

**Defense-Related Spending in China:
A Preliminary Analysis and Comparison with
American Equivalents**

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PREFACE

The mission of the United States – China Policy Foundation is to improve mutual understanding and communication between Americans and Chinese. There are few aspects of China that have been subject to greater misunderstanding, not to say wilder conjecture and distortion, than the country’s defense budget and military spending. The issues involved are too important to be left to speculation. That is why the Foundation was especially pleased to work with the General Staff Department of the People’s Liberation Army to facilitate a delegation of distinguished American experts to engage in an intensive exchange of information on this subject with active and retired PLA officers in November 2006.

The result of those exchanges is this report. We at the Foundation believe it offers a significant contribution to the factual basis for public understanding of the defense and related budgets in China and the United States, even as it establishes a benchmark for future exchanges and further advances in mutual understanding and pioneers a methodology for international defense-spending comparisons with implications far beyond those for Sino-American relations. We are pleased to note that our Chinese counterparts have informally indicated a desire for the process of mutual discovery begun in 2006 to continue. We are gratified and honored by the prospect that the Foundation can help to advance this process in the years to come.

Chas W. Freeman, Jr.
Co-Chair, United States - China Policy Foundation

EXECUTIVE SUMMARY

In November 2006, Ambassador Charles Freeman, Jr., co-chair of the United States – China Policy Foundation (USCPF), led a U.S. delegation of four experts to Beijing to participate in a Track II exchange (i.e., non-governmental) on the subject of Chinese and U.S. defense budgets.

Prior to our trip, the Chinese government had released a series of White Papers, each of which discussed the basic composition of the defense budget. Likewise, each March, around the time of the National People’s Congress, the size of the official defense budget is announced, sometimes with corrections to update numbers from previous years. Since the first White Paper on arms control in 1995, the announced defense budget has grown by over a factor of six, from approximately RMB 55 billion in 1994 to about RMB 350 billion in 2007.¹ Each White Paper also outlines general reasons for the increase in funding – improving the pay and standard of living for personnel is traditionally foremost in order to keep up with growth in the civilian economy. Defense spending is broken down into three main categories of personnel, operations and maintenance, and equipment, each of which receives *about* one third of the total announced budget. This one-third distribution was skewed slightly because of the large pay raise of 2006. Moreover, the personnel account now has seen the largest rate of increase over the 14 years for which data are available. It is generally recognized, however, that the official announced defense budget does not include all sources of extrabudgetary funds available to the Chinese armed forces.

Evidence exists indicating that China’s “total defense-related spending” also includes funding from three major sources: 1) other central government ministries and organizations, 2) local governments, and 3) from within the PLA itself. Many questions remain about the amount and source of funding for foreign equipment purchases; spending on military research and development; military-related infrastructure construction; local government support for retired and demobilized personnel, operations of the reserves and militia, and pay for local cadre who support the military; as well as the value of PLA sideline production of food and its sales of any excess property and equipment. The amounts of these extrabudgetary sources likely vary from year to year and some funding that previously was “off-the-books” may now be included in the official defense budget. The exchange rate value of the Chinese currency also has an important impact on China’s defense budget which needs to be taken into account in estimates of “total defense-related spending.” As a result of these factors, foreign estimates of the size of China’s “actual defense budget” or “total defense-related spending” vary greatly. This paper does not attempt to judge which of the numerous foreign estimates of Chinese defense spending is most accurate.

The Chinese presentations in to the USCPF delegation provided valuable data about the structure and process of Chinese defense budgeting, including highly detailed discussions of changes in personnel expenditures as well as the relevant budget organizations and the planning calendar. Over the course of the meetings, the Chinese side explained three key

¹ The Chinese currency is known as the *renminbi* (RMB). It is also referred to as *yuan*.

pieces of defense budget information not previously known to the experts on the U.S. delegation. First, the Chinese side provided a tripartite breakdown of the personnel (RMB 83.159 billion), operations and maintenance (RMB 80.683 billion), and equipment (RMB 83.656 billion) costs in the published 2005 defense budget of RMB 247 billion. Second, the PLA participants offered deep insights into the RMB 13.5 billion salary adjustment July 2006, and provided detailed data about the dramatic increases in their own personal salaries and retirement benefits. Third, the Chinese delegation disclosed that higher global oil prices have resulted in fuel budget overruns of more than RMB 10 billion in 2006. Each of these facts was corroborated after the trip through interviews and primary sources, and much of the information later appeared in China's newest Defense White Paper, published in December 2006.

While these meetings were a good start and the progress to date has been promising, there is still a long way to go. Through this effort we have acquired a better understanding of the composition of the officially announced Chinese defense budget, a more detailed listing of the types of extrabudgetary inputs, and a general knowledge of the process by which the military budget is formulated and executed. ***But we do not yet have enough information to make a reasonable estimate of the total amount of Chinese "defense-related spending."***

The information and insights gleaned from the USCPF delegation's dialogue in China raise the immediate and appropriate question: where do we go from here? We assess that there is an opportunity both to expand existing Track II exchanges and also to create a distinct defense budget working group under the framework of the existing U.S.-China Defense Consultative Talks (DCT). The goals of such a working group would be two-fold: to develop a common baseline for analysis and comparison, and to narrow misunderstandings about each other's national defense intentions, priorities and plans. The working group could begin by focusing on questions related to strategy and policy, including secrecy versus openness and national budget priorities. A second major activity could be negotiating a common definition of defense spending. This report's definition of "total defense related spending" would be one place to begin, as it incorporates elements of other major international standards. A third part of such a dialogue could be even more specific and focused on the content of American and Chinese defense budgets. A final part of this dialogue should focus on the defense budget formation process and related reforms.

We hope that this report will prove useful to those outside China who feel a need for a more accurate understanding of Chinese defense spending and the budgetary processes that support it. We also hope that it will stimulate our military dialogue partners in China to educate us further. We need their assistance to correct misunderstandings and to improve our still very imperfect understanding of China's total defense-related spending and its implications. Without their help, no one abroad can hope to assess China's military modernization accurately or objectively and foreign apprehensions will grow apace with China's burgeoning defense budget.

INTRODUCTION

The accurate appraisal by U.S. defense planners of the level of resources assigned by foreign states to national defense is essential to America's ability to assess these states' current and future military capabilities. Such estimates inform threat estimates and are the basis for the planning and funding of U.S. defense forces against foreseeable challenges. The quality of U.S. decisions about our national security as well as tens of billions of dollars of defense spending rests on the accuracy of these estimates.

There is near universal agreement that China's drive for wealth and power is among the most formidable potential challenges to U.S. national security in the 21st century. In the face of uncertainties over the implications of these trends for global and regional security, the improving capabilities of the People's Liberation Army (PLA) have become a significant factor in U.S. force planning for the Asia-Pacific. Rapid growth in the officially announced Chinese defense budget is the most obvious aspect of PLA modernization and is the source of growing concerns to U.S. policymakers and strategists.

Defense budgets are a visible manifestation of national strategic intentions, priorities, and policies, but seldom, if ever, include all military and military-related spending. Major categories of such spending are often contained in other budgets or handled on an ad hoc basis. This is the case, for example, in the United States, where the defense budget excludes huge amounts of such spending, such as combat operations in Afghanistan and Iraq (funded through supplemental appropriations), nuclear weapons (in the Department of Energy budget), benefits for wounded and disabled soldiers (Department of Veterans Affairs), homeland security functions (Department of Homeland Security, Justice Department), and so forth.

There is no agreed international standard for the construction of defense budgets. Each country includes or excludes categories of spending in such budgets in accordance with its unique military history, roles and missions, force structure, acquisition procedures, accounting practices, and national security traditions. Superficially identical budget categories may embrace vastly different activities, making unadjusted comparisons of defense budgets highly misleading as measures of military and military-related spending. Budget reforms can make them even less indicative of trends in such spending.

For decades, the PLA viewed secrecy and opacity about its capabilities and operations as an essential component of its strength, causing foreign adversaries to underestimate Chinese military weakness and to overestimate PLA capabilities. China has become more open in recent years but we still lack more than rudimentary understanding of what military and military-related spending is and is not in the PLA budget. Chinese budgeting processes, accounting methods, and acquisition policies are, like the Chinese economy, in a state of rapid evolution. We lack insight into these changes and their implications. Chinese published budget data aggregates spending in ways we do not understand. The result of all these gaps in our knowledge is analysis from incomplete, flawed data, based on crude speculation and empirically unsubstantiated methodologies. No one, not even those in the intelligence and academic communities who labor to produce the widely

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varying estimates of Chinese military spending that circulate in the United States, has any confidence in the numbers or any certainty about their significance.

Though the PLA has briefed visiting officials from the Office of the Secretary of Defense on the process by which it constructs its budget, it has traditionally viewed pressure for greater transparency as a hostile effort at intelligence collection intended to gain military advantage. This tendency has been reinforced by press reporting and commentary implying that the funding of military spending from outside the defense budget or through special budget allocations (as in the case of purchases of foreign weaponry) constitutes an effort at deception or concealment rather than a budgetary practice similar to that of the United States and other countries. Still, as China grows in military power, some in China are beginning to argue that excessive secrecy may be counterproductive, causing the United States and other countries to overestimate PLA capabilities and to react in response to an exaggerated threat perception of China. Among other undesirable consequences, they see this as risking the entanglement of China in economically wasteful arms races it could not hope to win. Thus some Chinese national security specialists now recognize the desirability of greater openness with respect to military spending.

In this context, Ambassador (Ret.) Chas W. Freeman, Jr., co-chair of the United States – China Policy Foundation (USCPF) suggested to General Xiong Guangkai, president of the Chinese Institute of International Strategic Studies, that a previously agreed Track II (i.e., unofficial) dialogue on Sino-American defense matters be devoted to disaggregating and comparing military and military-related spending in both China and the United States. He proposed that the object of working meetings during that dialogue be to identify functional categories of spending common to both sides or unique to one or the other, without regard to the department or budget category to which each side assigns this spending in its national budget. Such functional categories would be organized in a matrix that would be jointly developed to facilitate later bilateral or multilateral comparisons with third countries' military spending, as appropriate and desired. The USCPF would publish a report containing the preliminary results. This could provide a benchmark for follow-up discussions, if both sides agreed a continuation of the process would be useful. General Xiong, who was until recently the Deputy Chief of the PLA General Staff Department, accepted this proposal and undertook, on a Track II basis, to assure the participation of PLA officers able to provide Chinese data to compare with U.S. data provided by American counterparts. This report contains the results of the initial meetings and proposes a roadmap for future exchanges.

SECTION 1. USING A COMMON BASELINE: DEVELOPING A STRUCTURE TO COMPARE U.S. AND CHINESE TOTAL DEFENSE-RELATED SPENDING

The goal of the USCPF delegation was to better our understanding of total defense-related spending in China by comparing it to total defense-related spending in the United States. We adopted the terminology, “total defense-related spending,” to emphasize that relevant expenditures are not confined solely to money in defense budgets. For example, in the U.S. many costs related to nuclear weapons and propulsion systems are in the budget of the Department of Energy. In both the U.S. and China some costs associated with personnel retirement are outside the defense budget. The keystone of our philosophy is that all expenditures made as the result of decisions to provide military capability in defense of the nation from external threats should be included in international spending comparisons. By definition, total defense related spending is directed primarily outward toward deterrence or defense against external threats or internal *armed* threats to domestic stability, but does not include routine law enforcement activities undertaken to maintain order within the country.

There are two reasons for wanting accurate comparisons of total defense-related spending across countries. The first is to understand the amount of defense capability the countries are buying every year. The second is to understand the economic sacrifices being borne to build and use defense capability.

Total defense-related spending is not the same as defense capability. It is related to annual increments in defense capability. Some defense-related spending, spending on personnel for example, is needed to maintain the defense capability embedded in the defense-related capital stock. Some defense-related spending increases capability by increasing the capital stock or by improving the quality of the capital stock in the short- or long-term. Expenditures associated with actual operations may have little to do with the development of additional defense capability. Thus, even the best comparison of total defense-related spending across countries will be an imperfect indicator of investment in increased defense capability. Comparisons of expenditures on new equipment and on research and development may be more illuminating in this regard, and they will be discussed later.

Comparisons of total defense-related spending are much more tightly linked to the sacrifices being borne to provide defense. Defense-related spending uses resources that could be devoted to raising the standard of living of the population either directly through increased consumption or through investments in increased future productivity. A consistent examination of total defense-related spending across countries provides clear insight into the priorities being given to defense as compared to other government priorities.

Developing comparisons of total defense-related spending will require four steps:

- Specification of what should be included in total defense-related spending.
- Specification of the categories into which total defense-related spending should be disaggregated.

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- Presentation of spending by the two countries according to the agreed-upon taxonomy in their own currencies.
- The use of an agreed upon methodology to convert spending into a common currency.

In this study we will only address the first three of these steps. Currency conversion issues have to be tackled to place the resources devoted to defense in the two countries on common terms, and were not part of the discussions held by USCPF and its Chinese counterparts.

DEFINING TOTAL DEFENSE-RELATED SPENDING

Several definitions of total defense-related spending have been developed.

SIPRI Definition

The Stockholm International Peace Research Institute (SIPRI) definition is based on the principle that military expenditure includes all current and capital expenditure on the armed forces, including peace-keeping forces, defense ministries, paramilitary forces when judged to be trained, equipped and available for military operations, and military space activities.²

Such expenditures should include:

- Personnel
 - All expenditures on current personnel, military and civil
 - Retirement pensions of military personnel
 - Social services for personnel and their families
- Operations and maintenance
- Procurement
- Military research and development (R&D)
- Military construction
- Military aid (in the military expenditures of the donor country)

SIPRI excludes:

- Civil defense
- Current expenditure for previous military activities
 - Veterans' benefits
 - Demobilization
 - Conversion of arms production facilities
 - Destruction of weapons

² This material is drawn from the SIPRI website, specifically http://www.sipri.org/contents/milap/milex/mex_definition.html

This is a very useful taxonomy, but it includes two elements with which we disagree. In today's world, homeland defense is a major military mission and civil defense is a central part of it. Excluding it seems inappropriate.

Many kinds of current expenditures for previous military activities are part of the life-cycle cost of defense activities. When people enter into military service they know that they will likely receive veterans' benefits if they fulfill required service obligations. There is no particular reason to differentiate between retirement pensions and other forms of deferred compensation. Similarly, the life-cycle of weapons systems includes design, procurement, operations, and disposal. The costs associated with all four phases should, we believe, be included in total defense-related spending.

