

Testimony before the U.S.-China Economic and Security Review Commission

Hearing on A ‘World-Class’ Military: Assessing China’s Global Military Ambitions

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Introduction

Economics is the ultimate foundation of military power. The size and technological sophistication of a country’s economy serves as a hard constraint on the potential size and capability of its military forces. In the case of China, rapid economic growth and increasing technological capability in the reform era (1979-present) have provided the foundation for significant improvements in the capability of the People’s Liberation Army (PLA). Chinese leaders have placed increasing emphasis on building a military that can “fight and win wars” and have backed up this commitment with sustained increases in military spending. The professed goal of military modernization is to basically achieve modernization by 2035 and to build a world class military by mid-century.

This testimony examines trends in Chinese defense spending and their implications for future military modernization. It begins by examining the Chinese official defense budget, which excludes a number of items usually considered to be part of defense spending. These “off budget” revenues and expenditures mean that the official defense budget understates actual

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defense spending, but the size of these “off budget” expenditures appears to have declined over time. A survey of estimates of Chinese defense spending suggests that actual spending is about \$30-50 billion more than the official budget.

The testimony then examines trends in defense spending. As Chinese economic growth has slowed, defense spending has grown at a rate that has sometimes outpaced GDP growth, but which remains roughly consistent with growth in national government spending. The data do not indicate that defense spending is becoming a higher relative priority for Chinese leaders. Defense spending has declined over time as a percentage of government expenditure (to about 5 percent in 2017 and 2018) and has fluctuated between 1.2 and 1.4 percent of GDP (with a modest increase in 2014-2016 that was not sustained).

Projections that Chinese economic growth will continue to slow in the future and the potential for significant fiscal and financial system crises suggest that future defense budgets will experience slower growth than in the past. China may eventually reach an equilibrium point where defense budgets grow at slower, steady-state level that produces slower improvements in defense capabilities. This might change if Chinese leaders conclude that external military challenges—especially those posed by the United States—constitute the most important threat to the Chinese state and continued Chinese Communist Party (CCP) rule.

Chinese Defense Spending Data

China releases a figure for its total annual defense budget, but the available public information is extremely limited. The Chinese annual government budget lists figures for central government and local government spending on national defense, with no breakouts by service or type of expenditure. In some years, China has published white papers with defense budget information or submitted reports on defense spending to the United Nations. These provide a breakout of

defense spending in three broad categories: 1) Personnel, 2) Training & Maintenance, and 3) Equipment (including research and experimentation, procurement, and maintenance costs). China does not release budget figures for the individual services or figures for the 13-15 categories it uses internally to manage the PLA budget.²

The official Chinese defense spending figure excludes a number of categories related to national defense, but which are contained in other parts of the government budget (and not broken out separately). These include the budget of the paramilitary People's Armed Police (PAP); some domestic procurement and research and development (R&D) expenses; procurement of foreign weapons; some demobilization, retirement, and education expenses; some military-related construction expenses; some military aspects of the space program; spending on nuclear weapons and strategic rockets; and reimbursement for military expense in disaster relief.³ The official budget also does not include various "off budget" revenues, such as revenue and goods produced by military enterprises.

China's official defense budget figure for 2017 was 1,026,635 million RMB, or about \$159.9 billion. The Office of the Secretary of Defense estimates that actual military related spending in 2017 was more than \$190 billion, or about \$30 billion more than the official budget.⁴ A Defense Intelligence Agency report looking at the 2018 budget gives a similar estimate that actual

² Dennis J. Blasko, Kenneth W. Allen, and Samm Tyroler-Cooper, *Chinese Defense Budgeting: Training and Maintenance* (Vienna, VA: DGI, Inc., 2010), 8-10.

³ See Dennis J. Blasko, Chas W. Freeman, Jr., Stanley A. Horowitz, Evan S. Medeiros, and James C. Mulvenon, *Defense-Related Spending in China: A Preliminary Analysis and Comparison with American Equivalents* (Washington, DC: The United States-China Policy Foundation, 2007); Blasko, et. al., *Chinese Defense Budgeting*; and Adam P. Liff and Andrew S. Erickson, "Demystifying China's Defence Spending: Less Mysterious in the Aggregate," *China Quarterly* No. 216 (December 2013), 805-830.

