

# China's Military Power Trajectory

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## China's Military Power Trajectory

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In assessing China's military power trajectory, this paper will focus on three areas; conventional military capability, strategic nuclear capability, and power projection capability. Traditional Chinese military strategy has been based on the concept of mainland defense and preparation for a Taiwan contingency. This strategy has been based on a defensive use of military force.<sup>1</sup> Throughout the Cold War and up until the 2000s, China's military planning has been built upon large ground forces to defend its mainland from enemy invasion and missile forces to launch an attack on independent Taiwan and foreign interventionists, most possibly the US military in the region. As of 2015, official Chinese military strategy stated "China will unswervingly follow the path of peaceful development, pursue an independent foreign policy of peace and a national defense policy that is defensive in nature, oppose hegemonism and power politics in all forms, and will never seek hegemony or expansion" (China's Military Strategy 2015).

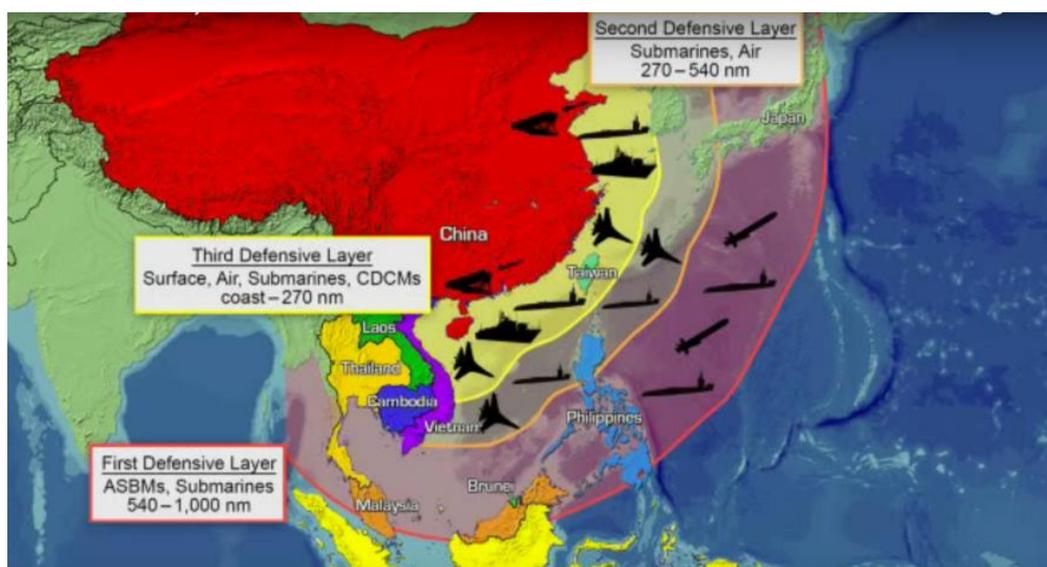
Yet at the same time, Chinese officials increasingly feel the pressure of neighboring countries working to contain China's growing power and influence in the region, especially the efforts led by the United States in the 21st century. There have been growing Chinese efforts to push back against American encirclement and secure China's sphere of influence. This strategy has evolved into what is known as Anti-Access Area Denial (A2/AD). China's A2/AD uses "a series of interrelated missile, sensor, guidance, and other technologies designed to deny freedom of movement" to keep any potential adversaries, including the United States, from intervening in a conflict off of China's coast or from attacking the Chinese mainland (Biddle and Oelrich 2016). Some see the new Chinese strategy as more aggressive in nature and posing a grave threat to US power projection capabilities in the region.<sup>2</sup> Still, from the Chinese perspective, A2/AD is an effort to defend its core interests close to its mainland, and are not an attempt to engage in any kind of expansionist ventures in and beyond its regional boundaries.

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<sup>1</sup> Alastair Iain Johnston. 2013. "How New and Assertive Is China's New Assertiveness?." *Quarterly Journal: International Security*, 37(4): 7–48; Johnston Alastair I. 1998 *Cultural Realism: Strategic Culture and Grand Strategy in Chinese History*. Princeton: Princeton University Press.

