

Any challenge to ROCN strategy and forces is apt to encounter similar pushback. If anything, navies are more prone to cultural myopia than most institutions. Henry Stimson, Franklin Roosevelt's secretary of war, joked that a "peculiar psychology" pervaded the U.S. Navy establishment. In this quasi-religious outlook, "Neptune was God," the navy "the only true Church" [12]. Dogma worked against innovation. Oftentimes smaller allies mimic their patrons' strategic and operational preferences. U.S. Navy influence may have contributed to ROCN mariners' lingering fascination with capital ships.

Reorienting the ROCN toward sea denial would mean playing down its tradition of fleet-on-fleet engagements and letting go of prized assets. Ships comprise much of a navy's institutional identity. Naval leaders can seldom resist the temptation to argue on behalf of particular ships, aircraft or armaments as a substitute for formulating strategy and operational concepts. They also favor big platforms with multiple missions—meaning that basing ROCN strategy on fast attack boats with one mission, and engaging enemy surface forces, is a toxic thought for many officers. Abandoning missions may be as unbearable for the Taiwan Navy as parting with major combatants or dispersing forces.

Having lobbied tirelessly for *Kidd*-class destroyers and other big-ticket items, the ROCN command would find it next to impossible to abandon the sunk costs of this weaponry, truly embracing guerrilla warfare at sea. Nor would reinventing the ROCN as a sea-denial force stop with hardware. The navy would have to develop new doctrine to put its fast attack craft to good use; the officer corps would have to steep itself in small-unit tactics predicated on isolating and annihilating individual PLAN units or small formations remote from mutual support.

A sea-denial culture, then, would place a premium on small-unit cohesion and individual initiative. This would involve a radical shift away from centralized command-and-control, both to enhance tactical effectiveness and to reduce the navy's vulnerability to preemptive PLA strikes against command-and-control nodes on the island. In institutional, equipment, and personnel terms, sea denial would spell fundamental change to how the ROCN conducts operations. Whether there exist any constituencies in Taipei that are strong, determined and knowledgeable enough to impose change on a Taiwan Navy obsessed with sea control appears doubtful. In all likelihood, the navy will keep trying to do everything at once, comporting itself like a U.S. Navy in miniature. If so, it will keep underperforming in both sea control and sea denial.

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NOTES

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Chinese Defense Expenditures: Implications for Naval Modernization

By Andrew S. Erickson

The extent and nature of Chinese defense spending can serve as the parameters for the future course of China's military power and China's intentions as it continues

military modernization. Recent scholarship on China's defense spending concludes that its military budgets have been understated in official sources, although there is enormous controversy concerning how much and why [1]. Even more controversial have been Western interpretations of China's defense budget. Some believe there is now firm evidence that Beijing fully intends to challenge Washington for regional leadership in the Asian littoral and may even reach further to conduct extensive operations. Others have concluded from recent budgets that China is pursuing military power commensurate with its economic strength and sufficient to allow military actions to achieve reunification with Taiwan. Studying PLA funding can offer insights into the trajectory and dimensions of the People's Liberation Army Navy (PLAN)'s modernization.

CURRENT SPENDING

The People's Liberation Army (PLA)'s official 2010 defense budget is \$78 billion [2], ahead of Russia and Japan, and second only to that of the United States at \$685 billion. Since 1990, the budget has enjoyed double-digit growth, with the exception of 2003 (in which growth was 9.6 percent) and 2010 (7.5 percent). From 1998-2007, China's annual increase in defense expenditures averaged 15.9 percent, outpacing growth in GDP at 12.5 percent, but not government expenditure, at 18.4 percent. This episode followed a period of slightly slower defense budget increases averaging 14.5 percent from 1988-97, which nearly matched increases in state financial expenditure at 15.1 percent, but amid GDP growth of 20.7 percent and significant inflation. That period in turn represented a major transition from the 1978-87 era, when prioritization of economic development held defense expenditure growth at 3.5 percent and government budgets at 10.4 percent while focusing on GDP growth of 14.1 percent [3].