⁴ *Military and Security Developments Involving the People's Republic of China, 2018*, (Washington, DC: Office of the Secretary of Defense, 2019), 82.

defense spending in 2018 was about \$30 billion higher than the official budget.⁵ IISS estimates that actual Chinese defense expenditure in 2016 was about \$53 billion larger than the official budget.⁶ SIPRI, which uses a broader definition of defense expenditure that includes pensions and other expenses, estimates China's 2017 defense expenditure at \$227.8 billion, about \$69 billion higher than the official budget.⁷

This data collectively suggest that China spends significantly more on defense than the official defense spending estimate, perhaps \$30-50 billion more. These estimates contrast with figures from the 1990s, when analysts believed that actual Chinese defense spending might be 2-3 times the official figure. The changes reflect the fact that central government spending on defense has increased steadily over the last twenty years, often at a double-digit rate, and that many off-budget revenues and expenditures have moved "on budget" or declined in size relative to the official budget.

For example, Chinese President Jiang Zemin ordered the PLA to divest most military-owned enterprises in 1998, and a second round of divestiture took place over the last several years as part of ongoing anti-corruption efforts. The divestiture greatly reduced off budget revenue and expenditure. The omission of procurement of foreign weapons from the official budget used to amount to about \$3 billion annually, but SIPRI data from 2017 indicate China only imported about \$1.190 billion in arms in 2017.⁸ This is both an absolute decline in value from earlier years, and an indication that the omitted category is becoming relatively smaller as a percentage of overall PLA spending on weapons and equipment.

⁵ Defense Intelligence Agency, *China Military Power: Modernizing a Force to Fight and Win* (Washington, DC: Defense Intelligence Agency, 2019), 20.

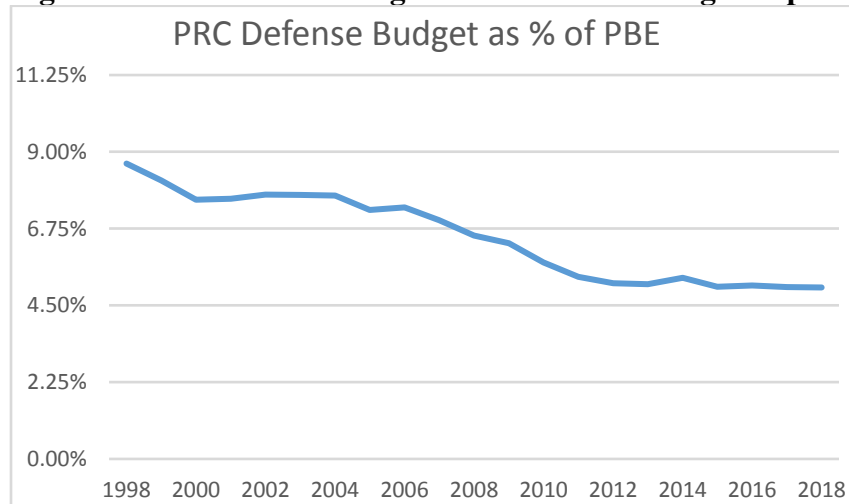
⁶ *The Military Balance*, 2018 (London: International Institute for Strategic Studies, 2018), 249.

⁷ SIPRI Military Expenditure Database (Stockholm: SIPRI, 2019), <https://www.sipri.org/databases/milex>

⁸ SIPRI Arms Transfers Database (Stockholm: SIPRI, 2019), <https://www.sipri.org/databases/armstransfers>

The appendix has data on trends in Chinese defense spending based on official budget figures. A recent DIA report notes that “China’s military spending increased by an average of 10 percent (inflation adjusted) per year from 2000 to 2016 and has gradually slowed to 5 to 7 percent growth during the past two years [2017-2018].”⁹ As Chinese economic growth has slowed over the last decade, defense spending has grown at a rate that has sometimes outpaced GDP growth (as in 2014-2016), but which has remained roughly consistent with overall GDP growth and with growth in central government spending. In other words, the official data *do not* indicate that defense spending is becoming a higher relative priority for Chinese leaders. Figures 1 and 2 indicate that defense has declined over time as a percentage of government expenditure (about 5 percent in 2017 and 2018) and has fluctuated between 1.2 and 1.4 percent of GDP.