<sup>2</sup> Office of the Secretary of Defense. 2006. *Annual Report to Congress: Military Power of the People's Republic of China* (Washington, D.C.: U.S. Department of Defense) pp. 21, 25; Evan Braden Montgomery. 2014 "Contested Primacy in the Western Pacific: China's Rise and the Future of U.S. Power Projection," *International Security* 38(4): 115–149; Robert D. Kaplan. 2014. *Asia's Cauldron: The South China Sea and the End of a Stable Pacific* (New York: Random House); Robert S. Ross. 2013. "U.S. Grand Strategy, the Rise of China, and U.S. National Security Strategy for East Asia," *Strategic Studies Quarterly* 7(2): 32–33; Andrew Krepinevich. 2010. "China's 'Finlandization' Strategy in the Pacific," *Wall Street Journal*, September 11, <http://online.wsj.com/articles/SB10001424052748704164904575421753851404076>; Brendan P. Walsh. 2011. "Access Denied: Future Military Operations in an Anti-Access Environment" (Newport, R.I.: Naval War College, April 5); Robert Haddick. 2014. *Fire on the Water: China, America, and the Future of the Pacific* (Annapolis: Naval Institute Press); and Andrew S. Erickson. 2013. *Chinese Anti-Ship Ballistic Missile (ASBM) Development: Drivers, Trajectories, and Strategic Implications* (Washington, D.C.: Jamestown Foundation).

Figure 1. China's A2AD Concept



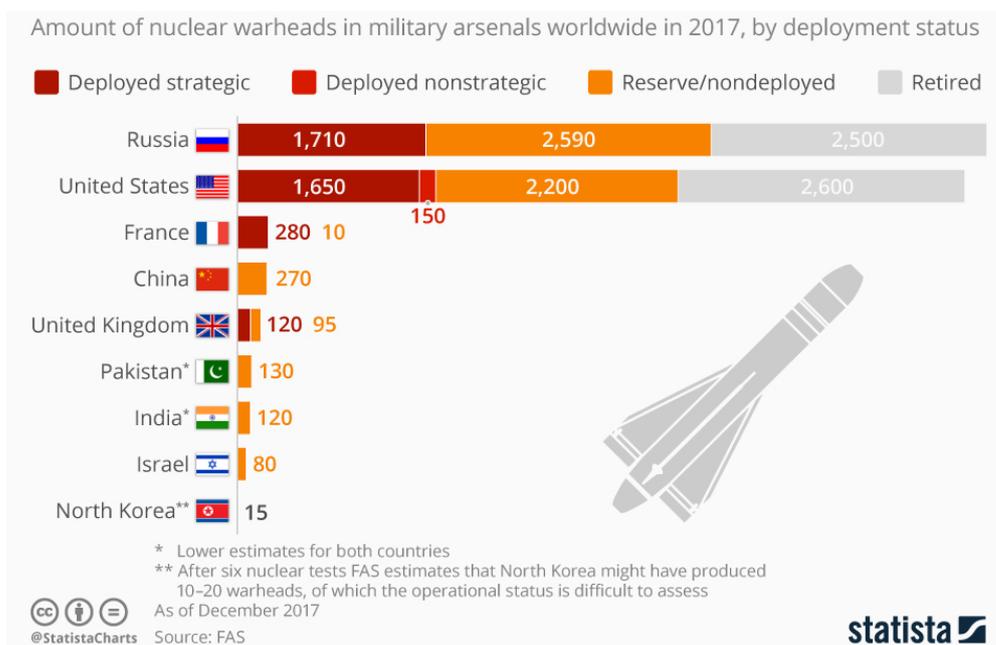
Source: Office of Naval Intelligence Image (LaGrone 2016)

As shown in the above map, China's A2/AD has evolved around its eastern and southern sea boundaries with three layers of what they call "defensive" lines against incoming foreign forces. Whether newly assertive or still defensive, Chinese emphasis on its national core interests with the A2/AD strategy creates tension not only with the United States, but also with its neighbors such as those located in the South and East China seas (Swaine and Fravel 2011).

