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## China's Economic Environment: Implications for Military Development

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**Strategic Horizon 1B:** *The U.S.-China relationship will be central to international relations in the twenty-first century, as the two great Asia-Pacific powers compete, coexist, and cooperate across the full spectrum of national capabilities. While they share many important interests and are increasingly interdependent, particularly in the economic realm, Beijing and Washington regrettably retain presently-irreconcilable differences regarding important security issues. While this friction can likely be managed, albeit at the cost of tremendous effort and patience on both sides, occasional crises are likely, and conflict cannot be ruled out completely if wisdom and diligence prove insufficient. The best way to avoid conflict is to understand its potential nature and cost. To that end, this four-part series will examine four major issues:*

- *China's Near Seas military focus and capabilities*
- *China's economic environment and implications for military development*
- *Chinese energy and resource imports and their potential to drive naval expansion*
- *China's conflict triggers and mitigating factors, particularly economic interdependence*

*While this series will retain China SignPost™ (洞察中国)'s traditional Sino-centric focus, it must be noted that the U.S. and its capabilities, policies, and actions clearly represent a major part of the strategic equation, and Beijing clearly has its own views and concerns about them.*

### **Rich Nation, Strong Army? Not So Fast...**

History is on the march, and in many observers' eyes, it appears to be favoring the Middle Kingdom. An unprecedented transfer of wealth from West to East is underway, with 2014 termed “the watershed year when the Asia-Pacific area will contribute within 1% as much to the global economy as the United States and the EU combined.”<sup>1</sup>

In the region that produced the concept of “Rich Nation, Strong Army,” and keeps it alive today—albeit in a post-imperial era,<sup>2</sup> an equivalent transfer of military power would seem likely to coincide. This year, in fact, Asian defense spending is likely to exceed that in Europe.<sup>3</sup>

At the center of this tectonic shift is China. Beijing's officially reported defense budget is already the world's second largest and is set to grow by 11.2% to 670.2 billion RMB (\$106.4 billion) in 2012.<sup>4</sup> This level of defense spending allows China to develop an increasingly capable military and could be raised should Beijing deem it necessary.

But, regardless of how precisely Chinese defense spending is calculated—itsself the subject of much debate in foreign analysis,<sup>5</sup> the reality is more complex, and straight-line projections are likely to prove wrong. As in other areas, Beijing faces an uncertain economic environment and diminishing returns on key inputs. China's leaders must therefore continue to decide how to prioritize its large but hardly unlimited defense resources.

They are likely to continue to focus on improving their military's capabilities to further Beijing's interests in the three "Near Seas" (the Yellow, East, and South China seas), home to the vast majority of China's outstanding territorial and maritime claims. This is a major development in its own right, but it should not be misrepresented as anything close to a path to global military dominance. Given the economic limitations that China is likely to face increasingly, such a projection is premature, even if Beijing's leaders favored such an approach—which they likely do not.

### **Alternative Scenarios for China's Economy**

There is a variety of possible Chinese growth futures, and analysts inside and outside of China heatedly debate a range of possibilities.<sup>6</sup> Whatever the ultimate result, it is likely to affect Beijing's military development significantly. China's economy has been growing rapidly for the past three decades.<sup>7</sup> Estimates emerge constantly as to when China's economy will become larger than that of the U.S., and there are larger assumptions that China's military power will grow in proportion. Proponents of this view cite projections like those made by Goldman Sachs and PricewaterhouseCoopers, which have predicted that China's GDP would exceed that of the U.S. by 2027 and 2020, respectively.<sup>8</sup>

Aside from several PRC-government stalwarts, notably Chief Economist and Senior Vice President of the World Bank Justin Yifu Lin—who recently declared: "It is very likely that China will maintain around an 8 percent GDP growth rate for another twenty to thirty years"<sup>9</sup>—most experts believe that China's rate of economic growth is in the process of slackening substantially and is becoming subject to some degree of uncertainty. Implications for military development are less clear, but current spending levels seem quite sustainable.

