánchez, *When Rains Became Floods: A Child Soldier's Story*, Duke University Press, 2015.

[2] Written interview with the author, February 17, 2024

PRC Pursues Chip Design Software Dominance

by Michael Laha



Nanjing National Center for Semiconductors (Source: [Sina](#))

Executive Summary:

- US-China technology competition is no longer confined to only leading-edge semiconductors but is now moving to also include older so-called mature-node or legacy chips.
- Central and local level Chinese industrial and innovation policies have long pursued a goal of achieving self-sufficiency in not just the most advanced chips now submitted to US export controls but also to develop manufacturing capacity for legacy chips now the subject of a US Department of Commerce survey.
- To accomplish this, the PRC erected new R&D institutions and offered generous tax exemptions and subsidies to domestic companies.
- PRC progress in mature-node Electronic Design Automation (EDA) software self-sufficiency is a more likely prospect for the foreseeable future. Domestic companies in the PRC are publicizing initial successes but have not achieved a fully localized ecosystem of EDA products.

In December of last year, the US Department of Commerce announced it would launch a survey of America's supply chains of mature-node semiconductors or so-called legacy chips ([Department of Commerce](#), December 21, 2023). The People's Republic (PRC) is poised to become a leading producer of mature-node chips and US national security experts are worried that industrial overcapacity in the PRC might lead to cheap Chinese chip imports, eroding the United States' manufacturing base in these chips. This in turn could threaten the reliable sourcing of such chips for use by the US military.

The Global Times, one of the Chinese Communist Party's more hardline mouthpieces, responded quickly to the Commerce Department announcement by quoting a Chinese telecoms expert who said that the United States was "citing national security just as a pretext to maintain US competitiveness in legacy chips" ([Global Times](#), December 22, 2023). In a [phone call](#) with Gina Raimondo this January, Minister of Commerce Wang Wentao (王文涛) raised the issue of the survey as one of three major concerns ([FMPRC](#), January 11; [Huanqiu](#), January 11). Weeks later, Gina Raimondo celebrated the first anniversary of the CHIPS and Science Act by announcing a first batch of approved semiconductor projects including in legacy chips ([CSIS](#), February 26).

Policymakers are now wrestling with a twin challenge. Washington seeks to deny the PRC technology at the very leading edge while at the same time allowing for a relatively normal economic relationship for less advanced technologies. Given the imposition of US export controls on high-end semiconductors in 2022, the investigation into legacy chip supply chains opens a new front in the US-China technology competition. This challenges efforts to restrict some chips and leave others more or less untouched.

The challenge is that PRC leadership set out to achieve self-sufficiency in both sets of semiconductors. Beijing is currently having more success in ramping up domestic capacity and grabbing a larger share of the global market for 28nm or larger node chips. One industry research company said that last year the PRC had captured 31 percent of global mature-node manufacturing capacity and was expect to increase that share to 39 percent by 2027 ([TrendForce](#), January 16). [1]

Some Wins in Localizing EDA Software

Electronic design automation (EDA) software currently constitutes a weak link in the PRC's efforts to build a leading domestic semiconductor value chain. EDA software is used by engineers to design the chip specs which are then sent to manufacturers such as TSMC who producing the actual chips. Three companies dominate the global market: Cadence and Synopsys (both American), and Siemens EDA (a German company which acquired a US company formerly known as Mentor). The PRC wants to create versions of its own. These design tools were listed in a string of high-priority chip-related domestic breakthroughs needed in the 14th Five Year Plan ([Xinhua](#), March 13, 2021), but are also referenced in older policies such as the "Made in China 2025" plan promulgated in 2015 ([State Council](#), May 19, 2015).

The PRC may now be logging some initial successes. This time last year, Huawei claimed to have developed an EDA tool for 14nm node sizes ([People's Daily](#), March 24, 2023). At a conference announcing this

breakthrough, Huawei's deputy chairman Xu Zhijun (徐直军) claimed that the company had substituted 78 software and hardware items over the previous three years. If such reports are credible, then this constitutes at least one success for the indigenization of EDA software. In 2020, Chinese companies had captured 11.48 percent of the domestic EDA market (for both advanced and less advanced manufacturing processes), up from 6.24 percent two years earlier ([21st Century Business Herald](#), August 15, 2022). Recently, Chinese tech media company TMT Post reported that some industry researchers estimate this number could increase to 14 percent by 2025 ([TMTPost](#), January 22). However, almost all of the remaining market share will stay in the hands of the two US and one German industry leaders.