## US vs Chinese Nuclear Force

On par with this defensive strategy, China's nuclear capability has been based on the concept of no first use and minimum deterrence (Fravel and Medeiros 2010). Since its first nuclear test in 1964, China has maintained a small number of nuclear forces compared to those of the US and Russia. While the Soviet Union and the United States produced thousands of nuclear warheads and missiles after engaging in a decades-long nuclear arms race that lasted through the 1990s, Chinese nuclear forces largely maintained a moderate deterrence capability of 200 to 300 nuclear warheads. Even with the series of nuclear reduction treaties between Russia and the United States after the Cold War, the gap between the two traditional nuclear superpowers and China remains considerable, as shown in the graphic below. While the US and Russia still keep over 5,000 active and reserved nuclear warheads, China has less than 300 of them. This is because the Chinese have maintained the defensive nuclear doctrine of no first use and minimum deterrence (Pan 2016).

**Figure 2. Size and Composition of Nuclear Arsenals around the World**



Source: Statista (Loesche 2018)

The gap between China and the two nuclear superpowers becomes even more serious if one considers weapons systems. China’s strategic nuclear capability appears even weaker compared to that of the US when you look at the composition, quality, technology, and operational capability of its nuclear forces. As shown in the table below, China does not have a nuclear triad, and its nuclear deterrence mostly depends on a small arsenal of outdated ICBMs against the powerful US triad system of land-based ICBMs, strategic nuclear submarines, and nuclear bombers.

**Table 1. US-China Nuclear Forces**

Weapons System	1996		2003		2010		2017	
	US	China	US	China	US	China	US	China
ICBMs	514/ 1514	7/7b	450/ 1200	20/20 8/8c	450/ 950	20/20 36/36	400/ 400	20/40d 36/36 (60/60)g
SLBMs	384/ 2688	12/12e	422/ 3072	12/12e	336/ 2016	12/12 e	240/ 960	30/30f (60/60)g
Bombers	192a /3444	0/0	115/ 2216	0/0	96/ 1840	0/0	60/ 784	0/0
Total	1090/ 7646	19/19	1047/ 6488	40/40	882/ 4806	68/68	700/ 2144	86/106 (140/160) g

a. 비행기수 b.미국 전역을 미칠수 있는 동평5 c. 제한된 사거리를 가진 동평31  
 d. 최근 중국은 10대의 동평5를 3탄두 핵미사일로 개조한 것으로 추정  
 e. 구형 Xia급 잠수함의 JL-1 미사일 f. 신형 JN급 잠수함의 JL-2 미사일 g. 최대추정치

Source: Sheen (2017, 16)

As of 2017, the US keeps 400 strategic ICBMs ready to hit any Chinese target, whereas China's twenty old Soviet-era DF ICBMs have to be taken out of their tunnel and refueled for an hour before they can be ready for a preemptive attack. To make up for its weak ICBM nuclear deterrence capability, China has been trying to develop a new arsenal of strategic forces at sea. Over the past 15 years, the PLAN has constructed four JIN-class strategic nuclear submarines (SSBNs-Type 094), equipped with the CSS-N-14 (JL-2) submarine-launched ballistic missiles (SLBM), which represent China's first credible, sea-based nuclear deterrent.<sup>3</sup> However, compared to the 12 Trident nuclear submarines armed with 960 powerful nuclear warheads, the Chinese nuclear fleet has only about 30 nuclear weapons and is still far behind in its strike capability and operational experience.<sup>4</sup> China does not have strategic bombers, while the US has a powerful group of nuclear-armed aircrafts with long range and stealth capability. More seriously, China's second-strike capability, which is a critical element of nuclear deterrence, seems to be much vulnerable to a first US attack and could be crippled by US missile defense capability.<sup>5</sup> As a result, one US study found that in an all-out nuclear war between the US and China, China does not have effective second-strike capability against the overwhelming US nuclear forces and missile defense systems.<sup>6</sup>