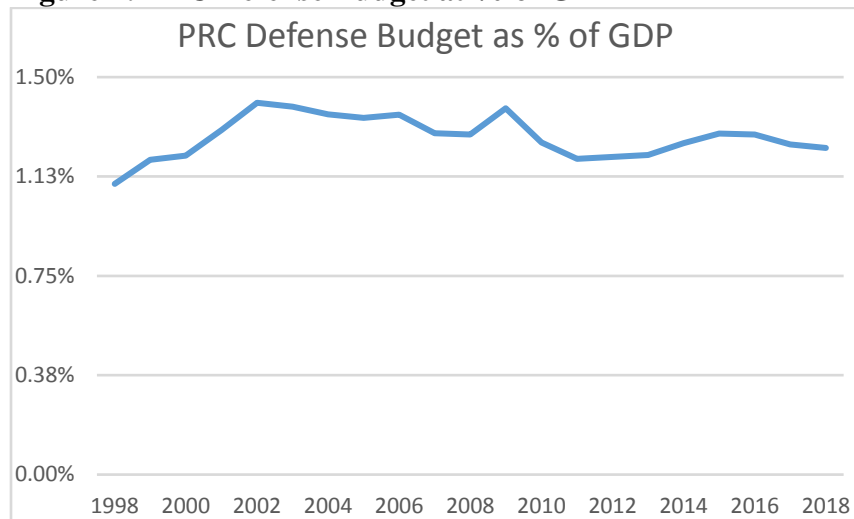
Figure 1: PRC Defense Budget at % of Public Budget Expenditures (PBE)



Source: China Statistical Yearbook

⁹ *China Military Power*, 20.

Figure 2: PRC Defense Budget at % of GDP



Source: China Statistical Yearbook

If it were possible to develop consistent estimates for the defense spending that is missing from the official budget, these percentages would both be somewhat higher. However, since “off budget” expenditures have either migrated into the official budget or declined in significance relative to official budget spending, the trend lines in defense spending as a percentage of government expenditure and defense as a percentage of GDP would not change radically. In fact, addition of data on off budget spending would likely show a steeper fall in the percentage of central government spending devoted to defense over time, since off budget spending was more significant in earlier years.

The public data, while limited, are sufficient to indicate several significant trends in defense spending over time. Although China does not release budgets for the individual services, the Chinese 2004 defense white paper indicated that the PLA was increasing spending on the navy, air force, and Second Artillery Force (now Rocket Force), increasing their relative share of the overall PLA budget at the expense of the ground forces.¹⁰ Table 1, which examines the data that

¹⁰ *China's National Defense in 2004* (Beijing: Information Office of the State Council, December 2004), <<http://en.people.cn/whitepaper/defense2004/defense2004.html>>.

China submitted to the United Nations with breakouts of PLA spending, shows that the share of the PLA budget devoted to equipment increased from 32.2 percent in 2007 to 41.1 percent in 2017.

Table 1: Chinese Military Expenditure Breakouts, 2007 and 2017

	2007		2017	
Personnel	120,015	33.8%	321,052	30.8%
Training and Maintenance	121,042	34.0%	293,350	28.1%
Equipment	114,434	32.2%	428, 835	41.1%
Total	355,491		1,043,237	

Source: China’s military expenditure submission to the United Nations, 2008 and 2018.

This indicates that the PLA’s equipment buildup and modernization efforts are consuming an increasing share of the growing defense budget, not surprising in a military that is expanding the size of its air, naval, and missile forces and investing in replacing older systems with upgraded modern weapons. It is notable that the share of the budget devoted to personnel expenses decreased from 33.8 percent of the budget to 30.8 percent. Increases in the overall defense budget permitted major increases in PLA salaries and benefits during this period, even as the budget shared devoted to personnel declined. However, as the PLA competes with the civilian economy for soldiers, officers, and non-commissioned officers with greater technical knowledge, personnel costs are likely to rise in the future.

The major Chinese military reforms that began in late 2015 have changed the relative size of the services in the PLA (for example, the PLA Army now makes up only half of the total force) and surely have caused shifts in the budgets allocated to Central Military Commission offices, the services, the five theater commands, and the new Strategic Support Force and Joint Logistics

Support Force.¹¹ They also stripped many of the economic functions away from the PAP, ended its dual subordination to the State Council, and refocused it on support to military operations, internal security, and maritime security functions. The Chinese Coast Guard was also resubordinated to report directly to the PAP.¹² This strengthens the case for considering PAP (and Coast Guard) spending as part of China's overall defense spending. However, in 2018 the PAP (and Coast Guard) spending continued to be listed within the public security budget.¹³ The PAP budget in 2017 was 192,369 RMB, or \$29.9 billion, which does not include the Coast Guard budget.¹⁴

The lack of detailed, publicly available data on Chinese defense spending imposes limits on open source analysis of trends within the PLA. For example, it is difficult to track expenditures on specific weapons programs, the relative share of the service budgets over time, or details of personnel expenses. However, financial data on the Chinese defense industry are more available and may yield interesting insights.