NATO Definition

NATO defines defense expenditures as outlays made by national governments to meet the needs of their armed forces. The use of the term "national governments" limits defense expenditures to those of central or federal governments, to the exclusion of state, provincial, local, or municipal authorities. If one is interested, however, in either the growth of defense capability or in the burden defense places on the national economy these exclusions do not appear appropriate.³

The focus on outlays means that expenditures are not counted when they are budgeted, but when they are made. Outlays are the best measure of the flow of resources into defense, but budgets are the best measure of the commitment of the political process to defense. Both are of interest.

War damage compensation, veterans' pensions, payments out of retirement accounts, and civil defense and stockpiling costs for industrial raw materials or semi-finished products are not included in this definition of defense spending. With the exception of war damage compensation and payments out of retirement accounts, which were counted when the contributions were put into the accounts, these exclusions appear inappropriate.

In the case of the U.S., NATO's definition includes spending on programs funded outside the Department of Defense, namely the Department of State's International Security Assistance Programs and the defense-related portions of the Coast Guard and the Department of Energy.

United Nations Definition

Since 1980 the United Nations has had a system for standardized reporting of military expenditures. Member states are supposed to report annually.⁴

³ "2004 Statistical Compendium on Allied Contributions to the Common Defense," U.S. Department of Defense, page A-1.

⁴ United Nations Instrument for Reporting Military Expenditures, available at <http://disarmament.un.org/cab/milex.html>

The U.N. includes paramilitary forces and military assistance in its definition of total military expenditures. It includes civil defense in its standard budget format, but does not count it as part of “total military expenditures.”

United States Definition

The U.S. budget presents information for what is termed “The National Defense Function.” It includes Department of Defense (DOD) military activities, the atomic energy defense activities of the Department of Energy, and defense related activities of other federal agencies. Most spending by the Department of Veterans Affairs and by the Intelligence Community outside of DOD is not included.⁵

CHOOSING A DEFINITION

As a target for our efforts to compare total defense-related spending across countries, we will use a modified version of the SIPRI definition. To the extent possible, civil defense, veterans’ benefits, and weapons’ disposal costs will be included.

Defining the Chinese Armed Forces

Because of differences in the force structure of the Chinese armed forces and those of the United States, it is necessary to define early in this study exactly what the Chinese mean by this term. According to the PRC National Defense Law adopted on March 14, 1997, the Chinese *armed forces* have three components:

- The active and reserve units of the PLA
- The People’s Armed Police (PAP) force
- The people’s militia⁶

The PLA is organized into ground forces (the army), the PLA Navy, the PLA Air Force, and Second Artillery (strategic missile forces). By the definition above, neither the PAP nor the militia is part of the PLA. Both the PAP and militia meet the definition of *paramilitary* organizations, while the PLA is a military organization.

The Central Military Commission (CMC) commands the armed forces of China. The CMC exercises its command through the four national-level General Departments (General Staff Department, General Political Department, General Logistics Department, and General Armaments Department⁷) and the service headquarters for the Navy, Air Force, and Second Artillery, as well as a separate headquarters for the PAP. (The army does not have its own service headquarters. Service headquarters functions are performed by the four General Departments.) Unlike most countries, the Chinese Ministry of

⁵ “National Defense Budget Estimates for FY 2007,” Office of the Under Secretary of Defense (Comptroller), March 2006, page 1.

⁶ All quotes in this section are from “PRC Law on National Defense” *Beijing Xinhua Domestic Service in Chinese 0556 GMT 18 Mar 97* translated by the Open Source Center.

⁷ The four General Departments are commonly known individually as the GSD, GPD, GLD, and GAD, respectively.

Using a Common Baseline

National Defense is *not* in the direct chain of command of the Chinese armed forces, though the Defense Minister routinely is a member of the CMC. (See Appendix 1.)

According to law, the active units of the PLA “are a standing army, which is mainly charged with the defensive fighting mission,” which “when necessary, may assist in maintaining public order in accordance with the law.” Thus, as a military organization, the primary mission of the PLA is directed outward, but it also has a secondary mission of domestic stability. Active forces are deployed throughout China in seven military regions (MR), each of which encompasses several provincial-level military districts (MD). Reserve units of the PLA “shall take training according to regulations in peacetime, may assist in maintaining public order according to law when necessary, and shall change to active units in wartime according to mobilization orders issued by the state.” Reserve units are commanded by provincial military district headquarters, which are under the command of the military regions.

On the other hand, the primary mission of the PAP is directed inward. The PAP “is charged by the state with the mission of safeguarding security and maintaining public order.” In performing this mission, it works closely with the civilian Ministry of Public Security and, by law, is under “the leadership and command of the State Council and the Central Military Commission.” The PAP has several types of units, the majority of which are dedicated to internal security, but a significant portion of the force is tasked with guarding gold mines, forests, water, electricity, and transportation facilities, as well as performing border security, firefighting, and security functions for senior government officials. As a secondary mission, in time of war, PAP units can act in local defense operations in conjunction with PLA forces.

The militia, which is organized into small units in every corner of the country, can support both external and internal security operations. Militia units are commanded by local People’s Armed Forces Departments (PAFD) and “perform combat-readiness duty, carry out defensive fighting tasks, and assist in maintaining public order.” PAFD are under the dual command of the military (through military region and military district headquarters) and the local Communist Party committees and governments at the same level.

Units from all three components of the Chinese armed forces provide personnel, equipment, and logistics support to disaster relief efforts as required.

The vast network of civilian Chinese defense industrial enterprises that produce military weapons and equipment is not part of the PLA. Rather, the defense industrial sector is supervised by the State Commission of Science, Technology and Industry for National Defense (COSTIND). Prior to 1998, COSTIND had been a major headquarters in the PLA at the level of the service headquarters and the military regions, manned by both uniformed military and civilian personnel. In 1998, the old COSTIND was disbanded with most of its military personnel going to the newly formed General Armaments Department, while most of its civilian personnel were assigned to the new COSTIND, which is now responsible directly to the State Council and not under the command of the

CMC. COSTIND and the PLA have a close relationship especially in defining equipment requirements and establishing research and development priorities. But COSTIND and the defense industrial base is now a separate management system within the Chinese government – the PLA has no direct control over the functions of this system.

The differences in structural organization between the armed forces of the United States and China make direct comparisons problematic. For example, both PLA and PAP units have daily responsibilities for border defense and border control tasks, unlike the situation in the United States where Department of Homeland Security agencies have primary responsibility for border control. And while uniformed civilian cadre working for the PLA are counted as active duty personnel (unlike civilians who work for the U.S. Department of Defense), a large number of personnel who work in grassroots-level People's Armed Forces Departments are considered "local cadre" and are not part of the active PLA. Yet these village and township-level PAFD personnel are responsible for recruiting military personnel (similar to the duties of active duty recruiters in the U.S. military), as well as performing other duties such as commanding militia units. Whenever possible, these differences in systems will be highlighted in this report, but such differences compound the problem of comparing of defense-related spending between the two countries.

CATEGORIZING DEFENSE-RELATED SPENDING

Both the United States and China put together their defense budgets by organization and by spending category. In the U.S. the organizational structure is based on the military Services: Army, Navy, Air Force, and Marine Corps. It includes an additional category for Defense Agencies and other "Defense-wide" expenditures that are budgeted and made outside the Services. The Chinese structure revolves around the organizations that prepare budget submissions: the Navy, Air Force, Second Artillery, the seven military regions, and several other central organizations.

The U.S. has a more detailed set of spending categories than does China. The U.S. categories are called major budget titles, or appropriation categories. They are military personnel; operations and maintenance; military construction; procurement; research, development, test, and evaluation (RDT&E); family housing, and revolving and management funds. Most of these categories are self-explanatory. The last one has to do with the financing of some operational expenses and can be viewed as closely related to the operations and maintenance category.

China's uses only three spending categories: personnel expenses; operations, training and maintenance expenses; and equipment expenses. More detail on the nature of these categories is presented in the next section of the paper.

Comparing the two structures, the personnel categories are quite similar, though the U.S. category only covers military personnel, with civilian personnel being part of the operations and maintenance category. The Chinese personnel category includes both military and civilian personnel.

Using a Common Baseline

The U.S. operations and maintenance category includes more than the analogous Chinese category. In particular, it includes the maintenance, transportation, and storage of equipment which fall under the equipment expense category in the Chinese taxonomy. The Chinese operations, training, and maintenance category includes the maintenance of facilities, but not equipment.

It appears that the U.S. family housing category would fit under personnel expenses on the Chinese side. Military construction would be in the Chinese training and maintenance expense category. Procurement and RDT&E would be in the Chinese equipment expense category.

In the future, comparisons of U.S. and Chinese defense budgets probably should be based on the Chinese spending categories. U.S. civilian personnel costs can be moved from operations and maintenance to personnel. The U.S. categories related to equipment can be aggregated. The biggest obstacle to comparability will be the different treatment of equipment maintenance. American expenditures in this area cannot easily be broken out from the rest of the operations and maintenance category and moved to the equipment category, as would be necessary for strict comparability with Chinese practice.

In this paper, U.S. and Chinese spending will be displayed using their separate taxonomies, but considerable movement toward standardization appears possible.

Note that so far the discussion of taxonomies for categorizing defense-related spending has been limited to the part of defense spending in the narrowly defined defense budgets of the U.S. and China; that is, the DOD budget for the U.S. and the PLA budget for China. Defense-related spending that originates in other organizations is not categorized in the same way. In some cases, non-DOD funded defense-related spending is clearly tied to personnel and can be so categorized. In others there is no alternative but to show such spending by its source and purpose, not folded into the spending categories discussed above.

For the U.S. the following categories of defense-related spending funded from outside DOD will be addressed:

- Department of Veterans Affairs (VA): The entire budget of this department is a form of deferred compensation to military personnel. It covers both disability payments associated with medical conditions that began during military service and the cost of running VA medical facilities. Of course, DOD also runs its own medical facilities and the cost of these is in the DOD budget.
- Department of Energy: Atomic energy activities related to defense.
- Department of Treasury: Some retirement costs for people who served before 1986, when a retirement fund was set up.
- Department of Labor: Veterans' re-employment and training programs
- Department of Education: Payments to local areas for the education of military children

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- Department of Homeland Security (DHS): Coast Guard, Border Patrol, and the Transportation Security Agency are included, as are expenditures on preparedness, emergency management, and science and technology. It is difficult to be sure what to include from the DHS budget. Homeland security is certainly a defense priority, but relief from natural disasters is not usually thought of as defense-related. The Coast Guard spends much of its efforts on assuring the safety of navigators, which are also not explicitly defense-related.
- The National Aeronautic and Space Administration (NASA). We include the entire NASA budget here, but much of it is clearly not closely tied to defense. A better allocation should be developed.
- Non-DOD intelligence organizations. It is difficult to get detailed information on these expenditures, so we have used publicly available estimates.
- Department of Justice (DOJ): This includes the part of the FBI and other DOJ budget elements included in the “National Defense Budget”
- State governments, which provide some funding for the National Guard. The National Guard provides force structure to DOD and is mostly funded by DOD, but it also serves the states. One could argue that state funding is for state purposes, not national defense. We include them here, but may want to revisit this choice in the future.

AN ESTIMATE OF TOTAL U.S. DEFENSE-RELATED SPENDING

We start by presenting the DOD budget for Fiscal Year 2006 by appropriation. After that, estimated defense-related spending by other agencies is shown, broken down into items that are related to military personnel costs and other expenditures. Then total spending related to military personnel is shown, followed by our estimate total defense-related spending in the U.S.

Table 1 shows the FY 2006 budget.

Table 1. FY 2006 DOD Budget by Service and Appropriation (billions of dollars)

	Army	Navy/Marine Corps	Air Force	Defense-wide	Total
Military Personnel	52.7	39.5	31.0		123.2
Family Housing	1.3	0.8	2.2	0.6	4.9
O&M and Other	71.1	45.3	46.4	62.5	225.3
Procurement	27.6	36.3	33.4	4.3	101.6
RDT&E	11.5	18.9	21.7	19.9	71.9
Construction	3.8	2.0	2.2	1.4	9.3
Total	167.9	142.8	136.8	88.1	536.2

Using a Common Baseline

Costs related to personnel, the military personnel account and family housing make up 24% of the budget. Operations and maintenance make up 42%. The investment accounts, procurement; research, development, test and evaluation; and construction, together make up 34% of the budget. Supplemental funding is included in the table.

Table 2 shows defense-related spending (in some cases estimates) from sources other than DOD. The nature of what is included was discussed above. State government contributions to the National Guard and the costs of non-DOD intelligence organizations are estimates because precise numbers were not available. The numbers included for NASA and the Department of Homeland Security are estimates because it is not clear how much of the budgets for these agencies should be included as defense-related.

Total defense-related spending from sources other than DOD is estimated to have been \$186.6 billion in FY 2006. Of this \$95.6 was related to military personnel.

Table 2. FY 2006 Defense-Related Spending from Non-DOD Sources
(billions of dollars)

Department of Veterans Affairs	70.4	
Department of the Treasury	23.2	
Department of Labor	0.2	
Department of Education	1.2	
Military Personnel Related	95.0	
Department of Energy	18.7	
Non-DOD Intelligence Organizations	25.0	estimated
Department of Homeland Security	27.4	estimated
NASA	16.3	estimated
Department of Justice	2.1	
Other Federal Agencies	0.2	
State Governments	1.8	estimated
Total	186.6	

Table 3 shows that much greater detail is available on spending in the military personnel account. Comparisons at this level might improve mutual understanding of the U.S. and Chinese systems for managing and compensating military personnel.

Defense-Related Spending in China

**Table 3. Detailed Breakdown of the FY 2006 Military Personnel Budget
(‘000s of dollars)**

	Total	
	Officer	Enlisted
Basic Pay	14,120,277	30,998,371
Retired Pay Accrual	3,723,173	8,150,212
Basic Allowance for Housing	3,719,598	8,661,539
Basic Allowance for Subsistence	526,394	2,518,883
Incentive Pays	636,402	250,437
Special Pays	842,003	2,299,401
Allowances	378,032	2,040,263
Separation Pay	214,262	33,029
Social Security Tax	1,071,143	2,355,779
Academy Cadets		164,798
Subsistence-In-Kind		1,539,923
Family Subsistence Supplemental Allowance		5,689
Permanent Change Of Station	3,404,124	
Reserve Components	14,392,393	
Medicare - Retiree Health Care Contribution, Active	1,252,718	6,517,757
Medicare - Retiree Health Care Contribution, Reserve	2,750,584	
Other Military Personnel Costs	127,870	
Total (Without Supplemental)	113,395,054	

When personnel costs funded through supplemental appropriations, family housing costs, and funding from outside DOD are added, FY 2006 spending related to military personnel, both current and former, was \$223 billion, of which 43 percent was outside the DOD budget.