## China's Power Projection Capability

Finally, China does not have meaningful power projection capability due to the focus of its military goals on mainland defense. China has just finished refurbishing a Cold War era Soviet aircraft carrier and is in the process of building its first indigenous aircraft carrier, while the United States has ten active carrier strike groups. In 2017, the PLAN's first aircraft carrier, the Liaoning, concluded its second training deployment to the South China Sea, its first with an embarked J-15 fighter aircraft, and conducted its first port visit to Hong Kong. China's first domestic aircraft carrier was launched in 2017 and will likely join the fleet by 2019. The new carrier is a modified version of the Liaoning, but is similarly limited in its capabilities due to its lack of a catapult and the smaller size of its flight deck compared to US carriers. China is expected to begin construction on its first catapult-capable carrier in 2018, which will enable additional fighter aircraft, fixed-wing early-warning aircraft, and more rapid flight operations. However, China's new aircraft carriers are substantially less capable than US Navy carriers. It will take long time and a significant degree of investment before China can match US forces in any meaningful way (US Department of Defense 2018).

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<sup>3</sup> US Department of Defense (DoD). 2016. Annual Report to Congress: Military and Security Developments Involving the People's Republic of China. 2016. Office of the Secretary of Defense, April 26, 2016; US Department of Defense (DoD). 2017. Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2017. Office of the Secretary of Defense, May 15, 2017.

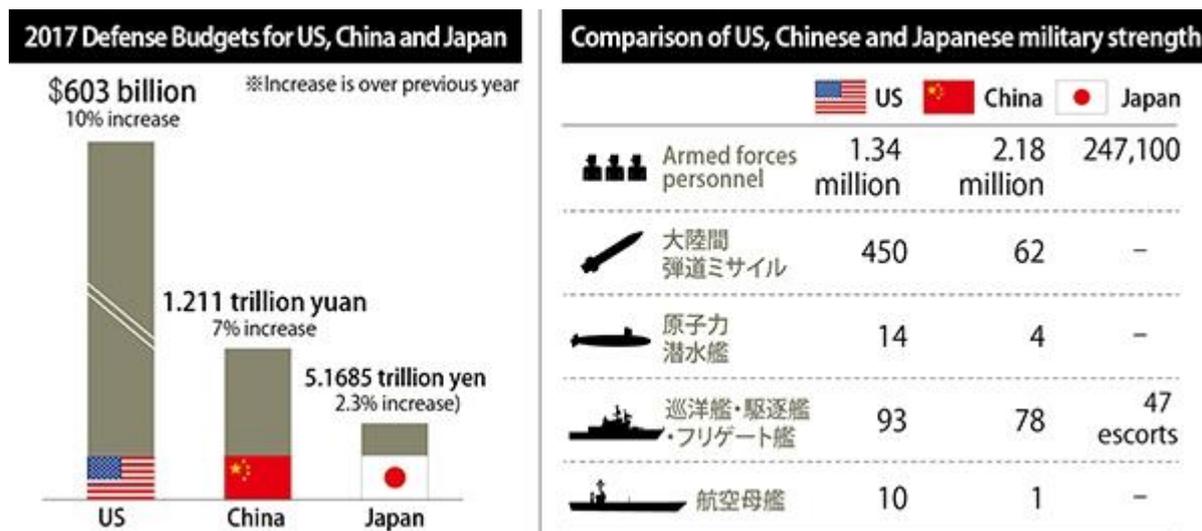
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<sup>4</sup> Glaser, Bonnie and Funaiolo, Matthew. 2016. Submerged Deterrence: China's Struggle to Field an SSBN Fleet. CSIS, May 9. <https://amti.csis.org/submerged-deterrence-chinas-struggle-field-ssbn-fleet/> (accessed April 28, 2018)

<sup>5</sup> Li, Bin, "The Impact of the U.S. NMD on the Chinese Nuclear Modernization," Institute of Science and Public Affairs, China Youth College for Political Science. <http://www.emergingfromconflict.org/readings/bin.pdf> (accessed April 22, 2018); Zhang, Baohui. 2011. "US missile defence and China's nuclear posture: changing dynamics of an offence-defence arms race," *International Affairs* 87(3): 555-69.

<sup>6</sup> Heginbotham, Eric. et al. 2015. *The US-China Military Scorecard: Forces, Geography and the Evolving Balance of Power 1996-2017*, RAND Cooperation.