While the growth of China's comprehensive national power may continue to proceed rapidly, it may, alternatively, abate, more than many analysts expect.<sup>10</sup> China is not immune to larger patterns of economics and history. History suggests that China faces costly [internal and external challenges](#) that will hinder its ability to avoid the S-Curve (logistics curve)-shaped<sup>11</sup> growth deceleration that so many previous great powers have experienced,<sup>12</sup> and that so many observers believe the United States is undergoing today.<sup>13</sup>

Beijing itself assumes that maintaining 10%+ economic growth is no longer feasible or desirable; Premier Wen Jiabao unveiled a target of 7.5% GDP growth for 2012 at the National People's Congress on 5 March 2012, while 7% is the target for the current Twelfth Five Year Plan (2011-15).<sup>14</sup>

But increasing numbers of economists and policymakers are beginning to question whether even this growth trajectory can be maintained in the face of clear and substantial structural challenges<sup>15</sup> that include pollution, corruption, chronic diseases, water shortages,<sup>16</sup> growing internal security spending, and a rapidly aging yet under-supported population<sup>17</sup>—all mutually-reinforcing factors that impose mounting costs on the Chinese state and economy. Indeed, Premier Wen himself noted that China faces “significantly higher costs of factors of production at home” and acknowledged that “China's economy is encountering new problems. There is downward pressure on economic growth.”<sup>18</sup>

At very least, to maintain rapid economic growth, China needs to “rebalance”<sup>19</sup> and reform its economy by embracing a new development model that is less reliant on infrastructure investment to prop up growth rates.<sup>20</sup> This is the conclusion of the recent “China 2030” study co-produced by the World Bank and the Chinese government, which states: “China should complete its transition to a market economy—through enterprise, land, labor, and financial sector reforms—strengthen its private sector, open its markets to greater competition and innovation, and ensure equality of opportunity to help achieve its goal of a new structure for economic growth.”<sup>21</sup>

Unfortunately, there is widespread skepticism that this is likely to happen expeditiously, for three reasons. First, because of bureaucratic politics, dramatic policy changes are unlikely before or immediately following Beijing's political power transition in October 2012. Second, a major difference between the last time sweeping economic reform was undertaken—in the late 1970s—and today is that three decades of prosperity have created entrenched “vested interests,”<sup>22</sup> particularly in key state-owned enterprises,

whose close connections to political elites make it difficult to pursue reforms that could harm their parochial concerns.<sup>23</sup> China's national oil companies and coal industry, which have thwarted the establishment of a robust Energy Ministry, are prime examples of this phenomenon, which is prevalent across the board.<sup>24</sup> Such sclerosis worries some wealthy Chinese, who are rapidly acquiring foreign passports, sending assets overseas, and even emigrating.<sup>25</sup>

Third, even if these challenges can be overcome, Chinese policymakers face a genuine dilemma in achieving a "soft landing" with regard to real estate,<sup>26</sup> and opening financial markets and liberalizing capital flows, which often increases the risk of financial instability<sup>27</sup>—and hence the potential for political turmoil.<sup>28</sup>

One prominent China-based economist believes that the country's growth will need to slow to 3-4% per year—less than half the current rate—for it to address structural imbalances in its economy.<sup>29</sup> The country's need for rebalancing comes as it begins to face swelling costs from health problems and chronic diseases fueled by pollution and changing diets. For example, assuming that China can treat its 92.4 million diabetes patients at only 1/3 of the annual U.S. per-patient cost and that even 25% of China's diabetics are being actively treated, the annual price for treatment alone would reach roughly US\$46 billion per year. This is equal to 44% of China's officially-stated 2012 defense budget.<sup>30</sup>

There is thus a strong possibility that China is already facing increasing headwinds that may constrain its economic growth and by extension, its future ability to spend on defense. The burdens imposed by chronic disease and other rising internal challenges reduce the potential funds available for defense spending and stand to affect hardware acquisition moving forward.

Yet perhaps even more importantly, these costs may also restrict the People's Liberation Army (PLA)'s ability to afford expensive training, retain qualified soldiers, sailors, and airmen, and meet the substantial facilities access and logistical support costs necessary to build a more robust regional military force and limited high-end power projection ability in areas like the Indian Ocean.

