MEMORANDUM

To: Council on Foreign Relations President Richard N. Haass
From: Matthew Samach
Subject: China's Economic and Military Power
Date: March 29, 2019

Abstract

This memo will analyze the People's Republic of China as an emerging power on the global stage. Three dimensions will be considered: China's growing economic dynamism, the growth of its military capabilities, and major points of contestation with the United States. It will then recommend two policies that Washington can implement to counteract Chinese military objectives in the near future: work towards forming a multilateral joint task force among allies in the South China Sea and develop a comprehensive program to ensure that the U.S. remains the world leader in AI technology in the coming decades.

Analysis - China's changing stature in the world

China's economic transformation

China's economic explosion over the recent decades is no secret. In less than a thirty-year timespan, the country went from representing a small fraction of global trade to accounting for an imposing 10 percent of total trade. It is now the largest net exporter in the world and the second-biggest importer, after the United States.[1]

China has become a giant in trade by participation in multilateral trade organizations and by opening its economy to foreign investment. In 2000, China helped to set up the ASEAN-China Free Trade Area to promote free trade in the region. Between 2001 and 2011, trade between China and ASEAN states increased from $41.6 billion to $361.2 billion, a nearly 800 percent increase.[2] In 2001, China joined the World Trade Organization – trade and current account surpluses spiked after the decision.[3] At its peak in 2006, China had a trade ratio of 66 percent, an unheard-of number for a country its size.[4] The largest recipients of Chinese exports are the U.S., Hong Kong, Japan, and South Korea. Its major traded commodities include labor intensive goods like apparel, furniture, electronics and footwear while its major imports include materials and commodities such as fuel, oil, plastics, iron and steel.[5]

China's economic policies, especially with regards to foreign exchange rates, have attracted intense scrutiny. Because of their policies designed to increase trade surpluses, critics have accused China of being "mercantilists" or "currency manipulators".[6] The People's Bank of

China demands that Chinese exporters abide by a "surrender requirement", whereby these firms sell their dollars to the People's Bank in exchange for CNY at a fixed rate. Because of the excess supply of foreign tender within internal Chinese markets, the PBoC buys much more foreign bills than it sells, keeping the value of CNY low.[7] Other countries' industries charge that this policy unfairly undercuts jobs and production by allowing Chinese firms to export at low prices; however, the many foreign firms who have significant investments in China favor the practice.

China's military transformation

To properly understand the capabilities, goals, and transformation of the People's Liberation Army (PLA), it is important to understand its unique relationship to the ruling party of China, the Chinese Communist Party (CCP). Historically, the CCP has been deeply ingrained in the decision-making organs of the PLA, with party committees existing at all levels of the command chain. Formal authority over the PLA rests with the CMC, or Central Military Commission of the Communist Party.[8] The centrality of the CMC, and hence the PLA, to governance in China is demonstrated by the fact that since 1989, the office of CMC chairman has been held by the upcoming general secretary of the CCP.[9]

The need to modernize the PLA became apparent to Chinese leaders following the decisive victories of U.S. military conflicts in the 1990s and early 2000s. These interventions, such as the U.S. led NATO intervention in the Baltics or the Gulf War, were characterized by precision, jointness of military branches, and superior use of information technology.[10] To drive modernization, the PLA became more professionalized and delinked from CCP institutions.[11]

The PLA consists of ground army, navy, air force, and artillery branches. Efforts to modernize have focused attention on quality over quantity. After four rounds of personnel reductions, the size of the military shrank from over 4 million to about 2.3 million soldiers. In 2011, the government reported an official budget of $91.5 billion, but some Western experts estimate budgets as high as $180 billion. The PLA plans to achieve complete mechanization of its army by 2020 and complete "informatization" by 2050.[12]

Chinese military leaders have no desire to compete with the U.S. in a costly arms race or construct a globe dominating military apparatus; instead, their strategy revolves around attempts to quickly "leapfrog" technological capabilities through investment in R&D and to gain advantages through unconventional asymmetric warfare. Key to this paradigm is the idea of

counter-interventionism, or "Anti-access/area denial" (A2/AD). These tactics are meant to discourage enemies from entering into conflicts or to restrict an opponent's ability to maneuver in an existing theater.[13] The C4ISR infrastructure, referred to by Chinese scholars as the "system of systems", is the army-spanning IT system that makes real-time battlefield awareness and coordination possible.[14]

Gaining a competitive advantage in outer space and cyber space is another important plank of Chinese military strategy. Chinese military analysts believe that they would be able to achieve quick victory in an altercation with the U.S. by attacking the "nerve centers" of U.S. digital infrastructure through electronic warfare, anti-space measures, and computer network operations.[15] Cyber and space capabilities contribute to the A2/AD framework – the threat of interference with enemy communication and logistics systems gives the PLA the ability to control active theaters with high precision and deter foes from entering altogether.[16]