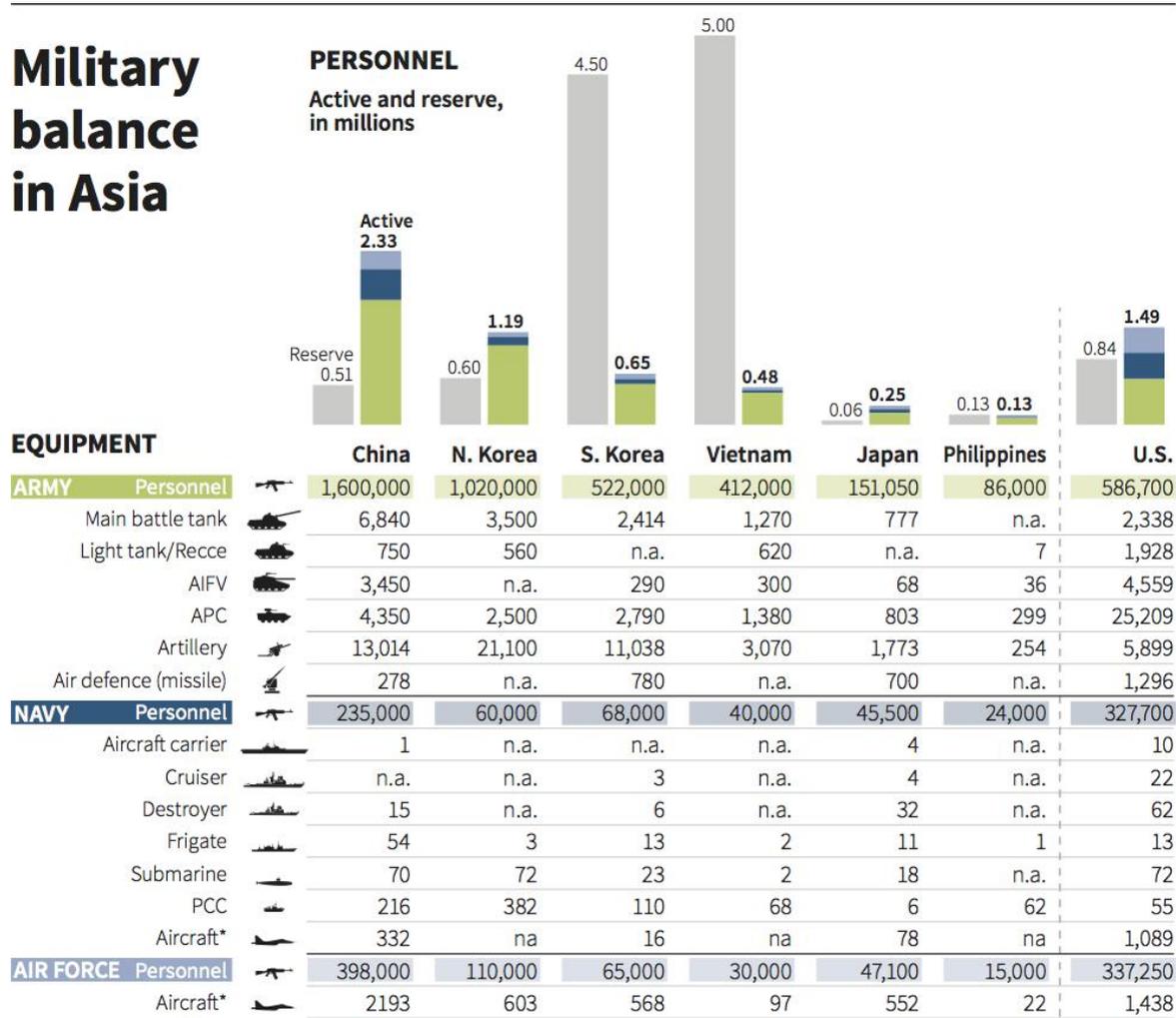
Figure 3. Comparison of US, China and Japan: Defense Budgets and Military Strength



Source: Gil (March 6, 2017)