Escaping Chokeholds Via New Institutions

The PRC has established centers of research excellence to boost the domestic semiconductor industry. These are meant to bring together disparate actors in industry, academia, and other institutions. In 2018, Fudan University, together with Chinese semiconductor manufacturers SMIC and Huahong Group launched the National Integrated Circuit Innovation Center (国家集成电路创新中心) ([Xinhua](#), July 3, 2018). The center's general manager hailed its importance in an article for a magazine established by the Management Committee of the Shanghai Zhangjiang High-tech Park (where center is located) ([Zhangjiang Science and Technology Review](#), June 6, 2019). Zhang Wei (张卫), who also served as Executive Dean of the School of Microelectronics at Fudan University, suggested that the National IC Innovation Center was China's answer to SEMATECH in the United States and IMEC in Europe. Zhang credits SEMATECH, a research consortium established in 1987 and funded in part by member companies and the US federal government, with helping the United States regain the upper hand in a tense period of semiconductor competition with Japan that lasted into the mid-1990s. Similarly, the Belgian government created IMEC in 1984 to facilitate a European center of semiconductor excellence. Zhang highlights the role of consistent European government investments into IMEC R&D as a critical ingredient to its success.

The PRC government appeared to see the country's particular weakness in EDA software as requiring the establishment of a distinct Chinese version of IMEC or SEMATECH. In June last year, the vice-governor of Jiangsu Province and the Mayor of Nanjing opened the National EDA Innovation Center, which now employs just under 100 researchers ([Jiangbei New Area Propaganda and United Front Work Department](#), June 30, 2023). Several months earlier, Yang Jun (杨军), a professor at Southeast University, who was charged with leading the innovation center, said that the center would undertake the critical work of breaking the United States' chokehold in EDA software ([The Paper](#), May 13, 2023). In 2020, Chairman Liu Weiping (刘伟平) of Empyrean Technology, PRC's leading EDA provider, said that PRC's late arrival to the semiconductor industry meant that it had difficulties building domestic versions of EDA software. Such software typically require significant R&D investment and had already clustered around a global triopoly of Synopsys, Siemens EDA (formerly Mentor), and Cadence ([PRC Electronic News](#), September 1, 2020). In 2022, EDA software, especially for some of the most advanced chips based on so-called gate-all-around (GAA) transistors,

became subject to US export controls ([US Federal Register](#), August 15, 2022). It is these tools that Yang Jun singled out as core elements of focus for the center's work.

The center has been undertaking several projects and activities to create such tools. These include the leveraging of three joint key laboratories, the promotion of EDA competitions such as the Integrated Circuit EDA Elite Challenge with the goal of "increasing domestic market share of Chinese EDA players," and the establishment of an independent EDA ecosystem by coordinating the participation of companies such as Empyrean (华大九天), GWX (国微芯), or X-EPIC (芯华章) ([EDA ICISC Website](#), March 13).

Central and Local Initiatives Aim for Self-Sufficiency

In a 2018 series of S&T Daily articles, a Chinese expert in EDA development named Xia Gang (夏刚) weighed in on what the impact of a sanction or ban on US or German EDA tools would mean for domestic innovation. He suggested that a long-term ban on the scale of several decades would move Chinese actors to develop their own version. By contrast, a relatively short or intermittent ban would impose significant costs on Chinese chip designers but not trigger meaningful indigenization efforts as they would likely wait out the embargo ([S&T Daily](#), May 17, 2018; see also [CSET](#), May 2022). Regardless of whether such a ban was actually coming, Chinese policy makers pushed ahead. The National EDA Innovation Center, while established in June of 2023, had been announced almost three years earlier, in September of 2020, two years before EDA controls ([Southeast University](#), September 17, 2020).

At least one investment firm in the PRC echoed Xia's argument that restrictions would help Chinese EDA companies. In a 2022 research note published only months after the US controls on EDA, Haitong Securities (海通证券), a Hong Kong-based financial-services company, wrote that it believed that US action to restrict EDA tools made companies such as Empyrean more attractive investment targets ([Haitong](#), October 19, 2022). What Xia Gang did not mention (though it appears in the Haitong note) is that Chinese policymakers are helping. Haitong pointed to a recently released promotion policy issued by the Shenzhen Municipal Reform and Development Commission aimed at lifting the semiconductor space. ([Shenzhen Municipal Reform and Development Commission](#), October 8, 2010). The Shenzhen policy is merely one example of a much broader industrial policy in support of self-reliance that has been a priority of the central government for many years.