Much has been made of the 2010 reduction in growth, with American scholars citing internal politics, domestic priorities in the 12th Five Year Plan, low inflation, corruption crackdowns and PLA achievements of mid-range goals [4]. Senior PLA scholars, including Major General Luo Yuan, cite the need for economic spending during the financial crisis [5]. General Luo also states that defense budgets should not be based on international opinion, perhaps implying that he believes this consideration may have influenced the PLA's 2010 budget [6].

The bottom line is that no other major power is approaching even this level of defense spending growth. Expenditures in both the overall budget and on equipment (which includes procurement, and, to some extent, research and development) have increased several fold during this period. China's defense industry, while is still uneven in

efficiency and quality of output, is improving steadily. Together, these factors enable consistent increases in overall PLA capabilities, with particularly rapid progress in niche areas.

The PLA's budget remains veiled and apparently does not include at least some major items found in many Western defense budgets. These include foreign weapons purchases; defense industry subsidies for research and development; certain retiree benefits; and extra-budgetary revenues and resources from a limited number of surviving military commercial enterprises (e.g. hotels and military hospitals) and unit-level production. Also excluded are paramilitary forces, such as the 660,000-strong People's Armed Police (PAP), and substantial military contributions from regional and local governments. China has never released budgetary breakdowns for individual PLA services. The closest equivalent is Beijing's annual submission to the UN via the Simplified Reporting Form, which only enumerates respective active forces, reserve forces and militia spending on personnel, training and maintenance, and equipment.

At the same time, the PLA budget may contain costs not included in those of its Western counterparts. It contributes to national economic and infrastructure development, social welfare, crisis management and disaster relief in ways often covered by non-military organizations in the U.S. and other Western countries.

Much remains uncertain: the precise extent to which the PLA, as opposed to local governments, should fund such areas, including reserve forces and militia training and organization, is apparently under debate. For example, it has sought to transfer its retirement homes to local communities for the past decade, with no resolution in sight.

COMPARING CHINA

Foreign analysts offer a variety of estimates—all higher—for China's actual defense spending; these vary substantially with assumptions concerning exchange rate, purchasing power parity (PPP) indices and inflation. At the lower end of the spectrum, the Stockholm International Peace Research Institute (SIPRI) estimates the PLA's 2008 budget at 1.4 times the official figure. At the higher end, the U.S. Department of Defense estimated in 2009 that the PLA's 2008 budget could be roughly 1.8-2.6 times higher in practice than official figures state [7].

China's government and analysts are clearly worried about foreign perceptions. Chinese attempts to justify increased PLA expenditure are driven in part by concerns that foreign countries will cooperate to contain a so-called

“China Threat.” Official statements regarding China’s defense budget seek to justify its recent rise, citing as the major drivers (1) personnel costs (e.g. education, training and salaries), (2) compensation for rising prices of oil and other inputs, and (3) furthering China’s Revolution in Military Affairs, including implementing informatization and increasing equipment and supporting facilities. Other factors cited include logistics and infrastructure development and international cooperation [8]. Such costs likewise comprise a significant percentage of the defense budget of the U.S. or any other modern military. The PLA is just now trying to get personnel pay in line with societal trends requiring large increases for many people, whereas the U.S. and other countries made those large increases long ago and are now keeping up with inflation.

Chinese sources use a variety of statistical comparisons to explain and minimize Chinese military spending. China’s 2008 Defense White Paper emphasizes “both the total amount and per-service-person share of China’s defense expenditure remain lower than those of some major powers” [9]. Much is made of the idea that China’s official defense budget does not correspond to ‘Western standards,’ and therefore can not be readily compared.

China’s defense economy is substantially different from that of Western nations, and perhaps more prepared to assume a war footing in certain respects. According to China’s 2006 Defense White Paper, “In building ... infrastructures, China pays close attention to the requirements of national defense, and ensures that peacetime needs and wartime needs are properly balanced” [10]. Of course, to the extent that the U.S. engages in equivalent spending, it would come from the budgets of other organizations (e.g. the Department of Homeland Security).