The commission may wish to request classified briefings on specific aspects of Chinese defense spending or commission research on the financial details of the Chinese defense industry.

¹¹ For a comprehensive analysis, see Phillip C. Saunders Arthur S. Ding, Andrew Scobell, Andrew N.D. Yang, and Joel Wuthnow, eds., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms* (Washington, DC: National Defense University Press, 2019).

¹² See Joel Wuthnow, *China's Other Army: The People's Armed Police in an Era of Reform*, China Strategic Perspectives 14 (Washington, DC; NDU Press, April 2019).

¹³ “海警开支是否属军费？ 国防部：国防费保障包括现役部队、预备役等，” http://www.sohu.com/a/298312274_161795

¹⁴ <https://www.ceicdata.com/zh-hans/china/government-revenue-and-expenditure/government-expenditure-public-security-armed-police>

Potential Impact of a Chinese Economic Slowdown

Projections that Chinese economic growth will continue to slow in the future, the drag of government budget deficits on the financial system, and the potential for significant fiscal and financial system crises all suggest that future Chinese defense budgets will also experience slower growth than the 5-7 percent increases in recent years. If the CCP leadership maintains the relative priority of defense spending, the future growth rate of PLA budgets will continue to decline in line with slower GDP growth and slower growth in central government spending. There are some indicators that smaller increases in defense spending are already starting to impose some constraints on the PLA, and that these are likely to increase over time.

The surge in procurement of existing and planned PLA advanced weapons systems implies significant long-term financial commitments to operate, maintain, and upgrade these systems over their life-cycles. The recent expansion of the navy, air force, Rocket Force and the cost of the advanced weapons systems they operate will incur continuing expenses for the next 20-30 years, regardless of future PLA decisions about procurement. These financial commitments to traditional air, naval, and sub-surface platforms—which will eventually turn into what the U.S. military calls legacy systems—may eventually limit PLA financial flexibility to invest in new areas of warfare.

Slower growth in defense spending is already producing increasing competition among the PLA services for roles and missions (and the budgets that accompany them). For example, the higher priority accorded to the maritime domain by Xi Jinping has prompted efforts by the air force, Rocket Force, and even the army to develop and showcase capabilities relevant to maritime

operations.¹⁵ Similar trends are evident in long-range precision strike platforms, where the navy, air force, and Rocket Force all have systems that perform similar missions. In an environment where military budgets are growing more slowly, inter-service competition over missions and resources may impede operational cooperation. This may also be the case in the nuclear domain as the PLA Navy's submarine-launched ballistic missile-equipped nuclear submarines become operational and if the PLA Air Force develops nuclear capabilities.

One question going forward is whether the removal of the service commanders from membership on the CMC will allow that organization to override parochial service considerations and make procurement decisions that maximize PLA joint capabilities. Recent interactions with PLA officers suggest that the PLA is grappling with how to reconcile competing service and theater command requests for advanced systems and additional spending. According to one PLA officer, the service commanders regularly petition the CMC for additional money to fund their priorities.

One interesting new development involves efforts by the services and the Chinese defense industry to lobby for increased defense expenditures and for procurement of specific weapons systems. Military services are beginning to use more sophisticated public relations efforts—including movies such as *Shy Hunter* and *Operation Red Sea*—to boost recruiting and advocate for increased funding for individual services and branches.¹⁶ The Chinese defense industry is also making increasing use of advertising, lobbying, and defense exhibitions to influence PLA decisions about arms procurement. A good example is the FC-31 stealth fighter designed by

¹⁵ See Ian Burns McCaslin and Andrew Erickson, “The Impact of Xi Era Reforms on the Chinese Navy,” in *Chairman Xi Remakes the PLA*, 125-170.

¹⁶ For a look at the efforts of the air force, see Ian Burns McCaslin and Andrew S. Erickson, *Selling a Maritime Air Force: The PLAAF's Campaign for a Bigger Maritime Role*, (Montgomery, AL: China Aerospace Studies Institute, April 1, 2019).

