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Civil–Military Integration Efforts in China

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Summary

Over the past two decades, the relationship between China’s civilian and military industrial sectors has been undergoing a major realignment brought on by the transformation of the country’s economic and technological landscape. Whereas the defense sector had been the undisputed leader of Chinese industrial technology for most of the PRC’s history, the predominantly non-state civilian economy has begun to catch up with and even surpass comparable military capabilities in many key areas since the 1990s. The Chinese leadership recognizes the enormous potential of the civilian sector for China’s military modernization program, especially in light of the often disappointing results of various technology initiatives spearheaded by the state sector, despite massive investments. Serious efforts are now under way to facilitate the entry of non-state sector firms into the military market. However, many obstacles remain, of which the entrenched interests of the defense industry stands out.

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CMI AS AN EMERGING POLICY FOCUS

In late 2010, the State Council and the Central Military Commission (CMC) jointly issued a new set of “Guiding Opinions” on the development of the defense industry. The central theme of the document is the current state of civil–military integration (CMI) efforts in the Chinese defense industry, and it identified a number of pressing challenges as well as ambitious development goals. According to the document, the defense industry is to achieve the following objectives for the 12th Five-Year Plan (2011–15): 1) The defense sector and the civilian industrial sector are to “basically achieve” integration in terms of information interflow and mutual complementation; 2) Treatments for all enterprises undertaking defense-related research and development (R&D) and production are to “basically achieve” equitability; 3) Structural reforms of defense sector organizations are to be completed; and 4) Reforms toward a competitive and integrated military procurement system are to achieve steady progress.

In many ways, this document represents a remarkable milestone in the evolution of the Chinese defense industry. Over the past two decades, the relationship between China’s civilian and military industrial sectors has been undergoing a major realignment brought on by the country’s dramatic economic and technological development. Before the 1990s, the defense sector was the undisputed leader of Chinese industrial technology, and the overwhelming focus of Chinese defense industrial policy was on military-to-civilian conversion, so the superior capabilities of the defense sector could be parlayed into economic growth.

Over time, the civilian economy began to catch up with and even surpass comparable military capabilities, and today the civilian sector enjoys a clear lead in industries such as microelectronics, information technology, communications equipment, and advanced materials. As a result, the harnessing of civilian capabilities for military use took on increasing significance, and CMI became a prominent element of Chinese defense industrial policy. At the 17th Party Congress in 2007, CMI was included in the Party’s paramount programmatic statement for the first time. But

unambiguous equality for non-state sector firms in the defense market was not promised until the promulgation of the 2010 document.

Although CMI generally entails the development and commercialization of dual-use technologies and the integration of civil and military industrial resources, in the Chinese case the promotion of civil-to-military “spin-on” conversion is of particular relevance. More specifically, spin-on conversion can take the form of the military utilization of mature civilian technologies, as well as the military utilization of civilian sector R&D and production resources.

Chinese analysts believe that CMI can significantly enhance the efficiency of the defense industry. Indeed, one 2006 study estimated that greater civilian participation in the defense sector could reduce development costs by as much as 50–70 percent. CMI is therefore regarded as a means by which to defray the high costs of military modernization while maintaining a brisk pace of economic growth, since Chinese strategists still generally consider economic power to be the ultimate guarantor of a country’s ability to achieve its strategic intent.

The long-term goal is to create an economy with civil–military synergies similar to those of Japan, but with a defense-industrial base on a scale comparable to that of the United States. Such an economy will consist of a small core of dedicated defense prime contractors focusing on R&D, systems integration, and marketing, with the low-value-added middle portion of the supply chain outsourced to a large base of secondary sub-contractors.

CURRENT STATE

Until the mid-2000s, the main thrust of defense industrial reforms had been focused on military-to-civilian spin-offs. Accordingly, many highly successful civilian sector high-tech firms today can trace their roots to the defense sector, and most of the best-known examples of Chinese CMI are offshoots of long-established defense entities. In the information and communications technology (ICT) sector, for instance, four companies have been identified as sector leaders. Of the four, Datang Telecom, Great Dragon Telecom,

and Zhongxing Telecom can be characterized as spin-offs of defense sector entities. The leader of the pack, Huawei, though formally a non-state enterprise, was founded by a former director of the PLA Information Engineering Academy and clearly enjoys close ties to the military leadership. The pattern of their success is by no means limited to a handful of elite national champions. The same formula is replicated in small to medium enterprises across many sectors.

The spectacular success achieved by many of these companies has been made possible by an enormous commitment of resources from the Chinese government. Since the turn of the century, total R&D spending has increased at an average of 23percent a year, reaching some US\$89 billion in 2009, or 1.7percent of GDP. Notwithstanding the massive investments and a few high-profile success stories, tent-pole programs such as the 863 Program and the 973 Program appear to have fallen short of their goals. And although China now boasts the largest science and technology (S&T) workforce in the world, the quality of this workforce still leaves much to be desired. Blame for such shortcomings is often attributed the often recalcitrant organizational inertia within the traditional state sectors.

In response, there is an emerging consensus among Chinese policymakers that successful defense modernization will require the full exploitation of non-state sector resources. Until the early 2000s, private enterprises were legally excluded from the defense sector. But in 2005, the eligibility for defense contract work was finally expanded to non-state sector enterprises without foreign investments, although their participation is still formally limited to components and auxiliary products. Under the new system, eligibility for defense work is determined by a Catalog of Armaments Research and Production Permits jointly maintained by the State Administration for Science, Technology, and Industry for National Defense (SASTIND) and the General Armaments Department (GAD). All R&D and production activities relating to items in the catalog require the prior obtainment of the relevant permits. Items in the Catalog are divided into two categories: Advanced weapons systems and other high-tech projects are placed under Category 1, while most

subsystems and various auxiliary products are placed under Category 2. In general, only established state owned enterprises (SOEs) are eligible for Category 1 contracts. Non-state sector firms are limited to Category 2.