In 2020, the State Council issued a significant policy aimed at boosting domestic semiconductor and software development ([State Council](#), August 4, 2020). Among the 40 measures it lists were tax exemptions for companies, the most generous of which went to those working on nodes below 28nm. Slightly less generous exemptions went to firms producing chips with nodes in the 28-65nm range, while special exemptions also applied to chip design software companies.

Local administrations followed up with similar policies. The Shanghai Municipal Government devised additional local measures such as innovation coupons that also target EDA with a preference for 28nm or

below ([Shanghai Pudong New District Government](#), March 1, 2022). To keep pace, the Chongqing Municipal government released an “Electronic Design Plan” that sets a target for 2027 of growing the industry size to a valuation of 12 billion RMB ([Chongqing Municipal People’s Government](#), December 29, 2023). This plan also articulated hopes to anchor any R&D around its local universities—Chongqing University and Chongqing University of Posts and Telecommunications. It also intends to bring mature-node foundries to the city (fabricating chips with nodes in the 28-55nm range) alongside the EDA companies that design these chips. Not to be outdone, the Guangzhou city government envisions that it will be home to five companies with revenues of 100 million RMB by the end of 2024 ([Guangzhou City People’s Government](#), March 18, 2022). The Shenzhen government, meanwhile, is host to an Integrated Circuit Design Application Industrial Park (圳集成电路设计与应用产业园) and related industrial bases ([Industry and Information Technology Bureau of the Shenzhen Municipal Government](#), May 22, 2019; [National IC Design Shenzhen Industrial Center](#), accessed March 15). This is not to mention the already widely reported on state-directed investments into the semiconductor industry, through which the government poured billions into the sector, with mixed results ([Reuters](#), September 5, 2023).

Significant hurdles and gaps remain, despite this plethora of official support. In a recent research report, Shanghai-based Topsperity Securities (德邦证券) elucidated the challenges Empyrean—the PRC’s leading EDA maker—is facing ([Topsperity Securities](#), October 30, 2023). Citing the company’s own prospectus, the report notes that Empyrean could not yet cover the full digital circuit process on its own, even if many of its offerings were now approaching international standards. The report includes “unsustainable tax incentives and government subsidies” in a subsection on risks for investing in Empyrean equities, a sign that some industry observers had been growing concerned that government support would not continue indefinitely and take localization efforts only so far.

Lessons for Leverage

PRC policymakers have assessed the need to localize a much broader set of technologies than just those targeted by US export controls. This distinction is especially salient if one considers two sub-classes of EDA software—leading-edge versions which US export controls do target and mature-node design software that they do not target.

It is more likely in the medium term that the PRC will make headway in EDA tools for processes at the 14nm level or above. The PRC government and industry players will cite those as successes in the overall drive for self-reliance, even if they do not help the country acquire leading technology denied by the United States through export controls. Longstanding Chinese industrial and innovation policies aim to displace foreign players across both groups of EDA tools. This makes it more difficult to leave one area free for relatively open trade while placing restrictions on the other.

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Notes

[1] “Mature node” generally (though not exclusively) refers to chips that rely on wafer feature sizes larger than 28nm.

The National People's Congress Exposes Xi Jinping's Problems

by Willy Wo-Lap Lam



National People's Congress 2024 (Source: Gov.cn)

Executive Summary:

- Li Qiang's government work report offered no significant incentives to help the nation's three sectors most in need of government support. Economic targets were practically identical to those for 2023 but will be harder to achieve.
- Xi amassed more power through sidelining Li and other colleagues, violating personnel norms, and through revisions to the State Council Organic Law.
- Lack of support to homebuyers and the real estate sector suggest people will have to wait for the Third Plenum later this year.
- One bright spot was the plan to invest RMB 700 billion—in addition to issuing special bonds worth RMB 1 trillion—in high-tech sectors.