Total U.S. defense-related spending in FY 2006 is estimated to have been somewhere near \$723 billion, including approximately 26 percent outside the DOD budget.

SECTION 2. INSIGHTS INTO CHINESE DEFENSE BUDGET STRUCTURE

SOURCES AND METHODS FOR UNDERSTANDING DEFENSE BUDGET STRUCTURE

Foreign observers of the Chinese military currently have access to an increasing but still insufficient set of sources detailing aspects of China's defense budget structure. In its series of White Papers on "Arms Control and Disarmament" and "National Defense," the Chinese government has publicly released basic information about the structure of its defense budget, primarily for foreign audiences. In addition to these official documents, a variety of Chinese newspapers, journals, and books expand upon the topic and provide greater detail. Many of these sources are in Chinese and not readily available to non-linguists, though significant information can be found in Chinese media available on the Internet. Nonetheless, even after intense study by a wide variety of foreign governments and scholars, large gaps about the structure and process of the Chinese defense budget and defense-related expenditures persist. While the Chinese government has improved transparency in this regard with the publication of its White Papers and it is understood that all militaries will maintain some degree of secrecy about some specific details of sensitive programs, many mundane facts, which if revealed would have little or no adverse impact on overall China's security posture, remain concealed from foreign scrutiny. As a result, there is much speculation and guessing about the "actual" size of the Chinese defense budget.

THE OVERALL BUDGET

Every year in March, in conjunction with the annual session of the National People's Congress, the Chinese government announces the size of the coming year's defense budget, as well as the percentage increase. Little detail is provided publicly about budget details, though usually some explanation is given to justify increases over the previous year's numbers. Later in the year or in subsequent years, the government may publish adjustments in the size of the budget to reflect actual spending, but this is done with much less fanfare. Usually, any changes only marginally affect the size of the number announced in the previous March. As will be seen, a significant exception to this general rule occurred in March 2007, when the 2006 actual budget was adjusted upwards by approximately 5 percent, due to the large pay raise that went into effect in July 2006.

Starting in 1995 with the publication of the White Paper on "Arms Control and Disarmament," and updated in each of the five White Papers on National Defense, the Chinese government has provided additional detail about the officially announced defense expenditure.⁸ Over this period of time, the announced defense budget, not

⁸ The first National Defense White Paper was published in 1998. Additional Defense White Papers have been released every two years since then, usually in December. In 2003, a White Paper on "China's Non-Proliferation Policy and Measures" was published, but it did not discuss defense expenditures. The 2005 White Paper on "China's Endeavors for Arms Control, Disarmament and Non-Proliferation" basically repeated information from the 2004 Defense White Paper with the exception of providing a number for the 2005 defense budget, which was close to what had already been released earlier in the year. All Chinese

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adjusted for inflation, has increased by over a factor of six, from approximately RMB 55 billion in 1994 to about RMB 350 billion in 2007. (See Figure 1 and Table 4 below.) This increase is the result of consistent annual double-digit increases of over 10 percent (not adjusted for inflation) and took place as the active duty personnel strength of the PLA was streamlined from about three million to some 2.3 million. Concurrently, many old weapons systems were retired and replaced, usually in fewer numbers, by more advanced, sophisticated equipment. The training tempo for the entire force also has increased significantly and grown more expensive as newer, more expensive weapons have been added to the force. In a major break with past practices, since 2002 the PLA has conducted a series of combined training exercises with foreign forces, many focused on anti-terrorist operations, and opened a number of its internal exercises and demonstrations to foreign observers. The Chinese armed forces have conducted numerous internal disaster relief operations in recent years and the PLA has increased its participation in overseas UN peacekeeping operations. These trends have all been outlined in the White Papers.

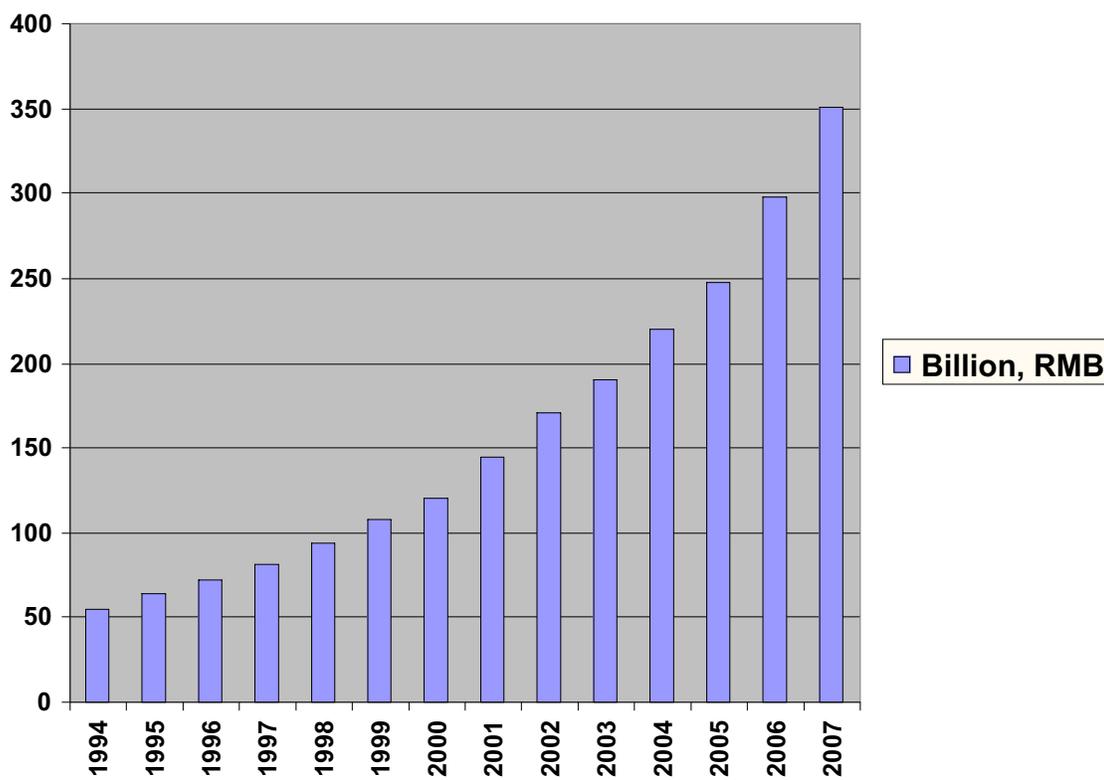
The format and content of information about the defense budget contained in the White Papers has been reasonably consistent over the years. Each White Paper contains information about:

- The total size of the current year's defense expenditure and sometimes information about the previous one or two years;
- The composition of the budget, broken down into three broad categories (personnel, operations and maintenance, and equipment);
- Reasons for increases in the budget over previous years;
- The defense budget as a percentage of total government expenditures and of the Gross Domestic Product (GDP); and
- The comparative size of China's defense expenditures with those of other countries.⁹

government White Papers are accessible at <http://english.gov.cn/links/whitepapers.htm> and <http://www.china.org.cn/e-white/index.htm>.

⁹ This section will not discuss the White Papers' comparisons of China's defense expenditures with other countries because of the complexities involved in these comparisons due to exchange rates, inflation, and differences in exactly what is included in a nation's total defense expenditures. Without accounting for these factors, comparisons of defense expenditures among countries can be misleading. The Chinese are correct, however, when they point out that both in actual numbers and in numbers relative to the spending of other countries that the budget increases over the past 15 years started from a very low base. Senior PLA officers still consider the force to be financially constrained and great efforts are made to save money and conserve funds.

Figure 1. Growth of Announced Defense Expenditures



THE THREE STRUCTURAL CATEGORIES: PERSONNEL, OPERATIONS AND MAINTENANCE, AND EQUIPMENT

The White Papers break down the total Chinese defense budget figures into the three categories of personnel; operations, training, and maintenance; and equipment.¹⁰ *This nomenclature is helpful at a macro-level of analysis, and provides an initial framework for discussions with the Chinese military on budgeting issues. As will be seen in the subsequent chapter, Chinese primary sources provide much more detail about the structure of budget categories.*

Over the years, the subcomponents of these three categories have been identified, but no details of how funds are distributed among subcomponents have been provided.

- **Personnel expenses** mainly cover salaries, insurance, food, clothing, and welfare benefits for officers, non-commissioned officers and enlisted men as well as for civilian employees;

¹⁰ The PLA does not break down its budget by individual services because there is no single "Department of the Army" for the PLA's largest service. However, the Central Military Commission, four General Headquarters Departments, Navy, Air Force, Second Artillery, National Defense University, Academy of Military Sciences, and National University of Defense Technology (known as "major commands") all have their own budgets.

- **Training and maintenance expenses** cover troop training, institutional education, construction and maintenance of installations and facilities, and other expenses on routine consumables; and
- **Equipment expenses** mainly cover research on, experimentation with, and procurement, maintenance, transportation and storage of weaponry and equipment.¹¹

As can be seen in Table 4, Chinese defense expenditures have been roughly divided into thirds for each of the three categories over this entire period. From 1994 to 2005, specific percentages varied among categories, but stayed within the range of 31 to 35 percent each.¹² The details of distribution by category usually did not include information about the year that the White Paper was released, but instead provided information on prior years (for example, the 2006 White Paper gave the break down for 2005, not 2006). The number of years for which data is provided varies among White Papers and gaps in this level of detail can be seen in the two most recent iterations of the document. Nonetheless, the roughly one-third distribution of funds among categories has remained constant. From 1994 to 2006, growth in the size of the personnel account was the largest of the three categories (growing at approximately 5.81 times the 1994 number or 581 percent), followed by growth in the equipment fund (approximately factor of 5.41 or 541 percent), and last operations, training, and maintenance (about factor of 5.01 or 501 percent). The relative growth in the personnel account was spurred by the July 2006 pay increase, where most members of the PLA received a large pay raise, approximately doubling compensation for many personnel. While the 2006 White Paper, which was released in December, acknowledged in general that this pay increase took place, it did not provide details or discuss how the pay raise affected the distribution percentage among the three categories of the defense budget. Rather, the impact of the pay raise is strongly suggested based on the budget information announced in March 2007, specifically the increase in the final year-end budget number compared to the figure announced the year before. (See the following section for details.)

¹¹ These subcomponents are as defined in the 2006 White Paper.

¹² This one-third distribution scheme also extends down to the budgets for operational units. It reportedly reflects 1985-86 guidance from the late Chinese leader, Deng Xiaoping and, as such, has long been immune to reexamination.

**Table 4. China's Officially Announced Defense Expenditures
(in billions of RMB/percentage of total budget)**

Year	Total	Personnel	Operations	Equipment
1994	55.071	18.774/34.09	18.845/34.22	17.452/31.69
1995	63.672			
1996	72.006			
1997	81.257	29.162/35.89	26.536/32.66	25.559/31.45
1998	93.47	32.27/34.52	29.80/31.88	31.40/33.59
1999	107.67	34.86/32.37	38.03/35.32	34.78/32.30
2000	121.29	40.55/33.43	41.81/34.47	38.93/32.09
2000 (update)*	120.754	40.550/33.58	41.274/34.18	38.930/32.23
2001	144.204	46.163/32.01	48.581/33.68	49.460/34.29
2002	169.444	54.043/31.89	58.123/34.30	57.278/33.80
2002 (update)**	170.778			
2003	190.787	62.006/32.50	64.104/33.59	64.677/33.90
2004	220.001			
2005***	247.496	83.159/33.6	80.683/32.6	83.654/33.8
2006	283.829			
2006 (update)****	297.93	109.2/36.65(est)	94.37/31.68(est)	94.37/31.68(est)
2007	350.92			

* Numbers for the year 2000 were provided in both the 2000 and 2002 White Papers.

** Numbers for the year 2002 were provided in both the 2002 and 2004 White Papers.

*** Numbers for 2005 provided during the USCPF delegation visit are consistent with 2006 White Paper.

**** Total is an update based on the March 2007 announcement that the RMB 350.92 billion for 2007 was an increase of 52.99 billion over 2006. Personnel, operations, and equipment numbers are estimates for 2006 only. Previous numbers are based on data from the White Papers.¹³

According to information in the White Papers, the percentage of defense expenditure to GDP has ranged from a low of 1.09 percent in 1996 to a high of 1.63 percent in 2003, dropping to 1.35 percent in 2005. As a share of total state financial expenditures, defense expenditure has dropped from about 9.5 percent in 1994 to 7.29 percent in 2005. These

¹³ The estimates for 2006 are based upon the following calculations: In 2005, the personnel account was 33.6% of the total or about 83 billion (the figures they gave us). In 2006, applying the original 14.7% increase to 83 billion, 12.22 billion should be added for a total of 95.2 billion (prior to the July pay raise). Assuming the entire 14 billion *actual* increase (revealed in 2007) is applied only personnel, that total then becomes 109.2 billion out of a total of 297.93 billion for a percentage of 36.65. Further assuming that operations and equipment split the remainder equally, these accounts each amount to 94.37 billion or 31.675 percent (still significant increases in the absolute numbers for these accounts over 2005). This assumption is probably wrong and either operations or equipment probably received a slightly larger percentage of the budget, but it is likely to fall within a percentage of actual numbers – and still roughly within the traditional spread of 31 to 35 percent per category, or consistent with the one-third breakdown scheme.

numbers, however, only account for the official defense budget and do not include any extrabudgetary categories.

As defense expenditures have grown, the White Papers have given increasingly detailed explanations for the upward movement of the budget. In 1998, the White Paper asserted that “the annual increase in defense outlay went for the most part to ensure that the living standards of military personnel keep up with the nation's social and economic development and with the increase of the per capita incomes of urban and rural residents, so as to improve the living conditions of officers and men.” In 2000, after the divestiture of PLA commercial activities,¹⁴ the demobilization of 500,000 personnel, and the return of Macao to PRC sovereignty, three new reasons were given:

The annual increase in defense expenses went or will go [1] for the most part to cover the increased spending for carrying out their routine duties and operations after the armed forces have ceased commercial activities; [2] increased spending for the placement of retired officers and their pensions; [3] increased spending for pay and subsidy raises for military personnel to keep their living standards in step with the nation's social and economic development and with the increase of the per capita incomes of urban and rural residents; and [4] increased spending for maintaining a garrison in Macao.