Shenyang Aircraft Corporation. Although the FC-31 lost out to Chengdu Aircraft Corporation's J-20 in the PLA Air Force stealth fighter competition, Shenyang has mounted ambitious efforts to market the fighter to foreign customers and to try to lobby the PLA Air Force and PLA Navy naval aviation to procure the aircraft. The company is reportedly trying to modify the aircraft for possible use on Chinese aircraft carriers.¹⁷

Moreover, as the PLA competes with the civilian economy for the high-tech talent needed to operate a modern military, personnel costs are likely to rise significantly as the PLA pays more for salaries, benefits, personnel expenses (such as training, education, and relocation costs), and retirement costs. China's booming technology sector offers higher salaries and a less restrictive working environment than military careers.

An economic downturn or crisis could delay the production and fielding of high-end assets, which would constrain military modernization. An economic slowdown would probably result in even slower or no growth in defense budgets, which would further heighten inter-service competition for resources and missions. However, it is also possible that Xi or another future Chinese leader could decide to devote a higher proportion of Chinese spending to defense, in which case an economic slowdown would not necessarily result in scaled-back military ambitions.

These factors collectively suggest that China will eventually reach an equilibrium point where defense budgets grow at slower, steady-state level that produces more gradual improvements in defense capabilities. Given China's significant recent progress in military modernization, and the

¹⁷ See Ian Burns McCaslin, "Chinese Defense Firm Lobbying and Public Relations Efforts," draft manuscript, Center for the Study of Chinese Military Affairs, June 2019.

likelihood that other advanced militaries will also face budget constraints, such an equilibrium point might still be sufficient to achieve China's goal of building a world class military.

While resources devoted to defense matter, the biggest constraint in improving Chinese military capabilities and taking full advantage of advanced weapons and the reformed military structure is likely to rest with the quality of the personnel in the PLA, especially the senior military leadership. Reforms to the PLA educational, training, personnel assignment, and promotion systems are critical to building officers who can function as effective joint commanders and staff officers in a modern military.¹⁸

Conclusion

The trends discussed above might change if Chinese leaders conclude that external military challenges constitute the most important threat to the Chinese state and continued Chinese Communist Party (CCP) rule. China has tried to avoid direct confrontation with the United States, but recent shifts in U.S. policy and strategy have focused the U.S. government and the Department of Defense on posturing for long-term strategic competition with China and Russia. From China's point of view, this represents a significant adverse shift in the strategic environment that may require adjustments in its grand strategy and military modernization efforts, including adjustments in the resources devoted to defense. To date, however, Chinese leaders have sought to stabilize relations with the United States and called for maintaining the period of strategic opportunity for China's modernization.

If Chinese leaders conclude that confrontation with the United States is inevitable, they may increase the resources devoted to defense and military modernization. However, CCP leaders

¹⁸ See Joel Wuthnow and Phillip C. Saunders, "A Modern Major General: Building Joint Commanders in the PLA," in *Chairman Xi Remakes the PLA*, 293-326.

have carefully studied the collapse of the Soviet Union and concluded that over-spending on military capabilities at the expense of economic development was a major factor. This suggests that CCP leaders will probably continue to regard internal challenges as the greatest threat to continued CCP rule, and view efforts to raise living standards of the Chinese people and spending on internal security (which exceeds spending on national defense) as more important priorities. However, this judgement might change if Chinese leaders perceive U.S.-China strategic competition as headed toward an inevitable military showdown.

Appendix

Chinese GDP, Central Government Expenditure, and Defense Spending, 2007-2018

	2007	2008	2009	2010	2011	2012	2013	2014	2015
PRC Nominal GDP	270232.3	319515.5	349081.4	413030.3	489300.6	540367.4	595244.4	643974	689052.1
Central Government Expenditures	49781.35	62592.66	76299.93	89874.16	109247.8	125953	140212.1	151785.6	175877.8
Defense Spending	3482.32	4098.95	4825.01	5176.35	5829.62	6481.38	7177.37	8055.14	8868.51
Nominal growth rate in %	16.9%	17.7%	17.7%	7.3%	12.6%	11.2%	10.7%	12.2%	10.1%
as % of CGE	7.0%	6.5%	6.3%	5.8%	5.3%	5.1%	5.1%	5.3%	5.0%
as % of GDP	1.3%	1.3%	1.4%	1.3%	1.2%	1.2%	1.2%	1.3%	1.3%

Source: China Statistical Yearbook in 100 million RMB; figures are nominal.