If China desires to create a more globally-capable military that can project combat power to the point of being able to challenge an adversary's naval and air forces in a distant theater such as the Indian Ocean region, its military budget needs would rise substantially, both for acquiring the platforms, and especially for training the personnel

to man them and building the logistical system necessary to support such forces at a high operational tempo far from home. This currently appears to be a lower probability scenario, even if some Chinese political and military leaders would welcome such extensive capabilities.

The more probable outcome is one in which China achieves a rudimentary, limited power projection ability by building several carrier groups and expanding its nuclear-powered submarine force. Pursuing this approach would give Beijing highly visible (and eventually capable) “influencers” that it could deploy throughout East and Southeast Asia, the Western Pacific, and the Indian Ocean’s strategic sea lanes. A more capable nuclear submarine force, particularly if it includes quieter attack subs armed with long-range land-attack cruise missiles, would offer additional credibility for coercive diplomacy by Beijing as well as a mechanism for bringing hard power to bear, should the need arise.

### **How Effectively Can the PLA Use Additional Funding?**

This question must be explored to understand the types of decisions that PLA leaders might confront if the national economy proves able to support lower military spending levels than originally anticipated. In theory, such policy options could best be elucidated by methodical analysis of Chinese defense industry production costs and subsequent maintenance costs.<sup>31</sup>

Unfortunately, such calculations are difficult, if not impossible, to make conclusively and comprehensively using available open source information. Even for major, tangible, well-known platforms, the specifics of Chinese capabilities are extremely difficult to determine specifically. For instance, the Type 052C *Luyang II*-class destroyer’s command and control system cannot be determined from open sources. Previous Chinese ships used derivatives of the French Thomson CSF *Tavitac* naval combat system.<sup>32</sup>

The Type 052C may use an improved system to better engage anti-ship missiles, and to process data from its helicopter; the *Ka-28* ASW helicopters must pass data back to its host ship for processing. Such limitations on available detail about capabilities render making solid comparisons difficult if not impossible. Even a discrete capability with strong civilian linkages (e.g., to Chinese universities) still defies accounting, because it is difficult if not impossible to total systematically the Chinese university investment and the effective investment foreign universities make in educating engineers that return to China, much less the military investment.

Second and third order effects compound the analytical challenge. For example, manifold practical problems with using military equipment in the field (i.e., in training) under different performance parameters can deny easy quantification for anyone, including specialists in China themselves. Then there is the still-more intangible concept of net capability, or the capability of a given Chinese platform/weapons system when used in conjunction with other Chinese systems against an opponent's constellation of weapons systems.

At the most general level of analysis, historical analogies may prove illuminating. One of the most penetrating unclassified studies available examines Japan between the first and second world wars. It concludes that, in the long run, a nation tends to spend a constant percentage of its economy on defense.

Meanwhile, the cost of ships and weapons rises far faster than inflation—at roughly 9% annually in real terms. In the interwar period, Japan's economy grew with sufficient speed to afford the rising costs of ships and weapons, and was motivated to develop advanced surface vessels and submarines by the prospect of achieving regional naval dominance.<sup>33</sup> Today Beijing enjoys the economic growth, and potentially the strategic motivation, to achieve such a dramatic naval buildup—while avoiding Tokyo's mistakes in militarism.

Even at a more specific analysis, some broader statements about Chinese defense industrial capabilities are possible. In some cases, China can produce large weapons and equipment at very competitive costs. For example, Chinese shipyards are said to be able to produce Type 071 amphibious warfare vessels (LPDs) for about one-third what it costs to build a *San Antonio*-class LPD in a U.S. yard, meaning that China's costs are likely around US\$565 million per ship.<sup>34</sup>

However, as military equipment becomes more technology intensive and less labor-intensive, China's cost advantages decrease significantly. The J-10 fighter, for example, is [estimated to cost](#) roughly U.S.\$28 million per aircraft.<sup>35</sup> This is nearly as much as the F/A-18 C and D series and the [Russian Su-34](#), which cost US\$29 million per unit and US\$36 million per unit, respectively, for aircraft that are in many ways substantially more capable than the J-10.<sup>36</sup>