In 2002, five reasons were given, reflecting changes in China's social security system, non-traditional security challenges after 9/11, and, for the first time, the expenses associated with new equipment entering the force:

- 1) Increase in personnel expenses.... The past decade has witnessed...an 84% salary raise for officers and 92% allowance raise for soldiers;
- 2) Establishment and gradual improvement of a social security system for servicemen;
- 3) Increase in expenses for maintenance. Since the armed forces stopped commercial activities in 1998, the budgets for training have increased year by year. With the gradual improvement of living facilities and progressive office automation, expenses for maintenance have continued to rise;
- 4) Increase in expenses spent on cooperation with the international community in anti-terrorism activities;
- 5) Appropriate increase of expenses for the improvement of military equipment to enhance defense capabilities under the conditions of modern technologies, particularly high technologies.

¹⁴ The PLA has also divested itself of quartermaster factories formerly run by the General Logistics Department that produced uniforms, shoes, and personal equipment by turning them over to local government control. See “Remarkable Progress Made in PLA Logistics Socialization,” *PLA Daily*, 11 April 2005, and confirmed in conversations in Beijing with senior retired PLA officers as well as a visit to the former PLA 3501 Factory outlet store during the first week of November 2006.

Chinese Defense Budget Structure

In 2004, five reasons again were listed, roughly similar to 2002, but with the addition of costs associated with the 200,000-man reduction announced in 2003 (both in structural reform and demobilization costs) and the recognition of the importance of education of the force. The impact of new equipment was still listed last:

- 1) Increase in the salaries and allowances for military personnel;
- 2) Further improvement of the social insurance system;
- 3) Support for the structural and organizational reform of the military...[and to] increase the expenses for the resettlement of the discharged surplus personnel accordingly;
- 4) Increased investment in the development of high-caliber [human resource] talents; and
- 5) Moderate increase in equipment expenses. This is aimed at promoting the leapfrog development of weaponry and equipment, and stepping up preparations for military struggle.

In 2006, increases in personnel expenses were first (as nearly always), but the cost of equipment immediately followed, tacitly acknowledging the influx of new equipment into the force in recent years, while suggesting this trend is to continue (though the White Paper contained no information on any of the new Chinese-made weapons entering the force or those imported primarily from Russia). Inflation of commodity prices was also included as a factor in the rise of the country's defense spending:

- 1) Increasing salaries and allowances for military personnel and improving their living conditions. Along with the growth of China's economy and the steady improvement of the people's life, the salaries and allowances of military personnel and the pensions of retired officers have increased accordingly. The insurance, medical, housing and other benefits have also increased. Subsidies are being increased, too, to compensate for differences across regions and facilities, and the living conditions of the troops stationed in hardship areas are being improved.
- 2) Increasing investment in weaponry and equipment and infrastructure. The PLA is accelerating its informationization drive, increasing expenses for procurement and maintenance of weaponry and equipment, upgrading the military infrastructure, and improving the facilities for border and coastal defense troops.
- 3) Supporting the training of military personnel. The PLA is increasing input into education and training through both military educational institutions and regular institutions of higher learning. It is also increasing subsidies for professionals with outstanding performance and incentives for experts, and increasing the budget for the employment of contract civilians.
- 4) Compensating for rising prices. As the prices of oil, building materials and staple and non-staple foodstuffs go up, the PLA accordingly increases the expenses on military petroleum, oils and lubricants and defense engineering, and raises the boarding subsidies.

- 5) Increasing expenses for international cooperation in non-traditional security fields.¹⁵

Two Unexpected Expenses: The July 2006 Salary Increase and Unexpected Oil Costs

No details of the impact of the July 2006 pay raise were included in the White Paper. However, during conversations in Beijing in November 2006 a retired PLA officer provided specific details about the changes in the compensation structure. The 2006 pay raise was applied to both active duty and retired personnel and affected nearly everybody in the PLA. From July 2006 to the end of the year, an additional 13.5 billion RMB was spent on salaries and other benefits.¹⁶ The 13.5 billion number mentioned in Beijing is remarkably similar to the difference of RMB 14.1 billion between the RMB 283 billion budget announcement in March 2006 and the *actual* 2006 figure of RMB 297.93 billion.¹⁷ It appears to be a reasonable assumption that most, if not all, of the difference between the announced 2006 budget and the actual budget was the result of the pay raise which went into effect during the second half of the year. This large pay increase skews the traditional 1/3 distribution among budget categories to favor the personnel category by a few percentage points at the expense of operations and equipment. More importantly, when the size of the pay raise is applied to the full year of 2007, it amounts to roughly RMB 28 billion, or over 50 percent of the entire 52.99 billion total budget increase.

The size of the pay increase varies from individual to individual based on four factors:

- Duty position grade and time in grade (years in that grade) (See Appendix 2)
- Military rank based on seniority (years in that rank)
- Time in service at RMB 10 per year (an increase from the previous number of one RMB per year)
- A new living allowance of RMB 560 for officers (enlisted personnel receive less)

For example, a retired major general with nine years at the deputy army grade, nine years as a major general, and 43 years in service received about RMB 4000 per month in retirement pay. (An active duty major general received about RMB 6000 per month.¹⁸) The July pay raise resulted in augmenting the retired general's retirement pay by:

¹⁵ In addition to international cooperation such as UN peacekeeping operations, non-traditional security missions also include domestic requirements such as disaster relief efforts.

¹⁶ USCPF delegation conversations with senior retired PLA officers, November 2006. Similar raises in pay have, according to collateral information, been granted to others in the national security-related professions, e.g., foreign service personnel.

¹⁷ This figure was calculated based on the announcement that "China's defense budget for 2007 is expected to hit 350.92 billion yuan... an increase of 52.99 billion" over 2006. Subtracting 52.99 billion from 350.92 billion results in 297.93, which is an increase of 14.1 billion over the number announced in March 2006.

¹⁸ At an exchange rate of RMB 7.8 to one U.S. dollar, RMB 6000 is about \$769 per month. In the U.S. military, a new recruit upon entering service received basic pay of \$1,178 per month in 2006. A brand new second lieutenant had a basic pay \$2,416 per month. A U.S. major general with 20 years of service received basic pay at \$11,075 per month. For a complete accounting of basic pay and allowance, incentives, etc, see

Chinese Defense Budget Structure

- RMB 1710 for grade and rank
- RMB 560 for living allowance
- RMB 387 for 43 years of service (387 plus the 43 allowance previously received equals 430 for 43 years of service)

The total, RMB 2657, is roughly a 66 percent increase over this general's prior pay. It is commonly understood that the pay raise doubled the salaries for most personnel. Presumably active duty personnel would receive a greater percentage than retired personnel, so it appears likely that some personnel had their pay raised by considerably more than 100 percent.

As an example of how higher prices affected the 2006 budget, discussions in Beijing revealed that an additional RMB 10 billion was spent over plan for the purchase of oil. The amount spent for oil in 2005 is not known, however. In addition to increasing funds for petroleum products, the PLA also has focused attention on fuel conservation and efficiency measures in units of all services in recent years. Articles describing how much fuel has been saved through conservation are not uncommon.¹⁹

BUDGET CATEGORY ONE: PERSONNEL

Every White Paper includes information about the PLA personnel structure. Of the three major budget categories, the most information about personnel costs has been revealed. The reports reveal the topline figure of 2.3 million active-duty personnel, but distribution by service or according to ranks (officers and enlisted) has never been disclosed officially²⁰. A close reading of all the White Papers reveals the following categories of personnel receiving salaries from the defense budget:

- Officers, including retired officers
- “Non-ranking cadre,” known as *wenzhi ganbu*, who are uniformed civilians working for the PLA usually in higher headquarters and administrative or support positions, particularly in the fields of health and education. *Wenzhi ganbu* wear military uniforms and have their own distinctive epaulets and collar insignia. The 1998 White Paper announced, “different from many other countries, China includes... civil cadres... in the overall strength of the PLA.” The number of uniformed civilians working for the PLA has not been released.²¹
- Noncommissioned officers (NCOs)

<http://www.dod.mil/dfas/militarypay/newinformation/WebPayTableVersion2006updated.pdf>. The Chinese government provides no similar detailed information about military pay.

¹⁹ For example, a headline from the *Jiefangjun Bao* website on 15 January 2006 read, “Armed Forces Units Throughout Country Save Close to 100,000 Tons of Fuel in 2005.”

²⁰ Statistics for U.S. active duty personnel specifying numbers for each officer and enlisted rank and service are available at <http://siadapp.dior.whs.mil/personnel/MILITARY/Miltop.htm>. As of November 30, 2006, a total of 1,420,206 personnel were on active duty in the U.S. military, including the Coast Guard.

²¹ *Wenzhi ganbu* are roughly equivalent to civilians who work for the Department of Defense, who do not wear uniforms, but are paid by the defense budget. As of August 2006, DOD employed over 670,000 civilians who are not counted as active duty personnel. See

<http://siadapp.dior.whs.mil/personnel/CIVILIAN/fy2006/august2006/august2006.pdf>.

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- Conscripts
- Cadets in military academies
- Civilian employees, known as *zhigong*, or workers and staff. This category includes the many workers and service personnel, such as drivers, necessary to perform basic administrative and support functions. Unlike *wenzhi ganbu*, these civilian workers do not wear uniforms and are *not* included in the count of total active duty PLA personnel.²²

In 2006, the PLA added a new civilian component of workers: non-active duty contract civilian workers, often called *wenzhi renyuan*. Unlike the active duty *wenzhi ganbu*, these civilians are not counted on the PLA's rolls. Contract workers do, however, wear military uniforms and are paid by the personnel account of the military budget.²³ Contract workers perform a variety of technical and administrative support jobs, such as "teaching, research, engineering, health, culture and sports, library and archives, as well as some administrative and logistics positions."²⁴ As of February 2007, the PLA had employed some 6,000 of this new category of personnel throughout the force.²⁵

The 2006 White Paper also revealed for the first time details of the manning of People's Armed Forces Departments. PAFD personnel perform many functions, including recruitment of new personnel to serve in the armed forces and command of local militia units. Two types of PAFD organizations are described by the White Paper – those found county level and manned by active duty PLA personnel and those found at grassroots levels (villages, towns, townships, and sub-districts), which are "non-active-duty organizations" whose personnel are considered local *civilian*, not military, cadre. These local civilian cadre are known as *zhuanwu ganbu*. As such, local governments must provide the salaries for this unknown number of personnel found in every corner of China who perform duties that directly support all components of the Chinese armed forces.²⁶

The defense budget includes pensions for approximately 300,000 to 400,000 retired officers.²⁷ These retired officers are broken down into three categories:

- 1) Officers who reached the grade level of deputy army commander and above (generally speaking this means they attained the rank of at least senior colonel or major general).

²² Based on USCPF delegation conversations with senior retired PLA officers, November 2006, some civilian workers in General Armament Department-managed maintenance depots and technical civilian workers in research and development organizations are paid out of the equipment category of the defense budget, not the personnel category.

²³ USCPF delegation conversations with senior retired PLA officers, November 2006.

²⁴ "Chinese PLA to Recruit More Civilian Employees," *Xinhua*, March 3, 2006. For many years, the U.S. military has employed a large number of contract workers who provide a variety of services.

²⁵ "Employment of nonmilitary personnel in the army begins to show effects," *PLA Daily*, March 23, 2007.

²⁶ USCPF delegation conversations with senior retired PLA officers, November 2006.

²⁷ For comparison sake, the U.S. military budget supports about 2.1 million retired personnel and survivor benefit recipients. See Charles A. Henning, "Military Retirement: Major Legislative Issues," Congressional Research Service Issue Brief, updated March 14, 2006, page CRS-1 at <http://www.house.gov/english/pdf/militaryretirement.pdf>.

- 2) Officers at division-level and below, who are paid by the military for the initial period of their retirement and are then gradually turned over to the Ministry of Civil Affairs to provide retirement payments. Money provided by the Ministry of Civil Affairs to support retired officers is not included in the announced defense budget.
- 3) Veterans who joined the PLA before 1949.²⁸

Additional funds for resettling demobilized officers and enlisted personnel have been necessitated by the reductions in force implemented since 1997. The Ministry of Civil Affairs and local governments also help PLA personnel not qualified for retirement to find jobs after they are demobilized from active service. Quotas are sent to local governments from a Resettlement and Transition Office that works for the State Council and coordinates with the General Political Department to formulate local demobilization plans. Demobilized personnel are entitled to a one-time resettlement payment depending on their length of service and location.²⁹ For officers and NCOs, local governments send requests to institutions and enterprises in their areas to help the new civilians find jobs. If the officer or NCO volunteers to find his own job without government help, the one-time payment will be higher. Demobilization and resettlement funds from the Ministry of Civil Affairs and local governments are not considered to be defense expenditures by the Chinese. This information may be reported to the State Council, but it is not provided routinely to the military.³⁰ In 2006, over 21,000 retired military cadres were transferred to local governments for retirement placement and in total more than 150,000 retired military cadres have been transferred to local governments since 1958.³¹ In early 2007, the Ministry of Civil Affairs and the General Political Department jointly issued the *Measures on the Hand-over-and-Take-over Work for Transferring the Retired Military Officers to the Local Government for Placement* to standardize the work of transferring retired military officers to the local government for placement.³² At the time of the 2007 budget announcement, *People's Daily* reported that within the total of RMB 350 billion, “3.689 billion yuan [was] from the local budget.”³³ This figure amounts to about one percent of the total announced defense budget and is unlikely to include all funding from local governments to support the Chinese armed forces. Unfortunately, no further detail about the purpose of this local funding was released.

²⁸ USCPF delegation conversations with senior retired PLA officers, November 2006. The Ministry of Civil Affairs also provides pensions to some veterans who served before 1949 but retired in the 1950s, many of whom then took civilian jobs. For 2005, that number was reported as 14.36 billion RMB. See “Government Increases Subsidies For Oldest Red Army Veterans,” *Xinhua*, May 18, 2006.

²⁹ “Government to Speed Up Placement Service for Demobilized Soldiers,” *Xinhua*, January 3, 2006: “The central government [likely the Ministry of Civil Affairs] allocated 17.5 billion yuan for the retired soldiers or military officers' subsidies in 2005.”

³⁰ USCPF delegation conversations with senior retired PLA officers, November 2006.