As shown in the picture above, China’s power projection capability and strategic nuclear forces look even weaker if one considers the US ability to bolster its forces with those of Japan. Even though Japan does not have nuclear weapons, it represents a powerful military in the region with its well-trained modern army and state-of-the-art military weapons systems, which are largely inter-operable with US military forces. Of particular note is the fact that Japan’s self-defense navy offers an impressive fleet of powerful warships capable of operating in a wide range throughout the Asia Pacific. As Japan continues to increase its defense spending and upgrade its military, the combined forces of the US and Japan could pose a serious challenge to China’s military planners. The chart below shows the overall military forces among major countries in the region. Compared to the US and its allies like Japan and South Korea, China tends have large numbers of traditional military personnel and equipment mainly concentrated in its army. However, this type of force composition does not seem to be well prepared for the strategic competition of the 21st century evolving around sea lanes and spanning both the air and space over the Asia Pacific. It is no wonder China’s leadership has placed a recent, strong emphasis on comprehensive military reform.

Figure 4. The Military Balance in Asia



AIFV - Armoured infantry fighting vehicle APC - Armoured personnel carrier PCC - Patrol and coastal combatant

\* Fighters, bombers and anti-submarine warfare vehicles excluding helicopters. U.S. figures exclude special operation forces and reserve organisations.

Source: The Military Balance 2014

F. Chan; C. Inton, 19/08/2014

REUTERS

Source: Reuters (2014); Quoted in (Walsh 2014)

What will China want in the future as it builds greater military power? At the moment, the Chinese leadership defines three core national interests for its military to defend; national sovereignty, national security, and development interests (Xi 2017). As China's economy and regional influence grow, so does its scope of "core" interests. A good example includes disputes over South China's Sea and its nine-dash line claims. It will be natural for China to ensure that its regional leadership is accompanied by military capability in the Asia Pacific. However, it is not clear whether China will want global leadership commensurate with its global economic status. China will need a certain degree of global power projection capability to protect its economic expansion, a protection which includes business interests as well as energy supply. According to a US government report, China's leaders increasingly seek to leverage China's growing economic, diplomatic, and military clout to establish regional preeminence and expand the country's international influence. In particular, "One Belt, One Road," now renamed the "Belt and Road Initiative" (BRI), is intended to develop strong economic ties with other countries, shape their

interests to align with China's, and deter confrontation or criticism of China's approach to sensitive issues. For example, in July 2017, Sri Lanka and a Chinese state-owned enterprise (SOE) signed a 99-year lease for Hambantota Port, following similar deals in Piraeus, Greece, and Darwin, Australia (US Department of Defense 2018).

## China's Defense Reform and Future Military Power

In 2015, China launched a comprehensive military reform to modernize its military forces under President Xi. Indeed, Mr. Xi envisioned two stages of military reforms with one completing military modernization by 2035 and the second making China a world class military power by 2049. He stated in his major speech during the 19th Communist Party Congress in 2017 that by protecting Chinese interests, assets, and people abroad, the People's Liberation Army (PLA) will be at the vanguard of the "China Dream" through the ambitious Belt and Road Initiative (BRI) (Xi 2017).

As such, the PLA is undergoing the most comprehensive restructure in its history to become a force capable of conducting complex joint operations. The PLA strives to be capable of fighting and winning "informatized local wars" – regional conflicts defined by real-time, data-networked command and control, and precision strikes. The reforms seek to streamline command and control structures and improve joint action at all levels. Personnel cuts likely targeted non-combat personnel and rebalanced the preponderance of forces away from the PLA Army (PLAA) (US Department of Defense 2018).

Based on the discussion of China's current military posture and its reform efforts in terms of its conventional military capability, strategic nuclear capability, and power projection capability, this paper projects the following developments in China's military power in sync with its GDP per capita growth. First, China will try to finish its first stage of military modernization with the current organizational restructuring focusing on the centralization of command and control, enhanced joint military operation capability with the elevation of navy and air force combat readiness, and a downsize of the army together with the creation of independent nuclear strategic forces. This will be pursued through 2025, when China is projected to achieve the level of 15k GDP per capita.