As costs of acquiring equipment rise, so too do the costs of maintaining the new hardware, supporting sufficient training, and compensating the individuals that constitute the backbone of the military. Personnel, equipment, and operational costs

are all rising for the PLA, and there will be a limit to what it can afford in the future. Increased personnel costs already consume an increasing percentage of the PLA's overall budget as it works to improve soldiers' living standards. PLA officers, for example, now bring home roughly US\$845 (5,400 RMB) per month on average, the highest in PRC history, a very competitive wage compared to Chinese state owned enterprise employees' average monthly earnings of closer to US\$626 (4,000 RMB).<sup>37</sup>

The bottom line is that true military modernization will not come cheaply for China, especially in light of growing cost convergence, as well as inflation and the host of internal challenges described above that will consume funds that could otherwise potentially be invested in the military.

### **Near Seas: China's Front Line, for Foreseeable Future**

Constraints on Beijing's defense spending relative to originally-anticipated baselines could begin to manifest themselves even as China challenges U.S. forces via asymmetric means. Geographically, the Near Seas deserve special focus since Beijing views them as core zones of national interests where credible access denial and combat capabilities are needed regardless of competing budget priorities. Moreover, strong land-based support from Second Artillery and aviation forces, as well as sensor and communications architecture, offer numerous cost-effective "work-arounds" concerning limitations in coordination through temporal and spatial deconfliction of weapons.

Far Seas operations (south and west of the South China Sea and east of Guam),<sup>38</sup> by contrast, lack these advantages, and would impose expensive and vulnerable reliance on global C4ISR and other systems.<sup>39</sup> In the absence of significant consensus among Chinese leaders that such operations deserve prioritization, Beijing's capabilities in this regard are unlikely to develop rapidly. China increasingly faces choices in how to allocate finite defense resources: the global revolution in military affairs (RMA) imposes corresponding increases in technology and personnel<sup>40</sup> costs for China,<sup>41</sup> as it does all nations determined to master cutting-edge ways of war.

Moreover, economic problems and even resulting political instability that hinder the PLA's ability to build a more robust long-range power projection capacity could combine with rising nationalism to motivate Chinese leaders to adopt more assertive military approaches, particularly regarding unresolved territorial and maritime claims in the Near Seas. If so, the era in which China poses the greatest potential to challenge U.S.

strategic interests and the efficacy of the global system—and is doing so in practice—may have already begun.

Assuming that high intensity kinetic conflict can be avoided—fortunately, a highly likely prospect, particularly given Washington and Beijing’s substantial shared interests—China’s greatest challenge to U.S. interests and the global system might thus be the already-unfolding strategic competition, friction, pressuring, and occasional crises in the Near Seas.

**Bottom Line: Enriching the Nation, Strengthening a Near Seas-Focused Army**

Possessing the world’s second largest defense budget will allow China to develop an increasingly capable military and spending could be increased quickly should Beijing deem it necessary. Nevertheless, in the longer term, structural economic and demographic dynamics could greatly restrict China’s ability to sustain rapid military spending growth, regardless of its leaders’ intentions. The strength of China’s army will thus hinge in large part on China’s wealth. The two-century quest to realize China’s perceived potential thus continues today, together with attendant debates.

China’s wide range of possible economic growth futures are unlikely to substantially alter its current Near Seas military trajectory, in which it is already affording significant A2/AD capabilities. Developing equivalent Far Seas capabilities, by contrast, would require tremendous spending just as a wide range of factors are likely to restrain economic growth and impose competing priorities.



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China SignPost™ 洞察中国 founders Dr. Andrew Erickson and Mr. Gabe Collins have more than a decade of combined government, academic, and private sector experience in Mandarin Chinese language-based research and analysis of China. Dr. Erickson is an Associate Professor at the U.S. Naval War College’s China Maritime Studies Institute (CMSI) and an Associate in Research at Harvard’s John King Fairbank Center for Chinese Studies. Mr. Collins is a law student at the University of Michigan Law School. His research focuses on commodity, security, and rule of law issues in China, Russia, and Latin America.

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The authors have published widely on maritime, energy, and security issues relevant to China. An interactive archive of their work is available at [www.chinasignpost.com](http://www.chinasignpost.com).

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