³¹ “150,000 retired military cadres transferred to local governments for placement,” in *PLA Daily* 2007-02-08 at http://english.chinamil.com.cn/site2/news-channels/2007-02/08/content_730434.htm.

³² “Measures on handing over and resettling retired officers promulgated,” *PLA Daily* 2007-02-14 at http://english.chinamil.com.cn/site2/news-channels/2007-02/14/content_736240.htm.

³³ “Roundup: China's defense budget to rise 17.8 percent in 2007,” *People's Daily* March 05, 2007 at http://english.peopledaily.com.cn/200703/05/eng20070305_354267.html.

The 2006 White Paper also for the first time offered a manpower figure for the People's Armed Police, asserting that this paramilitary force numbered approximately 660,000. This figure is significantly smaller than most foreign estimates of the size of the PAP, which have ranged between one million and 1.5 million over the past decade. The White Paper also confirmed what had been generally recognized before that the People's Armed Police "has an independent budgetary status in the financial expenditure of the state." As such, the PAP budget is not considered part of defense expenditures. From the Chinese perspective, based on its primary duties of ensuring domestic stability, the vast majority of the PAP budget should not be considered as contributing to external defense.

Though most discussions of the personnel category of the PLA budget mainly focus on pay and allowances for personnel, this category also includes food and clothing expenses incurred by the force. Many PLA units at company level produce cash crops, such as vegetables and fruit, and animals, such as pigs, chicken, or fish, to augment the food consumed by the units. Excess from these sideline production efforts may be sold on the open market to earn cash that can then be used to buy other necessities for the units. Larger units maintain agricultural and sideline production bases, which produce staples such as grains and legumes. Despite these efforts, the PLA is not self-sufficient in food production and units must purchase some foodstuffs, especially processed foods and rations for use in the field. The General Logistics Department does, however, have a few research and development facilities that help in the development and testing of these products.

Before 1998, the PLA ran several dozen quartermaster factories that produced most of the PLA's uniforms, shoes, boots, and personal equipment, such as load-bearing equipment. These factories were part of the General Logistics Department system, operated primarily by non-uniformed civilians working for the PLA. These factories now have been turned over to local governments or other means of ownership. Many of them still retain their old numeric designators, such as the 3501 Factory, and produce goods used by the military (along with civilian products), but the PLA currently must purchase their wares out of funds in the defense budget. Compared to overall cost of pay and allowances, the percentage of funds dedicated to other aspects of the personnel account are probably relatively small, but no details have been made public.

BUDGET CATEGORY TWO: OPERATIONS AND MAINTENANCE

Fewer specific facts are known about the composition of the operations and maintenance category of the defense budget. Obviously a large portion of this category is dedicated to the wide array of training conducted to prepare the force to execute its missions, plan and organize its increasingly complex operations, and prepare its troops to effectively operate and maintain its more sophisticated weapons and equipment. The new equipment is more expensive to operate than in previous decades, as seen by the increase in oil costs, and especially more expensive to conduct live-fire training with live ammunition. Accordingly, to help manage costs, the PLA and defense industries have developed a large numbers of equipment simulators to train pilots, drivers, gunners, and other personnel in building the skills necessary for the future battlefield. As the PLA expands

its training in the field with troops and equipment, it also must reimburse local governments and citizens for “maneuver damage” caused during the course of the exercises. No details of amounts transferred to local governments, presumably from the PLA operations budget category, are available and the issue remains controversial among soldiers and local leaders.³⁴

The 2006 White Paper repeats a statement that was first used in the 2000 edition, “defense expenditure covers not only the active forces, but also the militia and reserve forces.” As written, that statement implies that all expenses incurred by PLA reserve and militia forces are paid out of the defense budget. In 1998, the first White Paper, however, limited that support to logistics support, not personnel or operations: “In terms of *the scope of logistic support*, these expenditures cover not only active service personnel, but also militia and reserve requirements.” (italics added) Other recent information strongly suggests that local governments actually provide the majority of funding for at least the *operational* expenses for reserve and militia units. For example, in July 2006, *Xinhua* reported that “Party committees and governments at all levels” should pay attention to “solving practical problems of the militia and reserve forces in the course of training and *providing effective guarantees in terms of policy, funding, and materials.*”³⁵ (emphasis added)

Education expenses to run the system of 67 PLA professional military education institutions are generally included in the operations, training, and maintenance category of the budget. The Ministry of Education also provides funding for a limited number of officers to study at civilian educational institutes in China for graduate degrees. In 2003 the numbers reported were 60 students per year in 29 universities.³⁶ The amount of funding provided by the Ministry of Education for this program is not known. On the other hand, funds to pay for national defense students, who do their undergraduate work at civilian colleges and universities and are obligated to serve in the PLA upon graduation, are included in the PLA operations budget. In 2006, over 10,000 high school graduates entered this program at 112 civilian institutions. The PLA provides a yearly scholarship of 5,000 RMB to each of the 40,000 students in this program.³⁷ Presumably, the PLA (or Ministry of Education) also provides some amount of funding to the universities themselves to support this program.

Personnel and equipment from the PLA, PAP, and militia are routinely used throughout China to respond to disasters and provide relief to civilians affected by floods, fires, earthquakes, and other natural disasters. In 2005, regulations were issued that outline procedures for reimbursement to the Chinese armed forces for performing these missions based on who tasked the forces to act:

³⁴ USCPF delegation conversations with senior retired PLA officers, November 2006.

³⁵ “Circular Issued on Commemorating PLA’s 79th Founding Anniversary,” *Xinhua*, 17 July 2006. There are many other articles in the Chinese military press that discuss the role of provincial and local governments in providing funding for reserve and militia operations.

³⁶ “High-caliber talent program runs smoothly,” in *PLA Daily*, September 29, 2003.

³⁷ PRC: National Defense Students Train at Xian Electronics University CPP20060818145012 Xian Shaanxi Ribao (Internet Version-WWW) in Chinese 29 Jun 06, translated by the Open Source Center (OSC). This amounts to some 200 million RMB annually.

The expenses incurred by the army in participating in disaster relief organized by the State Council *shall be assumed by the State Central Financial Department*. The expenses incurred by the army in participating in disaster relief organized by local people's governments *shall be assumed by the financial departments of the local governments*.³⁸ (italics added)

With reimbursement from the central or local governments for activity related to emergency tasks, the Chinese armed forces *theoretically* should be repaid for the diversion of funds from their operations budgets to perform these important missions (though not necessarily in the year that the expenses were incurred). The amount of money reimbursed will vary from year to year and unit to unit depending on their involvement in these operations.

Finally, within the operations and maintenance category, “construction and maintenance of installations and facilities” is included. Renovation of old facilities, often with energy-saving upgrades, and construction of new barracks and training grounds can be seen throughout China. While the total cost of these projects is not known, in late 2005, statistics from the General Logistics Department stated that 30 percent of barracks areas had reached the standard of “new-concept barracks,” and “50 to 80 percent of Chinese military barracks will be transformed in the next 10 years.”³⁹

BUDGET CATEGORY THREE: EQUIPMENT

Of the three components of the Chinese defense budget, the Chinese government has made public the least amount of detail about the equipment sector. No information has been released about costs for weapons and equipment produced by the Chinese defense industries. And little has been officially acknowledged about the specifics of foreign weapons purchases, most of which are assumed to be funded by special state funds and not from the PLA’s own budget. In particular, little is known about how research and development funds are allotted to the military, COSTIND, and the civilian defense industrial base.

The PLA has several armament research institutes that participate in the R&D for weapons and equipment, as well as a number of weapons testing ranges and bases. Some amount of PLA R&D funding is directed toward these institutes and bases; additional R&D money is provided to the various elements of the civilian defense industrial base, most of which probably comes from COSTIND, though some might also originate from the Ministry of Science and Technology.

The Chinese space program is a joint military-civilian effort, presumably funded in large part by R&D monies. Although the director of the General Armaments Department, General Chen Bingde, is the “commander-in-chief of China’s space program,” within the

³⁸ “PRC Regulations on Military Participation in Disaster Relief,” *Jiefangjun bao*, 7 June 2005.

³⁹ Liaowang Article Discusses 'New-Concept' Military Barracks *CPP20060105058002 Shanghai Liaowang Dongfang Zhoukan in Chinese 17 Nov 05 No 46, pp 35-39*, translated by OSC.

program itself, the GAD manages only three systems (launch, tracking, and recovery systems), with COSTIND's China National Space Agency managing the rest.⁴⁰

One final note as to how complicated the PLA budget can be, based on interviews in Beijing, the salaries of some civilians who work at depot-level maintenance facilities and technicians in R&D functions are paid out of the equipment budget, not the personnel budget.⁴¹

CONCLUSION

In summary, the series of Chinese White Papers provide an elementary foundation of data about China's defense expenditures. When considered together, they provide a larger body of data and information than any one single edition. Important trends and changes can be discerned by comparing the White Papers with each other. Unfortunately, discussion of defense expenditures in the White Papers is not as detailed or complete as is needed to judge objectively the full scope of China's defense modernization. Moreover, many basic questions about the PLA remain unanswered officially, such as the size of the individual services or numbers of officers, *wenzhi ganbu*, NCOs, conscripts, and civilian workers on the payroll or the numbers of PLA and PAP troops who perform border security duties every day of the year. Hints to the answers of many of these and additional questions can be found by close examination of other Chinese sources, but very few official sources provide answers at the level of detail required to build the confidence in many foreign governments and analysts. Nevertheless, the Chinese government's publication of the White Papers on a regular schedule is a welcome development and is to be encouraged. The Track II dialogue between the PLA and the United States – China Policy Foundation is another positive step along this path.

While the White Papers are a good place to start in the quest to understand total Chinese defense-related spending, many questions remain about the extrabudgetary sources of income available to the PLA, People's Armed Police, and militia. Many of these unknown, unquantified sources have been mentioned in the paragraphs above and come from a variety of central government sources, as well as local governments, commercial enterprises, and the activities of military units themselves. (See Table 5 for a summary.) Others likely exist.

More official data from the PLA or the Chinese government in answer to some of the questions raised above would help foreigners better understand China's military capabilities and thus shed light on Beijing's strategic intentions. The amount of resources dedicated to China's military modernization should be considered in light of other national priorities. For example, though the announced defense budget in 2006 finally amounted to nearly 300 billion RMB, in the same year 339.7 billion RMB from the central government was spent on "the three rural issues" (agriculture, peasants, and rural

⁴⁰ USCPF delegation conversations with senior retired PLA officers, November 2006. See "Shenzhou-6 a milestone in China's space program: Chinese top legislator," in *People's Daily*, October 17, 2005, for identification of Chen Bingde as "commander-in-chief of China's space program."

⁴¹ USCPF delegation conversations with senior retired PLA officers, November 2006.

SECTION 3. INSIGHTS INTO CHINESE DEFENSE BUDGET ORGANIZATION AND PROCESS

DEFENSE BUDGET ORGANIZATION

In addition to breaking the defense budget down into its constituent elements, it is important to understand both the budget organizations themselves and the processes they use to develop the budget, as both can provide further insights into the overall budget itself.

The Defense Budget Organizational System

Figure 2 (see page 32) summarizes the overall PLA budget organization. At the top of the chart is the Party leadership in the Politburo Standing Committee, followed by the Politburo and the Central Committee, all of which set the country's overall strategic direction. Civilian governmental organs, headed by the State Council, comprise the right side of the figure. Though many government bodies have responsibility over parts of the financial and economic system, the Ministry of Finance is responsible for developing the national budget, which includes defense spending below the national level. Civilian government units at the provincial, municipal, county, township, and village levels provide supplementary funding to the military units and organizations within their jurisdictions.⁴³

On the military side of the chart, the CMC is the highest command organization for the military and is also the highest policymaking organization for PLA finance, where it “manages defense outlays and assets jointly with the State Council.”⁴⁴ It determines the PLA's modernization priorities, the direction of military development, and it is also responsible for the level of total military expenditure. As part of this mandate, the CMC provides unified leadership over the military's entire financial dealings. The CMC is responsible for examining and approving Five-year Plans (FYP) for military expenditure, the annual general budgets for the PLA, general accounting, and large expenditures. The CMC also approves and issues military-wide regulations on military financial work and expenditure standards.⁴⁵

The GLD is subordinate to the CMC and is responsible for allocating funds for all budgetary items; working out the Five-year Plan for military expenditures and the annual military budget as well as implementing general accounting for the military; drafting military-wide financial regulations, arranging the military-wide system of finance

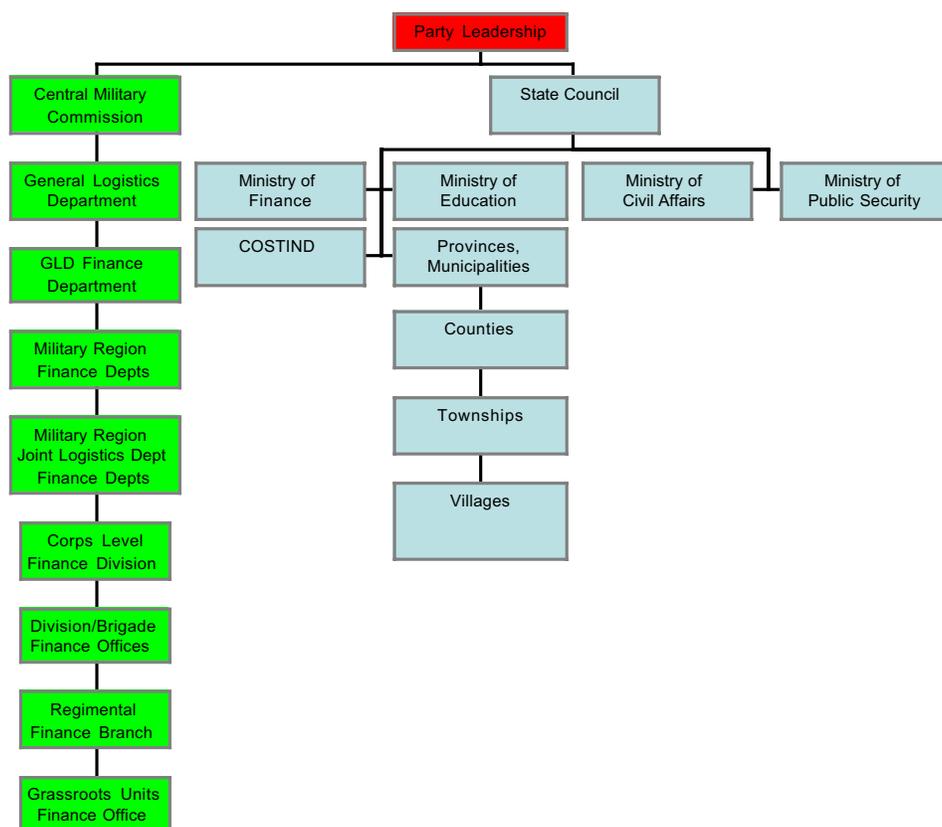
⁴³ James Mulvenon, “China's Military Expenditures,” in Keith Crane, et al, *Modernizing China's Military: Opportunities and Constraints*, Santa Monica, CA: RAND, MG-260-1-AF, 2005, pp. 91-134.