China U.S. relations

Military tensions between China and the United States are at their highest in the South China Sea (SCS). Historical territory disputes, abundant natural resources, and strategic security value all make the sea a hotly contested area. China has antagonized its ASEAN neighbors in the SCS by taking actions such as harassing ASEAN nation fishing boats; in response, these smaller neighbors have partnered with the U.S. Navy to counter Chinese aggression.[17] In 2010, amid rumors that the Chinese government had decided that the SCS territories were part of their nonnegotiable "core interests", the U.S. responded by declaring the "freedom of navigation" in the SCS as a core U.S. interest.[18] As such, U.S. ships have increased operations in the SCS, including within 12 nautical miles of occupied islands that China claims dominion over. The U.S. Navy and Japan Maritime Self-Defense Force have also participated in bilateral exercises to assert autonomy in the territory.[19]

As previously mentioned, a key plank of China's economic and military strategy is "leapfrogging", or rapid development of emerging technologies. More than 400,000 scientists and technicians in China are working on military research projects. Additionally, the PLA manages over three hundred research institutions and ten universities. Industrial espionage and hacking are key tools for cutting costs and leapfrogging technological capabilities as well.[20]

The race for superiority in artificial intelligence is particularly vital to China's military capabilities in the coming decades. In PLA jargon, successful implementation of militarized AI will mark a shift from "informatized" to "intelligentized" warfare, and experts suspect that the powers first able to master AI applications in warfare will define geopolitics in the coming century.[21] Although the U.S. is currently the world leader in AI, China is nonetheless making great strides. In July 2019, Beijing released its *New Generation Artificial Intelligence Development Plan*, an ambitious program meant to make China the world leader in AI by 2030. Innovation metrics are starting to favor China as well – Chinese scholars have been publishing more papers on AI than American ones and in 2017, the annual conference of the Association for the Advancement of Artificial Intelligence accepted as many Chinese papers as American ones, proving the quality and materiality of Chinese AI innovation.[22]

Recommendations

Recommendation 1: The U.S. should exercise multilateral leadership in the South China Sea by conducting joint exercises and other coalition-building activities with allies with the goal of forming a combined task force to neutralize Chinese aggression.

This approach has already proven fairly effective in cracking down on illegal smuggling to North Korea in the East China Sea. The U.S. has partnered with Australia, France, Singapore, South Korea, the UK, Japan, and other nations to cooperate in the surveillance and intercepting of illegal shipments. As a result of this coalition's work, the U.S. has reported that on 30 different occasions since October 2017, smugglers have had to abandon ship-to-ship transfers.[23]

The South China Sea coalition should include reliable U.S. partners such the UK, Australia, France and Japan as well as key stakeholder nations like the Philippines and Vietnam.[24] This would send a clear message to Beijing that the international community is united in protecting freedom of navigation and the territorial sovereignty of smaller South East Asian countries. Increasing cooperation and jointness between navies would force the PLA to reconsider its hostile actions directed towards Philippine and Vietnamese crafts, lest they incur harsh economic and diplomatic penalties from an influential group of nations.

Recommendation 2: Washington should implement a comprehensive, long-term AI strategy that includes measures to dramatically increase federal expenditures in R&D, continue

attracting the world's top AI talent to work in the US, develop educational programming standards, and limit clandestine technology transfers to China.

Beijing has already revealed sweeping plans to become the world leader in AI by 2030 – the U.S. does not have long to act boldly. Should Washington fail to proactively ensure U.S. leadership in AI technology, it risks losing the technology, and hence security, advantage on the world stage.

Current trends in public R&D investment are unfortunately moving counter to where they need to be. While China is spending billions more per year on next-generation AI projects, the Trump administration's budget proposal called for a 10 percent cut to the National Science Foundation's funding for intelligent systems research.[25] Instead, it should be allocating more funding to this institution. Congress should distribute grants to states specifically for development of programs centered around AI proficiency; children should be introduced to programming fundamentals by high school, and high achievers should be by middle school. Washington should increase its granting of H-1B visas to individuals with high proficiency in AI skills to make sure U.S. firms stay at the bleeding edge of the field. Finally, federal agencies should increase oversight of Chinese investments in and acquisition of U.S. technology firms, especially those focused on AI, machine learning and robotics.

Conclusion

China is quickly emerging as a major world power and a rival to U.S. global hegemony and interests. It has managed to achieve tremendous economic growth through a steadfast prioritization of trade and openness to foreign investment. Some of China's economic policies, such as its alleged currency manipulation, have attracted fierce criticism from nations who feel they are not competing fairly. China has undertaken major reform and modernization efforts with regards to the PLA. It has streamlined and revamped its traditional military branches, but more importantly it has refined its military doctrine to focus on asymmetric techniques including cyberwarfare and area denial. U.S. China relations are most strained with regards to the South China Sea, where China is projecting maritime power and antagonizing its neighbors. To counteract these growing threats to American military superiority, the U.S. should move towards forming a multilateral joint task force with allies to secure the South China Sea and implement a comprehensive program to ensure U.S. superiority in AI technology in the coming decades.

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[19] Poling, Gregory, and Bonnie S. Glaser. "How the U.S. Can Step Up in the South China Sea." Foreign Affairs. January 18, 2019. https://www.foreignaffairs.com/articles/china/2019-01-16/how-us-can-step-south-china-sea.
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