For the second phase of military reform by 2035, China will try to achieve meaningful strategic nuclear deterrence capability against the United States with a focus on enhancing the survivability of its ICBMs with mobile and MIRV capability. It will also try to build its operational SLBMs capability within the first defensive layer in the East Pacific. It may also try to build strategic bomber capability to have a basic level of triad capability. This will be in line with the country's achievement of a 20k GDP per capita.

For the final phase of military reform by 2049, China will try to achieve a world class military power on par with that of the United States. This will include state-of-the-art military technology in terms of conventional military capability, a powerful strategic nuclear capability with a full triad, and a global power projection capability. Within this period, China is projected to achieve economic development to the level of 30k GDP per capita.

Below is a prediction of China's military reform trajectory as it aligns with its projected economic development.

### 15k (2020-2025)

- Military reform and modernization (change in command structure and transformation to joint-operation capability)

- From seven regional commands to five area commands, strategic forces and space/cyber capability
- Building of two aircraft carriers, next generation stealth jet-fighter, building sea bases in the South China Sea
- Nuclear Forces: 260 warheads, very limited ICBM capabilities, testing stage of four nuclear submarines with some SLBM capabilities, no bomber yet
- No match for US strategic forces in the Asia Pacific, grey-area strategy

### 20k (2025-2035)

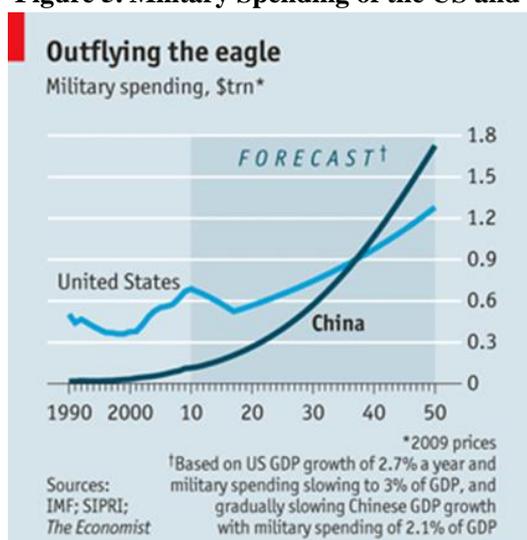
- Continuation of modernization (information, joint operations)
- Consolidation of sea bases in the South China Sea
- Nuclear Forces: over 300 warheads, improved ICBMs in numbers, mobility, and MIRV capability with missile defense capability, limited operation of a nuclear submarines fleet of six to eight: achieve minimum strategic deterrence against the US
- Limited power projection capability with three to four aircraft carriers in the real operational stage

### 30k (2035-2050)

- Completion of science/tech intensive military (state-of-the-art military)
- Establish an exclusive military zone in the South China Sea and expand beyond the West Pacific
- Nuclear Forces: over 1000 warheads, 100 modern ICBMs, nuclear submarine fleet in operation in the Pacific and strategic bombers with missile defense and space warfare capabilities: on par with conventional military capability in the Asia Pacific of the US with considerable strategic deterrence
- Active operation of some of its aircraft carrier fleet of five to six in Africa and the Middle East

## Conclusion

**Figure 5. Military Spending of the US and China**



Source: *The Economist* (2018)

As shown in the picture to the left, China is projected to overtake the US in defense spending as its economy surpasses that of the US in mere decades. This raises a whole lot of questions regarding China's future military power, its military rivalry with the US, implications for regional and global security, and so on. Those questions include: first, given its GDP growth trajectory, when and whether the Chinese defense budget will become bigger than that of the United States; second, how much of the rapid growth in Chinese defense spending will translate into progress in military operational capability; third, how successful will the Chinese defense reform be, and in what areas (military structure, technology, operational capabilities, power projection capabilities); fourth, how much progress will the Chinese military make in its strategic nuclear forces; fifth, how much progress will the Chinese military make in third offset

technologies such as AI, drones, cybertechnology, autonomous technology and robots, and how effective will they be against the US military; and sixth, what will be a game changer in the US-China military competition? These are just few examples of questions regarding the serious implications that China's growing economy and military power has for the region and the world. One thing that is certain is that China will seek increased influence and prestige as its national interests and military power grow. ■

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