⁴⁴ Information Office of the State Council of the People's Republic of China, “Chapter III: National Defense Construction,” *China's National Defense*, July 1998, accessed at <http://www.china.org.cn/e-white/5/5.3.htm#3> on March 27, 2006.

⁴⁵ Sun Zhiqiang, ed., *Practical Encyclopedia of Chinese Military Finance (Zhongguo Junshi Caiwu Shiyong Daquan)*, Beijing: PLA Publishing House, 1993; hereafter referred to as ZJCSD, pp. 10-11. In 2006, this book was in its 13th edition, strongly suggesting its continued relevance.

standards, and organizing the implementation of the total budget.⁴⁶ Though the CMC heads the entire PLA financial process, the military finance system is technically subordinate to the GLD, with the GLD's Finance Department specifically responsible for financial affairs. Each subordinate logistics department at every level of the system has, in turn, a subordinate finance department, division, office, or branch under the joint direction of the logistics departments and the logistics finance departments at higher levels. Below regimental level, lower level units do not necessarily have logistics finance departments, but they will have established their own equivalent financial organizations or finance cadres.

Figure 2. The Chinese Defense Budgeting Organizational System



The GLD Finance Department is the highest organization within the PLA finance system, and it administers the entirety of the military's financial work.⁴⁷ Most important among its responsibilities is drafting the mid-to-long term financial revenue and expenditure plans for the PLA. Additionally, it manages the PLA's annual budget and general accounting, carries out assessments and revisions of the military-wide system of finance standards, ensures the overall balance of the budget, and adjusts and manages all

⁴⁶ ZJCSD, pp. 10-11.

⁴⁷ ZJCSD, pp. 10-11.

military-wide revenue and expenditure plans. Specifically, the logistics finance departments are responsible for:

- Managing the military's financial affairs
- Planning and balancing expenditure items
- Managing transfers, receipts, and payments
- Settling accounts
- Reporting expenses
- Examining product pricing from military enterprises
- Reporting on budget and financial supervision⁴⁸

To facilitate the budgeting process, the GLD Finance Department manages a vertical system of subordinate logistics finance departments at every level of the military. The budgeting process also includes operating departments. These operating departments are under the control of their functional chains of command, while the system of finance departments exercises oversight of their budgets. At each level, operating and logistics finance departments exercise shared management over budgetary expenditures. While the logistics finance departments are concerned with the management of military finances, the operating departments are focused on spending these finances.⁴⁹ Party committees are also involved at all three management levels and are responsible for examining and approving annual budgets and large projects for their work units.⁵⁰ A final role the GLD Finance Department performs is that it directs the account settlement centers.⁵¹

Sitting below the GLD are the military regions and armed services. The MR joint logistics finance departments are responsible for examining and approving budgets and deciding on large expenditures for ground force, Navy and Air Force units subordinate to the headquarters. They are also responsible for ensuring a balanced budget, drafting supplementary regulations, implementing rules and regulations, handling funds transfers, receiving funds for each budgetary item, and organizing and directing financial work for the departments they supply with funding.⁵² The armed services logistics finance departments have essentially the same functions; however, their main duty is to manage the finances of those units directly subordinate to them.

The finances for all other PLAN and PLAAF units are managed by joint logistics department finance departments, which comprise the third level of the finance system. The JLD finance departments are responsible for supplying funds and managing the finances for all ground, naval, and air force units that fall within their respective military regions.

⁴⁸ ZJCS, pp. 10, 13, 132-133.

⁴⁹ ZJCS, pp. 5, 11.

⁵⁰ ZJCS, p. 10.

⁵¹ ZJCS, pp. 11-12. The PLA's system of account settlement centers (ASCs) has both banking and financial control functions. These centers manage capital, supervise the financial activities of operating departments, and manage accounting. In particular, the ASCs are responsible for centralizing the financial management (especially account settlements and expense reports) of operating departments under the General Departments, military regions, services, and lower-level units.

⁵² ZJCS, pp. 10-12, 132-133.

The fourth level consists of units at the corps/army-level and below that have party committees. Organizations at this level are responsible for developing specific implementation methods for supplementary regulations developed at the above level. Like the level above, these units are responsible for overseeing budgets and large expenditures.⁵³

Grassroots spending units include companies, dining facilities, the officer cadet corps, and management departments. Units at this level are primarily responsible for their direct revenue and expenditure on personnel, maintenance, operating, and other expenses. Generally, these units do not supply funds to other work units.

An Alternate Framework for Understanding Chinese Defense Budget Organization

POLICYMAKING UNITS

Policymaking work units are responsible for the system of financial regulations, the formulation of management methods, the allocation of funding, and the organization of and policymaking for major financial activities. Policymaking units include a variety of high-level organizations, which are categorized according to their responsibilities within the following four management levels:

- 1) CMC and General Departments
- 2) Military regions and armed services
- 3) Joint logistics departments
- 4) Units below the corps/army level

MANAGEMENT ORGANIZATIONS

Management units include military region air forces, naval bases, Second Artillery Corps bases, group armies, provincial military districts, garrison commands, and logistics sub-departments. These units organize, examine, and implement all financial work for the units they fund.

IMPLEMENTING ORGANIZATIONS

Implementing work units include divisions, brigades, regiments, and equivalent units. These units are primarily engaged in implementing the military finance system, ensuring the completion of financial work ordered by upper levels, and dealing with revenue and expenditure tasks.

⁵³ ZJCSD, pp. 10-11, 132-133.

OTHER DEPARTMENTS

Operating departments are responsible for financially managing operating tasks. These departments include hospitals, warehouses, military schools and universities, scientific research organizations, military transport representative offices, military affairs representative offices, and other financial management units. This group of organizations is responsible for managing operating finances and income for their subordinate work units and departments.

CHINESE DEFENSE BUDGET PROCESS⁵⁴

The Chinese military budgeting process provides an important window into PLA institutional equities and priorities. Interestingly, it is also one of the few areas of regular, standardized interaction with the rest of the Chinese bureaucracy, and thus offers unique insight into the military's role within the system. As described in this section, the PLA budget process includes formulating the budget, supplying funds to military units from the budget, adjusting unit budgets during the year, and settling all year-end account discrepancies.

At a macro-level, sources have documented the existence of three military budget processes that operate more or less simultaneously. The first, known as the centralized process, predominates and involves direct allocations from the state to the PLA's central, military region, and military district levels. The second, the decentralized process, complements the centralized process with funds contributed by civilian government units. A third system relevant to certain budgetary items is a combination of the centralized and decentralized processes.⁵⁵

The 2006 White Paper for the first time included a brief discussion of the process of formulating the defense budget.

China practices a strict system of financial appropriation of defense funds. The PLA's budgeting is based on the defense development strategy, military building objectives and annual military tasks set by the state. Budgeting units at each level carry out studies to decide on their budget items, make calculations of their requests for funds and then report to the next-higher authorities. The General Logistics Department, working with the relevant departments of other general headquarters/departments, analyzes, calculates and verifies the annual budget requests submitted by all the military area commands, the Navy, Air Force and Second Artillery Force, and draws up the defense budget. After being reviewed

⁵⁴ This section is adapted from, Mulvenon, "China's Military Expenditures," pp. 97-100. Also see ZJCSD, p. 142 and *Modernizing China's Military: Progress, Problems, and Prospects*, p 205.

⁵⁵ *Modernizing China's Military: Progress, Problems, and Prospects*, p. 205.

and approved by the CMC, the defense budget is submitted to the Ministry of Finance. The latter, on the basis of medium- and long-term fiscal plans and the estimated revenue of the year, puts forward a plan for military expenditure appropriations after consultation with the General Logistics Department, and then incorporates it into the annual financial budget draft of the central government. Upon approval by the State Council, the annual financial budget is submitted to the Budget Work Committee of the NPC Standing Committee and the Finance and Economic Committee of the NPC for review before it is submitted to the NPC for review. After the budget of the central government is approved by the NPC, the Ministry of Finance informs in writing the General Logistics Department of the approved defense budget. The defense budget is then implemented down to troops at different levels through prescribed procedures.

Financial departments are instituted at the General Logistics Department, military area commands, Navy, Air Force and Second Artillery Force, and units at the levels of corps, division (brigade) and regiment. These departments are responsible for the appropriation, management and supervision of the defense funds. The auditing offices of the state and the PLA conduct strict supervision of the defense budget.

A significant revelation in the paragraphs above is the acknowledgement that “all the military area commands [i.e., the seven military regions], the Navy, Air Force and Second Artillery Force” each have their own budgets and submit their requests to the General Logistics Department. Additionally, the Central Military Commission, the Ministry of National Defense, the four General Departments, the Academy of Military Science, National Defense University, and National University of Defense Technology each have their own budgets.⁵⁶ For financial purposes, these organizations are known as “budget units” and are treated as equals.⁵⁷ The relationship among these organizations is seen at Appendix 1.

The Budget Calendar

The PLA fiscal year is the calendar year, starting in January and ending in December. Little is known about the exact methods used to determine the topline of the budget each year, since most of the available information on the macro-budgeting process is from pre-zero based budgeting sources. Nevertheless, working from the calculated assumption that the PLA’s centralized budgeting system still operates according to a down-up-down dynamic, it is believed that the GLD works with the Ministry of Finance and the Central Military Commission to establish total expenditure levels. The first “down” stage in this procedure begins with the announcement of the annual military expenditure level in March at the NPC.

Next is the “up” process commences each April and activates three additional steps. First, all of the major PLA units – the MRs, service branches, military units at all levels,

⁵⁶ USCPF delegation conversations with senior retired PLA officers, November 2006.

⁵⁷ USCPF delegation conversations with senior retired PLA officers, November 2006.

operating departments, and each of the General Departments – collects the following budget materials and information:

- Materials on the previous year’s general budget, itemized budgets, and related earmarked expenditures
- Information on how much of the current year’s finances can be devoted to spending
- How much the state plans to allocate for military expenditure (announced at the NPC in March)
- Expenditure targets from the CMC and General Departments
- Current finance and economic policies and standards related to the military budget
- Reports justifying the military expenditure requests

In the second step, these work units calculate their funding needs, or the amount of funding required for each item in the PLA’s budget.

The third step is to create drafts of the annual budgets for each work unit and the operating departments’ itemized budgets. These drafts depend on the overall level of military funding from the state, their specific allocations, and the tasks determined by the CMC and General Departments. Using these factors, each unit’s draft lays out a detailed expenditure plan and includes additional information, such as a budget statement, an explanation of budget allocations, and steps for implementing the budget. After the budget plan has been formed, the draft undergoes a process of examination and approval that involves soliciting views from related departments, higher level departments, and party committees. Drafts are completed by June.

These proposed budgets are then sent upwards through the system of logistics finance departments and reach the military district logistics finance departments in July. The military districts assemble the proposed budgets they receive and send them to their respective MRs in August/September. The MRs then send the plans to the GLD Finance Department. The USCPF delegation’s interlocutors in Beijing asserted that the PLA also receive the defense budget ceiling from the Ministry of Finance by 10 November.⁵⁸ Once all of the estimates have reached the GLD (sometime in early fall) and the PLA has its topline, an “All Army Logistics Conference” is held in Beijing in November to construct the final budget.

After the conference concludes, the GLD sends the proposed budgets to the CMC, along with the final accounts for that year. Once the CMC receives these bids and final accounts, it compares the final accounts with the total expenditure level and allocations proposed in the upcoming year’s PLA budget. The recommendations must then sent to the Ministry of Finance by 10 December,⁵⁹ the act of which then closes the books on that year’s final accounts and sets in motion the next year’s military expenditure level

⁵⁸ USCPF delegation conversations with senior retired PLA officers, November 2006.

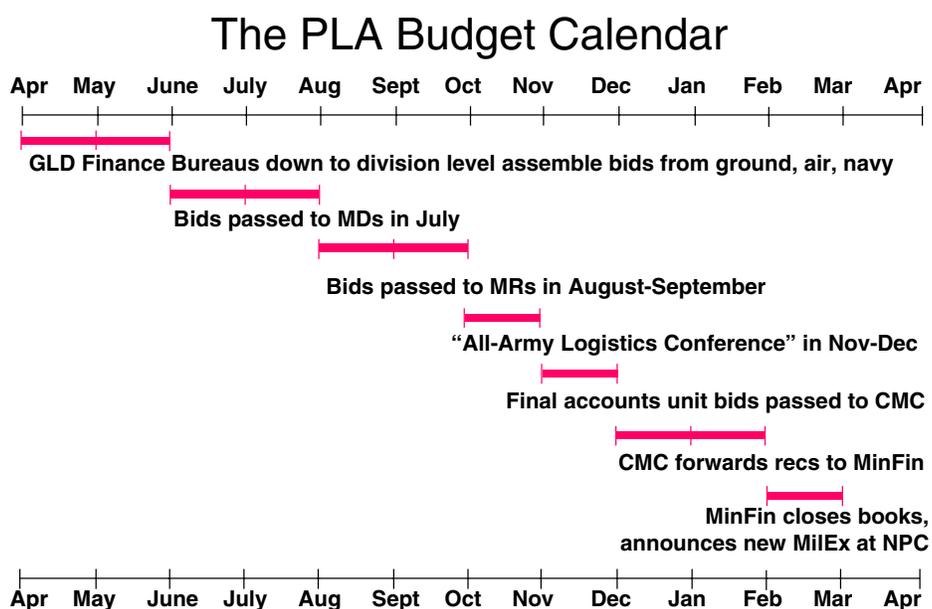
⁵⁹ USCPF delegation conversations with senior retired PLA officers, November 2006.

consultations among the state councilors, the Premier's Office, and certain Politburo leadership small groups.

Because the PLA's fiscal year is based on the calendar year and the National People's Congress is not held until March, each major command manages a "revolving fund" used in the early months of each year (January through April), until the budget is finalized by the Ministry of Finance.