The annual plenary session of the National People's Congress (NPC), the parliament of the People's Republic of China (PRC) should have seen the articulation of a clear-cut direction to tackle the dire economic situation. Instead, the focus has turned to how supreme leader Xi Jinping is exercising his power. Evidence has continued to emerge that the 71-year-old General Secretary of the Chinese Communist Party (CCP) and commander-in-chief is more interested in consolidating his own power and stoking the flames of nationalism than re-introducing market-oriented policies to remedy the nation's financial malaise.

In his Annual Government Work Report at the opening of the parliamentary session on March 5, Premier Li Qiang (李强), who is ranked second in the Politburo Standing Committee (PBSC), offered no significant incentives to help the nation's three sectors most in need of government support: the property market, indebted local governments, and the banking system. This is despite his optimistic targets for the year ahead, which were almost identical to those set for 2023 (which were duly met): a 5 percent GDP growth target, a fiscal deficit of 3 percent of GDP, a special bond quota for local governments of RMB 3.9 trillion, the creation of "over 12 million" urban jobs, and an unemployment rate of "around 5.5 percent" ([NPC Observer](#), March 5). However, the headline growth figure will likely be much more difficult to achieve compared to last year, as the economy does not have the prospect of a post-pandemic rebound. Some analysts suggest that potential growth in the PRC is no higher than three percent, even while others believe that it is at least theoretically possible for the country to sustain five or six percent growth, given certain policy shifts ([SOAS](#), March 12; [Caixin](#), March 9).

The special bonds earmarked to help localities handle tens of trillions (RMB) of combined debt seem a case of too little, too late. Li suggested that more would be done to "defuse risks in property, local debt, small and medium-sized financial institutions," but did not elaborate ([News.cn](#), March 5; [Gov.cn](#), March 5). Moreover, apart from measures announced prior to the NPC sessions, such as lowering the reserve requirement ratio of the banks, no new efforts have been made to rescue close-to-default financial institutions. Partly because of excessive lending to overleveraged real-estate developers, many provincial and county-level banks have created hurdles for depositors who want to withdraw their own cash. To boost consumer-spending, one of the "new" areas of growth, the government has lifted the lowest level of monthly old-age benefits payments from RMB 103 to RMB 123. The miniscule size of the raise has invited wild-spread criticism in the social media ([VOA](#), March 8; [Eastmoney](#), March 5).

The lack of support to the real estate industry and for homebuyers is also concerning. Perhaps most disappointing to the significant portion of China's 400 million-strong middle class who have bought "lanweilou (烂尾楼)"—unfinished apartments for which they have already paid—is that the Xi leadership has announced no new measures to bail out conglomerates such as Evergrande, which has run up debt totaling RMB 2.5 trillion. Instead, minister for housing and rural development Ni Hong (倪虹) pointed out at the NPC that Beijing's new focus was on "promoting a new development model for the real estate market," which he said would involve "planning and building affordable housing." Here, Ni used the term "subsidized housing (保障楼)," a throwback to the Maoist era when apartments were rented to

qualified—usually senior—employees of the government, semi-governmental units, and SOEs. Ni also recited Xi's well-known reprimand for commodity housing (商品房) speculators: "Houses are built for living, not for speculation." The minister strongly hinted that in the future, housing would be divided into commodity apartments for the relatively well-off sectors as well as government-owned apartments rented out to qualified employees of party-related units ([Fortune](#), March 12; [Xinhua](#), March 9). Such policies do not seem to be of as high an order of priority as helping those who have fallen victim to the overleveraged developers that have now filed for bankruptcy.

There was one bright spot in the report. Beijing will invest at least RMB 700 billion—in addition to issuing special bonds worth RMB 1 trillion—in high-tech sectors that focus on AI, semiconductors, biosciences, and green technologies such as batteries for electronic vehicles. Li used the slogan "to accelerate the development of new productive forces" in his report and pledged that input into high-tech sectors would be boosted by at least 10 percent a year ([WSJ China](#), March 13; [Bloomberg](#), March 7). The much-touted goal of predicating the nation's economy on high-tech sectors, however, is not new. This is the direction in which the PRC's top planners have been moving for a while now, and was discussed most recently in a lecture Xi gave to the Politburo on February 1, while Premier Li was away attending the World Economic Forum in Davos ([People's Daily](#), February 2).