Chinese economists offer mixed data when attempting to compare China’s military spending with that of other nations. There is significant, if very limited, disagreement concerning China’s actual level of defense expenditures, however, even inside China. One Chinese scholar not only maintains that direct comparison is possible, but also contends that DoD significantly *understates* China’s annual defense spending, which may be equivalent to over \$150 billion in U.S. spending in his view. He further contends that China’s defense budget should not only be calculated using PPP in general, but should also be further adjusted based on China’s relative degree of self-reliance. For instance, defense spending from non-military organizations (e.g., State Council “special budgets,” weapons sales, and previous military business activities) should be estimated and added to China’s official defense budget, which does not include these categories. Based on current exchange rates, personnel costs should be multiplied by seven.

Foreign weapons purchases should be multiplied by one. Indigenous weapons development and production should be multiplied by a factor somewhere between seven and one, depending on actual degree of indigenization [11]. Regardless of the accuracy of this scholar’s claims, it is useful to examine the methods suggested for calculating China’s defense budget. China’s secretive bureaucracy and low material and labor costs must be considered when attempting to estimate its true military spending.

ONGOING REFORMS

China’s defense development remains hampered by an unwieldy defense economy and budgeting process. While China’s complex and sometimes poorly-coordinated bureaucracy inhibits outsiders’ ability to determine its total military spending, perhaps China itself still has difficulty calculating its own total defense spending. As DoD assesses, “What little public information China releases about defense spending is further clouded by a multitude of funding sources, subsidies, and cutouts at all levels of government and in multiple ministries. Real spending on the military, therefore, is so disaggregated that even the Chinese leadership may not know the actual top line” [12].

This may gradually be changing, however. Since the mid-to-late 1990s, comprehensive reforms have increased PLA financial standardization: (1) divestiture of commercial assets, (2) regularization of accounting and auditing, (3) marketization of defense procurement, and (4) zero-based budgeting to bring budgetary and extra-budgetary funds under centralized management. Rising defense budgets place more and more defense-related expenditures ‘on the books’ [13]. A complex network of often corrupt commercial transactions that proliferated after Deng Xiaoping encouraged military entities to engage in private business in order to supplement reduced defense budgets has been gradually replaced by increased official spending following Jiang Zemin’s ordering of the PLA to extricate itself from most commercial businesses in the late 1990s and instead “eat imperial grain” (i.e. enjoy increased state funding).

ECONOMIC FOUNDATION

At 1.4 percent of GDP (6.4 percent of total fiscal expenditure) officially, China’s 2010 defense spending is clearly sustainable, and could be increased proportionally should Beijing deem it necessary. China’s national debt is equal to only 18 percent of GDP. By contrast, U.S. national debt approaches 100 percent of GDP; defense spending represents 4.7 percent of GDP and 19 percent of total fiscal expenditure. The rising tide of Chinese economic growth

is likely to steadily lift the PLA's boat, at least for the next few years. Liu Yingqiu, dean of the Graduate School at the Chinese Academy of Social Sciences, recently predicted that China's GDP, growing at 9 percent per year, combined with changes in the exchange rate, could overtake that of the United States in 2020 (Global Times, March 9).

COMPETING FACTORS

Nevertheless, in the longer term, a variety of factors may limit PLA budget growth, at least to some extent. Various structural and demographic dynamics could greatly restrict China's ability to sustain rapid military spending growth, regardless of its leaders' intentions. They are likely to face tradeoffs unprecedented since the post-1978 reforms as Chinese society ages, expects higher standards of living and perhaps includes more individuals who are disaffected.