In the final "down" step, the total military expenditure level is announced, along with the total central budget, at the NPC in March. Final decisions on allocations are sent at this time from the Ministry of Finance to the CMC, and down to lower levels through the system of logistics finance departments. (See Figure 3).

Figure 3. The PLA Budget Process⁶⁰



Budget Process: Categories of Budgets and Funds

The overall expenditure level of the PLA's general budget is determined in part (but not entirely) by three lesser types of budgets:

- Annual budgets from work units
- Itemized budgets
- Earmarked expenditures

Annual work unit budgets include the budgets of military regions, service branches, and all levels of military units. From the military region/services level down to the regiment,

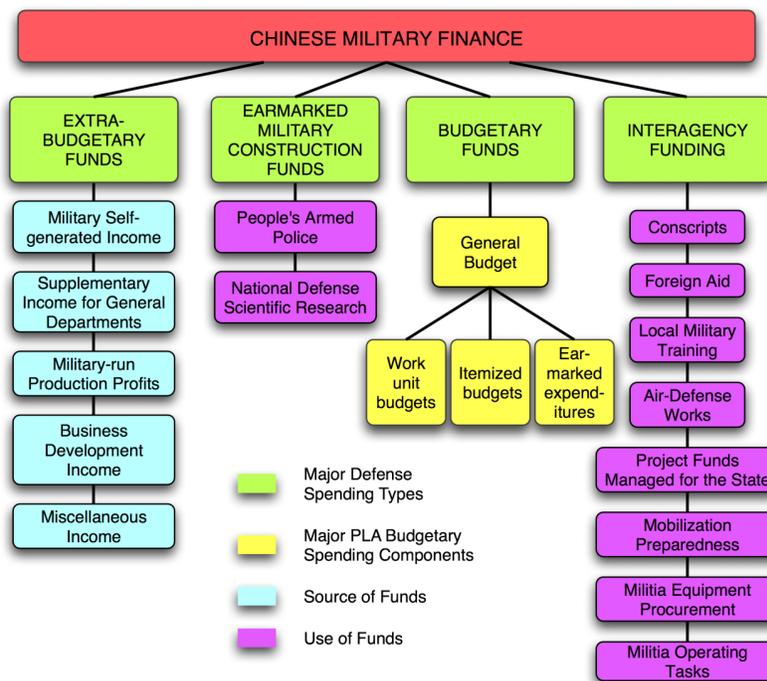
⁶⁰ Mulvenon, "China's Military Expenditures," p. 99.

as well as work units at equivalent levels, units draft and execute their own annual budgets. The content of these budgets determines how lower-level units formulate their budgets. Work unit budgets are structured much like the general PLA budget, although variations do occur depending on the type and level of the work unit. During the annual PLA budgeting process, these budgets are sent to the GLD Finance Department, which then collates and sends them to the CMC.⁶¹

Itemized budgets are annual revenue and expenditure plans for itemized spending that are formulated by “operating departments” at every level. Itemized budgets include the budgetary funding and extrabudgetary income for that year and war reserve materials that will be used to supplement budgetary funds.⁶² Operating departments formulate itemized budgets once a year based on their allocations from the general PLA budget and their operating tasks.⁶³

Earmarked budgets are revenue and expenditure plans that cover certain specially designated expenditures. Earmarked expenditures include equipment procurement, logistics equipment procurement, capital construction, fuel, scientific research, combat readiness and operations, horses, and CMC reserve funds. Earmarked budgets are formulated by either the relevant department or the finance departments and must then be reported to the GLD or military regions for examination and approval.

Figure 4. The Structure of Chinese Military Finance



⁶¹ ZJCSD, pp. 133-134, 221.

⁶² It is unknown how war material reserves supplement the budget. Two possible reasons are that excess stock is counted as additional budgetary revenue or that excess stock can be sold.

⁶³ ZJCSD, pp. 133-134, 221.

Types of Military Finance Funds

As emphasized above, Chinese defense-related spending is distributed across more than just the PLA budget. Reports on of the Chinese defense budget have thus far only provided top-level analysis of the PLA budget and have barely mentioned defense-related budgets outside the scope of the PLA budget proper. The following section goes beyond the current literature and not only provides extensive details on the PLA budget but also describes other defense-related budgets that fall under what the Chinese term “military finance.”

Internal Chinese military sources provide more detailed insights into the key components of military finance. Unlike the descriptions in the White Papers, according to these sources military finance is divided into four types of funds, descriptions of which are listed below:⁶⁴

- 1) **Budgetary funds:** These funds are allocated from the state to the military and serve as the basis for military finances. These funds compose the PLA budget.
- 2) **Extrabudgetary funds:** these are composed of the military’s self-generated income, supplementary income for the General Departments, profits from military-run production, income from business development, and miscellaneous income. These funds work in tandem with regular financing to units from the PLA budget.
- 3) **Earmarked military construction funds:**⁶⁵ these funds are used for People’s Armed Forces Departments and national defense scientific research.
- 4) **Interagency funding:** these funds are appropriated by the state, local governments, or related organizations. The management of these funds is entrusted to military work units. This funding category covers expenses for militia operating tasks, conscripts, foreign aid, local military training, project funds managed for the state, people’s air-defense projects, mobilization preparation,⁶⁶ and militia equipment acquisition.

From this description, it is clear that Chinese defense-related spending includes inputs from other central government agencies (such as the various ministries), local governments, and contributions from units themselves.

At township and village level, the salaries for *zhuanwu ganbu* in the People's Armed Forces Departments are paid by the local governments. These personnel are considered local *civilian* cadre and are responsible for conscription and command of militia units. At county-level and above, active duty officers man People's Armed Forces Departments and are funded by the PLA budget.

⁶⁴ ZJCS D., pp. 4-5, 132.

⁶⁵ Construction in this sense means all the measures required to build and maintain an effective force and national defense science and research structure.

⁶⁶ Mobilization preparation funds are earmarked funds used for ensuring there are adequate numbers of reserve and active duty troops. See Qian Shugen, ed., *The Encyclopedia of Chinese War Mobilization*, Beijing: Military Scientific Publishing House, 2001, p. 174.

Some funds for demobilization are provided by local governments and the Ministry of Civil Affairs, but those funds are not reported to the PLA, and rather any reports that are made go to the State Council.

The General PLA Budget

The PLA budget is comprised of only the first funding category (“budgetary funds”), with the three other funds categories defined as part of other, non-PLA budgets. The PLA budget – also called the “general PLA budget” or the annual military budget – plans funding allocations for the entire military, controls and directs the budgets for each military level, and controls earmarked expenditures. It is itself divided into 15 functional components:⁶⁷

- 1) Personnel expenses
- 2) Official business expenses
- 3) Operating expenses
- 4) Education and training expenses
- 5) Equipment acquisition expenses
- 6) Logistics equipment acquisition and maintenance management
- 7) Equipment maintenance management expenses
- 8) Petroleum expenses
- 9) Capital construction expenses
- 10) Scientific research expenses
- 11) Operational readiness and operational expenses
- 12) Other expenses
- 13) Central Military Commission reserve management funds
- 14) Militia construction expenses
- 15) People’s Air Defense expenses

Table 6. Notional Mapping of Functional Budget Components Onto White Paper Categories

PERSONNEL	O&M	EQUIPMENT	UNKNOWN
Personnel expenses	Official business expenses Operating expenses Education and training expenses Petroleum expenses Capital construction expenses Operational readiness and operational expenses Militia construction expenses People’s Air Defense expenses	Equipment acquisition expenses Logistics equipment acquisition and maintenance management Equipment maintenance management expenses Scientific research expenses	Other expenses Central Military Commission reserve management funds

⁶⁷ ZJCSD, pp. 133-134.

Supplying Budgetary Funds⁶⁸

Previous analyses on PLA budget processes have focused on how the annual budget is created. Less attention has been paid to how budgetary funds are distributed through the military hierarchy. This distribution occurs through the military's funding system, which dictates how budgetary funds make their way from the CMC to military units at every level of the PLA.

The military funding system operates according to the military's hierarchical structure.⁶⁹ At present, the GLD directly funds military regions, the Navy and Air Force, Second Artillery Corps, and other large units. These units, in turn, fund their respective subordinate units. In January 2000, the PLA established joint logistics departments at the MR level to supply and fund the ground forces, Air Force, and Navy. Joint logistics departments' finance departments allocate funding to operational units through MR-level service logistics departments finance departments. The Second Artillery Corps, technically a service arm rather than a full service, is still directly funded through the GLD. Looking at the funding organizations for each of these units (also see Appendix A):

- **Military regions:** subordinate units in the MR are funded through the joint logistics department finance department
- **Ground forces:** the joint logistics finance departments fund the corps in their MR, who in turn fund a system of divisions, brigades, regiments, companies, and other work units at equivalent levels.
- **PLAN:** the joint logistics finance departments fund the MR's Navy logistics finance department. This department then transmits funding through a system of bases, naval garrisons, and ships
- **PLAAF:** the joint logistics finance departments fund the MR's Air Force logistics finance department. This department then funds subordinate units through a system of military region air forces (MRAF), corps and command posts, airfields, ground regiment level work units, and grassroots food work units.
- **Second Artillery Corps:** the Second Artillery Corps headquarters funds all subordinate units through a system of bases, brigades and regiments, and grassroots work units.
- **Logistics sub-departments:** military region logistics departments receive funding from the joint logistics finance departments in their respective MRs. These sub-departments are not only responsible for funding hospitals, warehouses, and other subordinate units, they are also responsible for funding units specified by their military region.

Adjusting the Budget

Budgets or allocations sometimes need to be adjusted during the course of the year. This is usually due to modifications of resources, tasks, or prices after the budget has already

⁶⁸ ZJCSD, p. 134.

⁶⁹ That is, units that are directly under their chain of command. This type of funds supply is also termed "organic supply". See ZJCSD, p. 134.

been implemented.⁷⁰ The July 2006 pay raise, which was implemented half way through the fiscal year, appears to be the most significant recent example of a budget adjustment.

Account Settlement and Final Accounting⁷¹

At the end of each year, units are required to settle their budgetary accounts and draft final accounting reports, which summarize how their military budgets were implemented. Final accounting follows specific procedures depending on the type of funding. In general, each operating and logistics finance department works out its own final accounts. These reports must be verified and approved before making their way through the finance system. The GLD Finance Department compiles these final accounting reports into one report for the entire PLA budget, which is then sent to the GLD for examination. The GLD, in turn, sends the report to the CMC for approval, which also reports the final accounting to the Ministry of Finance.

⁷⁰ ZJCSD, p. 225.

⁷¹ ZJCSD, pp. 143, 225, 227.

SECTION 4. CONCLUSIONS

WHAT DID WE ACCOMPLISH?

Our meetings with the PLA and the resulting data provided in this report generated two major insights relevant to improving our understanding of the Chinese defense budget – as well as improving the quality of U.S.-China dialogues on sensitive military questions.

First, the delegation’s conversation with the PLA initiated a process of bilateral defense budget consultations, albeit of the Track II variety, that could grow into a more substantive and formal interactions. The PLA’s willingness to engage in this process with the USCPF delegation indicated that the Chinese view bilateral defense budget consultations as an area potentially worthy of discussion. Our delegation sensed a nascent and growing Chinese recognition that national defense budget information serves as an important signal to other nations of China’s national strategic intentions, priorities and policies. Thus, a new avenue for bilateral military consultations may be opening.

Second, our discussions revealed the importance of developing a common method for assessing and comparing national defense budgets – an insight that should directly inform future bilateral defense budget consultations. Perhaps the single greatest finding from our trip was that the U.S. and Chinese use drastically different baselines and related methods for counting the defense budget; this makes comparison a very challenging task. To address this structural constraint, this report puts forward the concept of “total defense-related spending,” drawing from multiple international definitions, to facilitate such comparison.

It is critical that any formal bilateral defense budget dialogue include the deceptively simple task of proposing national definitions of defense spending (i.e., what is in and what is out) in an effort to agree upon a common definition that can then be used to generate numbers that facilitate comparison. Although likely to be a complex task, it is a necessary part of a *process* of military-to-military interactions that gradually reduces suspicions through the channel of gradual and selective transparency. It may also provide the PLA with the time and opportunity to create an internal process for gathering this data from within their disparate bureaucracy.

Third, the delegation’s discussions in China helped both sides to identify the precise scope of the differences between the U.S. and the Chinese defense budgets. The remaining differences are myriad and are the source of enduring concerns about China among U.S. strategists and defense planners. The data in China’s official defense budget is limited and highly aggregated, constraining the ability to compare it to international standards. Some of the most basic information on the budget and budget processes is lacking:

- Contributions to the PLA budget by civilian government units
- Extrabudgetary expenditures, such as foreign arms acquisitions
- Expenditures by service branch
- Expenditures by functional category

Defense-Related Spending in China

- How funding allocations are determined

Further complicating the task facing Chinese military budget analysts is that China's official defense budget is so enormously disaggregated within different Chinese ministry budgets that the PLA itself may not even know the total figure. The result is that some defense spending usually included in Western budgets is not included in the PLA budget. Defense budget items not listed in the PLA budget that are usually included in Western budgets are:

- Arms imports, especially large imported weapons systems
- PAP expenses
- Some demobilization and military pension costs
- Some RDT&E expenses
- Some extrabudgetary revenue
- Funding from provincial and local governments
- Some capital construction expenses for defense projects
- Some elements of the nuclear weapons and strategic rocket programs

Overall, through this effort we now have 1) a better understanding of the composition of the officially announced Chinese defense budget, 2) a more detailed listing of the types of extrabudgetary inputs that augment the resources available to the Chinese armed forces, and 3) a general knowledge of the process by which the military budget is formulated and executed. Nonetheless, at this time, we do not have enough information to make a reasonable estimate of the total amount of Chinese "defense-related spending." There is little data available to even guess at the size of many elements of extrabudgetary input – the single exception is the foreign estimate of 2-3 billion dollars (U.S.) annually over the past several years that have been allocated to the purchase of Russian weapons and equipment. If data were available to calculate the size of other extrabudgetary funds available to the PLA, it would also be necessary to determine an analytically sound methodology to adjust the total sum to account for the differences in exchange rates and/or the purchasing power of the RMB in the Chinese domestic economy. Moreover, as the Chinese government provides more money to the PLA and slowly explains more of this process, some of the assumptions of the past may no longer be operative, especially as the value of the Chinese currency is gradually adjusted. In fact, some former "extrabudgetary" sources of income may now be incorporated into the announced budget. In the meantime, in order to be credible, any foreign estimate that attempts to gauge the size of the "real" Chinese defense budget must delineate exactly what extrabudgetary factors are included in their calculations, what amount of money goes to each factor, and how currency conversion rates have been accommodated. Because of the imprecision of these computations, a foreign estimate of "actual" Chinese defense spending should be stated within a range of numbers, admitting that this range is only a guess, and not focus only on the high end number in this range.