As early as 2005, private-sector firms were said to make up close to half of all defense sector contractors. By 2007 at least 68 private sector firms had reportedly been granted formal production permits. By 2009 there were over 3,000 private enterprises participating in the defense market. However, with the exception of a few leading firms in some select sectors, such as electronics, ICT, and advanced materials, most of these firms are in non-strategic sectors such as light manufacturing, textiles, and construction material, where they function as low-tech suppliers of basic products.

For the most part, success in the military market still appears heavily dependent on existing high-level PLA connections, even for formally civilian firms such as Huawei that have never been part of the defense establishment. In contrast, independent non-state companies without well-placed connections (*guanxi*) often find it difficult to penetrate the defense market, where even obtaining the necessary security certification is often impossible without prior *guanxi*. Given the nature of the business environment, most non-state sector firms have adopted a wait-and-see attitude and remain skeptical of the defense sector.

Even for industry titans such as Lenovo, the defense market's current significance remains modest. In the early 2000s Lenovo's annual military sales amounted to only half a percent of the company's total annual revenue, and at the end of the decade they were still likely less than one percent of the company's total revenue. For the foreseeable future, the Chinese defense market will likely remain a highly restricted arena for a small number of politically well-connected players.

MAJOR OBSTACLES

In short, although Chinese leaders aspire to a system that can effectively mobilize the civilian sector's technological and economic resources, they face considerable challenges. Most of the obstacles identified in the 2010 "Guiding Opin-

ions” have been discussed in depth in the Chinese scholarly literature. Some of the most important of these include:

Weakness of the Civilian Sector: A basic obstacle facing CMI reforms is the weakness of the civilian sector itself. With some notable exceptions, most firms in this sector are small to medium sized, with limited resources and sometimes dubious reliability. Lacking adequate resources, these firms are far more inclined to adapt mature foreign technologies than invest in risky innovation. Oftentimes, this approach is insufficient to meet the defense sector’s technological demands.

Deficiencies in the Current Institutional Framework: According to critics, current CMI policies still place too much emphasis on the exceptional nature of the military market and the protection of defense enterprises, at the expense of market competition and efficiency. Defense SOEs continue to enjoy various privileges, such as land tax and other tax exemptions that are denied private-sector firms for the same work. SOEs are also entitled to priority consideration in bids on PLA contracts, even if they are bidding against technologically superior non-state firms. Industrial information in the defense sector also tends to be excessively classified, making it inaccessible to civilian firms. Standards in the defense sector also tend to be different to civilian standards, even though many of them are now obsolete.

For firms in the private sector, two factors are especially problematic. The first is the “cost + 5 percent” price control system which applies to all military procurement. While well-connected insiders often find ways to increase their effective margins, newcomers find the return insufficient to justify the risks. The second problem is the familiar lament regarding poor intellectual property rights protection. According to reports, defense-sector SOEs often demand the transfer of key technologies from their non-state partners, frequently without compensation.

Poor Civil–Military Structural Linkage: A third major obstacle is the poor structural linkage between the defense and civilian industrial sectors. The exchange of information between the two sectors is notoriously poor. The PLA currently

only releases procurement information to the state-owned defense conglomerates, which leaves private sector firms with little access to market information. Likewise, a similar information barrier exists between the defense industry and civilian research institutions. Although efforts are underway to develop platforms for civil–military information exchanges, at present most such networks are poorly developed. In addition, the very autonomy of non-state enterprises is often a disadvantage in the defense market: Without a patron in the defense establishment, such firms have no means of establishing relationships with military end-users, nor do they have access to the crucial capital needed for innovation.

Reluctance of Defense Sector SOEs to Allow Outside Competition: Finally, the most fundamental obstacle in Chinese CMI development is the reluctance of defense conglomerates to open the military market to private sector competition. Currently, contracts in the defense sector, especially contracts for major systems, are still primarily allocated according to bureaucratic considerations, for which the lobbying of influential officials is more important than actual competencies. Furthermore, once awarded, contracts typically become quasi-permanent arrangements. As a result, de facto monopolies are said to be ubiquitous within the defense sector, allowing for rampant abuses and lucrative profits in despite of the formal “cost + 5 percent” pricing rule. Indeed, for well-established contractors the defense market is said to be considerably more profitable than the civilian market.

WHITHER CHINESE CMI?

There is no doubt that the Chinese leadership understands the potential benefits of CMI. However, past experience has shown that those sectors most affected by changes have corporate interests that do not always align with those of the state center. While the earlier emphasis on defense conversion and dual use has produced dramatic benefits for the defense industry, the current emphasis on civilian-to-military conversion threatens to expose the sector to genuine competition from civilian companies, and may encounter far less enthusi-

asm. Successful implementation of CMI reforms, therefore, requires not only the establishment of new rules and institutions, but also the successful neutralization of countervailing systematic pressures. In this regard, the central government's announced intent to dismantle the defense industry's current battery of privileges can be of singular significance. It would demonstrate the top leadership's resolve to take on powerful factional interests in pursuit of its own policy imperatives, as well as a notably enlightened attitude toward the status of the private sector.

Finally, it is worth noting that China's drive towards a dual-use economy has added a new na-

tional security dimension to its economic and civilian S&T development. While this new dimension may provide leverage and add urgency for the deepening of market-oriented reforms, it may also amplify the influence of the military in economic policy-making and trigger a regression to a more militaristic, techno-nationalist posture. In the years to come, China's CMI efforts will continue to demand careful attention and scrutiny.

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