Additionally, even if the PLA budget continues to grow steadily, factors internal to the PLA will likely limit its overall force structure and capabilities. The PLA is already wrestling with increased personnel costs, which will likely consume an increasing percentage of its overall budget. As NCOs increase, for example, they will be paid more than the conscripts they often replace. Combined with more capable and thus more expensive weapon systems and the higher operations and maintenance costs that come with missions such as the anti-piracy patrols in the Gulf of Aden, predicting the future force of the PLA is far more complex than simple straight projections that claim an expansive PLA twenty years from now.

Leading indicators of changes in the parameters of China's defense spending include the Chinese economy's growth, the central government's ability to collect revenues and propensity to spend them on non-military programs (e.g. a future national pension system and other welfare benefits for China's increasingly socially stratified and rapidly aging population), personnel salaries (e.g. competitive pay to attract a dwindling population of draft-eligible individuals amid increasingly attractive private sector alternatives), national spending on research and development, and weapons imports. Of course, even at a lower level of defense spending, China could still increase its power and influence substantially in East Asia and even challenge U.S. and allied interests there.

NAVAL IMPLICATIONS

Regardless of exact figures, China is clearly developing and procuring the weapons and nurturing the manpower to modernize its military significantly. As Richard Bitzinger concludes, "One does not need to count *all* the beans to know that China is an emerging military (as well as

economic and political) power in the Asia-Pacific to be reckoned with" [14]. Increasingly capable Chinese submarines, ships, aircraft, satellites, missiles, and other platforms emerge constantly, underscoring Bitzinger's point.

China's navy thus far has been focused largely on developing a variant of regional anti-access to prevent Taiwan from declaring independence, in part by achieving credible capabilities to thwart U.S. forces should Washington elect to intervene in a cross-Strait crisis. To assess related scenarios, one must compare the actual assets that relevant militaries could deploy; overall comparison of Chinese and American defense budgets is misleading unless one envisions an all-out conflict between the two, which fortunately is not a realistic possibility. The PLAN's current order of battle is still clearly sized and shaped primarily for defending claims on China's disputed maritime periphery as opposed to conducting extra-regional blue water sea control operations.

Yet while concerns about Taiwan's status have played a large role in driving Chinese defense spending since at least the mid-1990s, the PLA's defense interests are now necessarily greater. Taiwan President Ma Ying-jeou's March 2008 landslide election has greatly reduced the risk of conflict. Now, with cross-Strait relations stabilizing and China continuing to grow as a global stakeholder, China's navy is likely to supplement its Taiwan and South China Sea-centric access denial strategy that its current naval platforms and weaponry largely support with "new but limited requirements for protection of the sea lanes beyond China's own waters, humanitarian assistance/disaster relief, and expanded naval diplomacy" [15].

CONCLUSION

Regardless of its exact size, which remains uncertain to outsiders, China's defense budget is on track to continue funding an increasingly capable military/navy that is gradually increasing focus on areas beyond mainland China. This is part of a two-level process, however, with nearby priorities still at the core. Preparing to defend China's territorial and maritime claims by asymmetric means is likely to remain the PLAN's focus for the foreseeable future, even as it pursues secondarily lower intensity missions further afield. Developing robust long-range combat capabilities would require new platforms, force structures, training and operations to such a degree as to require significant increases in the PLAN's budget. As the most naturally internationally-oriented of the services, the PLAN may stand to benefit most the PLA's increasingly "externalized" orientation. It is possible that it might win a larger portion of a growing PLA budget, but there would

likely be resistance to such changes, including from China's other services, which are likely to press their own claims. China's ground forces, though no longer dominating the PLA to the same degree as they have previously, are still vital to the all-important objectives of domestic stability and border security. China's Second Artillery's conventional missiles are critical to holding regional land and, increasingly, sea-based assets at risk. China's Air Force appears to be laying claim to military space missions, and a space force may be developed in the future. Even the most basic data on service budgets remain unavailable to foreign researchers, however, so for now this must remain speculation. China's capabilities are clearly growing, but its naval intentions—at least beyond asserting control over its claimed territorial waters, to include Taiwan—are somewhat unclear.

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NOTES

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