WHERE DO WE GO FROM HERE?

We assess that there is an opportunity to both further expand existing Track II dialogues and to create a distinct defense budget working group under the framework of the

Conclusions

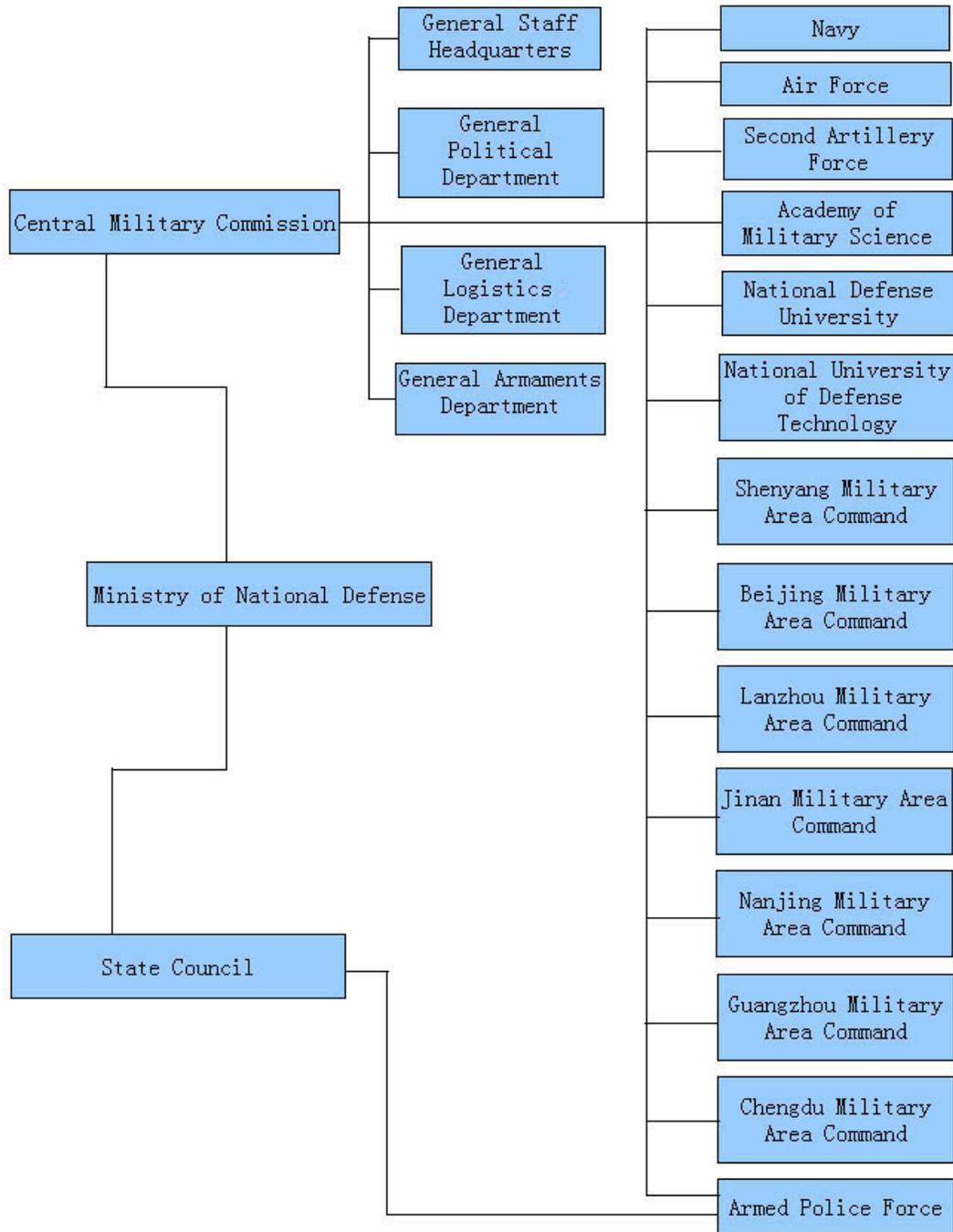
existing U.S.-China Defense Consultative Talks. We propose that such a working group could have the four part format detailed below. The goals would be two-fold: to develop a common baseline for analysis and comparison, and to narrow misunderstandings about each other's national defense intentions, priorities and plans.

- **Strategy and Policy** -- This could address three general issues: secrecy versus openness, national budget priorities, and understanding U.S. and Chinese defense budget priorities. Such an approach is premised on a negotiating approach that begins with general topics and moves to increasingly specific ones.
- **Towards a Common Definition** -- A second major activity could be negotiating a common definition of defense spending. This report's definition of "total defense-related spending" is one place to begin, as it incorporates elements of other major international standards. This negotiation should be pursued with the intention of creating a model that China could apply to bilateral military dialogues with other nations.
- **The Content of the PLA's Budget** -- Given our limited information about so many aspects of the PLA's budget, there are at least five sets of questions (and various sub-questions) that need to be addressed, including:
 - o How are local government contributions to "defense-related spending" determined and how are they reported back to Beijing?
 - o What is the breakdown of defense-related spending by military region, PLAN, PLAAF, Second Artillery, reserves, militia, PAP?
 - o How was the recent pay raise distributed among the ranks?
 - o How is defense-related research and development funded?
- **Understanding PLA Budget Processes** -- A final part of this dialogue should focus on the defense budget formation process and related reforms. Understanding this process in China may help us to understand the types of budget information that China can and can not provide as well as how the budget formulation process impacts other PLA decisions unrelated to budgeting, such as its exercise and training schedule.

The USCPF assesses that these four categories of topics could provide fertile ground for either furthering Track II defense budget dialogues with the PLA or to create a working group with the formal DCT process that current exists.

APPENDICES

Appendix 1



Source: *PLA Daily* website at <http://english.pladaily.com.cn/special/stength/content/index.htm>.

Defense-Related Spending in China

Duty Position Rank (Grade)	Military Rank	Retirement Age	Unit Level (Army)	Unit Level (Navy)	Unit Level (Air Force)	Unit Level (Second Artillery)
1. CMC Chairman/Vice Chairman	None	None				
2. CMC Vice Chairman or Member	General		General HQs Depts (GSD,GPD,GLD,GAD)			
3. Military Region	General/ Lieutenant General	65	Military Region	HQs	HQs	HQs
4. Deputy Military Region	Lieutenant General/Major General	63		Fleet	Military Region Air Force	
5. Army/Corps	Major General/ Lieutenant General	55	Group Army/ Military District	Support Base	Regional Command Post	Base
6. Deputy Army/Corps	Major General/ Senior Colonel	53				
7. Division	Senior Colonel/ Major General	50	Division/ Military Subdistrict	Garrison/ Flotilla	Division	
8. Deputy Division	Colonel/ Senior Colonel	48	Brigade		Brigade	Brigade
9. Regiment	Colonel/ Lieutenant Colonel	45	Regiment/Group/ People's Armed Forces Departments (county)	Group	Regiment	
10. Deputy Regiment	Lieutenant Colonel/ Major	43				
11. Battalion	Major/ Lieutenant Colonel	40	Battalion	Squadron	Battalion/ Group	Battalion
12. Deputy Battalion	Captain/Major	38				
13. Company	Captain/ First Lieutenant	35	Company		Company/ Squadron	Company
14. Deputy Company	First Lieutenant/ Captain	33				
15. Platoon	Second Lieutenant/ First Lieutenant	30	Platoon		Platoon/ Flight	Platoon

Appendix 2

Delegation Members

Dennis J. Blasko, Lieutenant Colonel, U.S. Army (Retired), served 23 years as a Military Intelligence Officer and Foreign Area Officer specializing in China. Mr. Blasko was an army attaché in Beijing from 1992-1995 and in Hong Kong from 1995-1996. He also served in infantry units in Germany, Italy, and Korea and in Washington at the Defense Intelligence Agency, Headquarters Department of the Army (Office of Special Operations), and the National Defense University War Gaming and Simulation Center. Mr. Blasko is a graduate of the United States Military Academy and the Naval Postgraduate School. He has written numerous articles and chapters on the Chinese military and defense industries and is the author of the book, *The Chinese Army Today: Tradition and Transformation for the 21st Century* (Routledge, 2006).

Ambassador Chas W. Freeman, Jr. is Co-Chair of the United States-China Policy Foundation, Chairman of Projects International, Inc., a Washington-based business development corporation, President of the Middle East Policy Council, Vice Chair of the Atlantic Council of the United States, a trustee of the Institute for Defense Analyses, and a member of the boards of directors of the American Academy of Diplomacy, the Association for Diplomatic Studies and Training, and the World Affairs Council of Washington, DC.

In 1993-1994 Ambassador Freeman served as Assistant Secretary of Defense for International Security Affairs. In that position, he earned the highest public service award of the Department of Defense for his roles in designing a NATO-centered post-Cold War European security system and in reopening defense dialogue with China. He was U.S. Ambassador to Saudi Arabia (during Desert Shield and Desert Storm), Principal Deputy Assistant Secretary of State for African Affairs (during the successful U.S. mediation of Namibian independence from South Africa and Cuban troop withdrawal from Angola), and Deputy Chief of Mission at both Bangkok and Beijing. He was Country Director for China from 1979-1981, a member of the advance team to open the U.S. Liaison Office in Beijing in 1973, and the principal American interpreter during the late President Nixon's path-breaking visit to China in 1972. In addition to his East Asian, Middle Eastern, African, and European diplomatic experience, Ambassador Freeman served in India.

Ambassador Freeman has a diploma from the Universidad Nacional Autónoma de México, a BA from Yale University, and a JD from the Harvard Law School as well as certificates in Chinese language (Mandarin and Taiwanese) and area studies. He was elected to the American Academy of Diplomacy in 1995. His award-winning book of quotations on statecraft and diplomacy, the *Diplomat's Dictionary*, was published in 1994. A revised edition and a second book on the same subject, *Arts of Power: Statecraft and Diplomacy*, were published by the United States Institute of Peace Press in 1997.

Mr. Stanley A. Horowitz is Assistant Director of the Cost Analysis and Research Division at the Institute for Defense Analysis (IDA). Much of his work involves analysis of the cost, measurement and enhancement of readiness. For the past few years he has been analyzing the effectiveness of the Training Transformation Program. Recently he has presented several papers in Beijing addressing the resource allocation system in the

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U.S. Department of Defense, the costs of personnel in the U.S. military, and total U.S. spending on national security. He has directed studies of reserve component readiness, reserve training, and reserve volunteerism. Before coming to IDA in 1985 Mr. Horowitz was in charge of manpower, logistics and readiness research at the Center for Naval Analyses. Mr. Horowitz was trained as an economist at M.I.T. and the University of Chicago.

Evan S. Medeiros is currently a senior political scientist at the RAND Corporation in the Washington, DC office. He specializes in research on Asian security affairs, China's foreign and national security policies, U.S.-China relations and Chinese military affairs.

In 2006, Dr. Medeiros was awarded a Council on Foreign Relations International Affairs Fellowship. In 2005 he was chosen to be a Public Intellectual Fellow by the National Committee on US-China Relations, the oldest American non-governmental organization promoting US-China exchanges. This fellowship facilitates community outreach and education programs on China for the American public.

Prior to joining RAND, Dr. Medeiros was a Senior Research Associate for East Asia at the Center for Nonproliferation Studies at the Monterey Institute of International Studies, in Monterey, CA. During 2000, he was a visiting fellow at the Institute of American Studies at the China Academy of Social Sciences (CASS) in Beijing and an adjunct lecturer at China's Foreign Affairs College. Dr. Medeiros conducted research on Asian security issues at the Carnegie Endowment for International Peace from 1993-1995.

Dr. Medeiros has written on a broad range of Asian security issues. A book on the evolution of China's WMD nonproliferation policies will be published in Fall 2007 by Stanford University Press. His most recent publications are an article in the June 2007 issue of *China Quarterly* on China's debate about its "peaceful rise" strategy and a *Washington Quarterly* article on U.S. and Chinese "hedging strategies" in Asia. In 2005 and 2006 he published a book chapter titled "China's Evolving Nuclear Doctrine," and three RAND studies called *A New Direction for China's Defense Industry* (MG-334-AF); *Chasing the Dragon: Assessing China's System of Export Controls on WMD-related Goods and Technologies* (MG-353), and *Modernizing China's Military: Opportunities and Constraints* (MG-260-AF). In November 2003, he published (with M. Taylor Fravel) the lead article in *Foreign Affairs* called "China's New Diplomacy" which has received international attention.

His other publications have appeared in: *The China Quarterly*, *Current History*, *Foreign Affairs*, *Issues and Studies: A Journal of Chinese Studies and International Affairs*, *The Nonproliferation Review*, *The International Herald Tribune*, *The Washington Post*, *The Washington Quarterly*, IISS's *Strategic Comments*, *Jane's Intelligence Review*, *The Los Angeles Times*, *YaleGlobal*, the *Christian Science Monitor*, *The Boston Globe*, *Defense News*, *Asia Times*, and the *San Diego Union-Tribune*.

Delegation Members

He holds a Ph.D. in International Relations from the London School of Economics and Political Science, an M.Phil in International Relations from the University of Cambridge (where he was a Fulbright Scholar), an M.A. in China Studies from the University of London's School of Oriental and African Studies (SOAS), and a B.A. in analytic philosophy from Bates College in Lewiston, ME. He travels to Asia frequently and speaks, reads and writes Mandarin Chinese.

James C. Mulvenon is Director (Acting), Advanced Analysis at DGI's Center for Intelligence Research and Analysis. Previously, Dr. Mulvenon was a Political Scientist at the RAND Corporation in Washington, DC and Deputy Director of RAND's Center for Asia-Pacific Policy. A specialist on the Chinese military, his current research focuses on Chinese C4ISR, defense research/development/acquisition organizations and policy, strategic weapons doctrines (computer network attack and nuclear warfare), patriotic hackers, and the military and civilian implications of the information revolution in China. His book *Soldiers of Fortune* (Armonk, NY: M.E. Sharpe, 2001), examines the Chinese military's multi-billion dollar business empire. Dr. Mulvenon received his Ph.D. in political science from the University of California, Los Angeles.