Beyond the policy announcements, an intriguing aspect of the NPC sessions has been how blatantly Xi has bent rules and conventions to underscore his already undisputed power. For example, for the first time in almost 30 years, the traditional end-of-NPC press conference by the premier was abolished. Given that this was the only opportunity that such a senior cadre faced the media—and that it would be broadcast live—the premier's presser had become a main attraction of the entire parliamentary session. Not only was the press conference canceled for this year's NPC, spokesperson Lou Qinjian (娄勤俭) suggested in a press meeting that this arrangement "will continue for the remainder of this term of the NPC," so it is unlikely to be revived any time soon ([RFI](#), March 12; [NYT Chinese](#), March 6). This reduces the premier's ability to cultivate a personal identity independent of Xi, as well as limiting the transparency and accountability—to the extent that it exists—of the government.

Xi has sidelined the decision-making powers of the government ever since coming to power. This violates the doctrine of the "separation of party and government" established by Xi's predecessor Deng Xiaoping in 1987. The State Council Organic Law, revised by the NPC, doubles down on the interpretation that the State Council is but an executive organ, rather than a site for policy design. The law makes clear that the State Council's major task is to implement policies and laws devised by the Xi-led party leadership ([NPC Observer.com](#), March 11; [Global Times](#), March 11).

Xi has also sidelined his colleagues. The two PBSC members who lead the State Council—Premier Li and Executive Vice-Premier Ding Xuexiang (丁薛祥)—do not seem to have been given major portfolios. Politburo member He Lifeng (何立峰), who is responsible for finance and economics, is not an English-speaking technocrat in the mold of former premier Zhu Rongji (朱镕基) or the many technical cadres he

had groomed for high government positions. He gained his prominent role mainly due to having worked with Xi when the latter was rising through the hierarchy in Fujian Province in the 1980s and 1990s ([VOA](#), November 4, 2023; [Nikkei Asia](#), August 19, 2023).

Xi has in the past few months repeatedly violated party practices. The CCP leadership postponing the Third Plenum of 20th Central Committee indefinitely, which was expected to be held at the end of 2023, is a notable example. The Party's Charter also points out that changes in the composition of the CCP Central Military Commission could only be effectuated in a plenum. Yet disgraced former defense minister Li Shangfu (李尚福) was dropped from Party documentation last month. And in contrary to conventional processes, not a single word was given to acknowledge or explain the disappearance of a dozen-odd generals as members of the NPC and the Chinese People's Political Consultative Conference ([RFA](#), March 8; [RFI](#), November 23, 2023).

As CMC chairman, Xi seems to be putting inordinate stress on high-tech military campaigns, which he referred to for the first time as “new quality (新质)” warfare. While meeting delegates from the PLA and the People's Armed Police to the NPC, Xi said that they “must comprehensively raise our strategic and fighting power in new [tech] areas... this is a new task for the system of national defense mobilization.” Xi made particular mention of the symbiosis of “new productive forces” and “new-quality defense.” The commander in chief pointed out that the PLA and PAP must improve their skills in naval, deep-water, spatial, and cyber domains, and AI-assisted capacities. Military expenses were forecast by Premier Li to grow by 7.2 percent this year ([People's Daily](#), March 9; [VOA](#), March 9).

In his NPC press briefing, Foreign Minister Wang Yi (王毅) picked up the themes of “wolf warrior diplomacy.” This is despite apparent efforts by Premier Li and Wang himself to strike a more conciliatory pose while talking to foreign government officials and leaders of multinational corporations in their recent trips to Europe. Without mentioning either the United States or its “anti-China” allies in Europe and Asia, Wang said Beijing had gone “beyond the obsolete zero-sum game mentality... [and that the CCP leadership] assumes the moral high ground of civilization and captures the shared aspirations of all nations.” He went on to add that “building a community with a shared future for mankind has become a glorious banner leading the progress of the times,” in an oblique but pointed dig at the “divisive” approach of the Americans ([FMPRC](#), March 7). Wang's stance echoes the harsh tone regarding the West contained in Premier Li's Government Work Report.

In his NPC speech to deliver the government work report, Premier Li admitted that “risks and potential dangers in real estate, local government debt, and small and medium financial institutions were acute in some areas.” He added that “under these circumstances, we faced considerably more dilemmas in making policy decisions and doing our work.” This sounded unrepresentatively candid. But irrespective of the diagnosis, so long as Xi keeps arrogating all powers and responsibilities to himself, the long-term outlook on the political, economic, and diplomatic fronts will not improve.

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