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Planning, Programming, Budgeting, and Execution in Comparative Organizations: Case Studies of China and Russia

Stephanie Young—is a Senior Researcher and Director of the Resource Management Program in RAND's Project AIR FORCE. Her primary interests relate to budgeting, acquisition, and resource allocation processes in the Department of Defense and the Department of Homeland Security, but she has also completed work related to security cooperation, special operations, and U.S. policy in the Middle East. She has a BA in physics and astrophysics and a PhD in history, all from the University of California, Berkeley. [syoung@rand.org]

Megan McKernan—is a Senior Defense Researcher at RAND and Associate Director of the RAND National Security and Research Division's Acquisition and Technology Policy Program. She specializes in Department of Defense weapon systems acquisition along with data governance, management, sharing, and analytics. Prior to working at RAND, she was an Economic Analyst providing reports for policymakers on global economic issues. She holds an MA in international trade and investment policy from The George Washington University and a BA in economics from William Smith College. [mckernan@rand.org]

Timothy R. Heath—is a Senior International Defense Researcher at RAND. Prior to joining RAND, Heath had more than fifteen years of experience in the U.S. government researching and analyzing military and political topics related to China. In addition to his publications with RAND, Heath has published numerous articles and two books. Fluent in Mandarin Chinese, he has extensive experience analyzing China's national strategy, politics, ideology, and military, as well as Asian regional security developments. He has a PhD in political science from George Mason University and an MA in Asian studies from The George Washington University. [theath@rand.org]

Dara Massicot—is a senior fellow in the Russia and Eurasia Program at the Carnegie Endowment for International Peace. Her work focuses on defense and security issues in Russia and Eurasia. Prior to joining Carnegie, Massicot was a Senior Policy Researcher at the RAND Corporation and senior analyst for Russian military capabilities at the Department of Defense. She has published extensively on Russian military capabilities, modernization efforts, and strategy, and is a preeminent expert on the Russo-Ukrainian War.

Mark Stalczyński—is a Senior Analyst at the RAND Corporation. Stalczyński's areas of interest include Russia (its budget, economy, and domestic policies); public finance and government spending; and energy and the environment. Stalczyński often undertakes budget and cost analysis to contribute to research in these policy areas. Stalczyński also contributes to policy and program analysis for federal agencies involved in emergency preparedness, infrastructure resilience, disaster recovery and national security. Stalczyński has an MS in public policy and management from Carnegie Mellon University, was a Russian Language Flagship Fellow, and has a 3+ in Russian on the Interagency Language Roundtable (ILR) scale. [mstalczy@rand.org]

Ivana Ke—is a Research Assistant—Chinese Language Specialist in RAND Corporation's DC office. Her research interests include defense innovation, artificial intelligence, and force development with a regional focus on China and Taiwan. [ike@rand.org]

Raphael S. Cohen—is a Senior Political Scientist at RAND and the director of the Strategy and Doctrine Program of Project AIR FORCE. He has worked on a variety of defense and foreign policy issues, including counterinsurgency, defense strategy, and civil-military relations. A military intelligence branched lieutenant colonel in the Army Reserve, Cohen has held a variety of command and staff positions in both the active and reserve components, including during two combat tours in Iraq. He holds a BA in government from Harvard University and an MA in security studies and PhD in government from Georgetown University. [rcohen@rand.org]

John P. Godges— is a Research Communications Analyst who reviews, revises, and restructures research documents primarily for RAND's Special Mission Analysis Group and for other projects in RAND's National Security Research Division, Project AIR FORCE, and Arroyo Center. In addition to



special mission analysis, his other areas of focus in research communications have included counterterrorism, security cooperation, and agile combat employment. He holds an MPP in public policy from Harvard University, an MJ in journalism from the University of California, Berkeley, and an AB in American Studies from Georgetown University. [godges@rand.org]

Heidi Peters—is a Policy Researcher at RAND. Prior to RAND, she was an Analyst in U.S. Defense Acquisition Policy at the Congressional Research Service, where she managed a research portfolio in support of congressional members and staff that covered the full spectrum of Department of Defense acquisition matters, including the defense acquisition system; defense contracting statutory and regulatory authorities; and defense industrial base policy. Her career also included time as a research specialist at the Defense Advanced Research Projects Agency, supporting agency leadership and program management staff in executing programs investing in breakthrough technologies with implications for national security. [hpeters@rand.org]

Lauren Skrabala—is a Communications Analyst at RAND. She works on publications and briefings across RAND divisions but most frequently on national defense and military health projects. Prior to joining RAND in 2005, she handled public relations, organized conferences, coordinated visits by international scholars and policymakers, and oversaw exchange programs for the Western European division of the University Center for International Studies at the University of Pittsburgh. [skrabala@rand.org]

Abstract

The U.S. Department of Defense's (DoD's) Planning, Programming, Budgeting, and Execution (PPBE) System was originally developed in the 1960s as a structured approach for planning long-term resource development, assessing program cost-effectiveness, and aligning resources to strategies. Yet changes to the strategic environment, the industrial base, and the nature of military capabilities have raised the question of whether existing U.S. defense budgeting processes remain well aligned with national security needs.

The U.S. Congress called for the establishment of a commission on PPBE reform. As part of its data collection efforts, the commission asked RAND to conduct case studies of budgeting processes across sixteen comparative organizations: ten international defense organizations and six U.S. federal government agencies.

In this paper, RAND researchers conduct case studies of the defense budgeting processes of China and Russia. Within data availability constraints, researchers conducted extensive document reviews and, to the extent possible, structured discussions with subject-matter experts with knowledge of internal decision-making processes and governance structures for each case study. Each case study was assigned a unique team with appropriate regional, language, or organizational expertise. The analysis was also supplemented by experts in the U.S. PPBE process.

Key Findings¹

- China and Russia make top-down decisions about priorities and risks but face limitations in implementation
- China and Russia make long-term plans but have mechanisms for changing course in accordance with changing priorities
- Especially in China, political leaders provide stable and sustained long-term support for military modernization priorities
- China and Russia have weak mechanisms for avoiding graft or ensuring transparency, efficiency, effectiveness, and quality control in PPBE-like processes
- Reforms in China and Russia have been designed to increase oversight of resource allocation processes

¹ There is additional information on this topic in the full document: *Planning, Programming, Budgeting, and Execution in Comparative Organizations: Volume 1, Case Studies of China and Russia* (McKernan et al., 2024).



Introduction

In light of a dynamic threat environment, increasingly capable adversaries, and rapid technological changes, there has been increasing concern that the U.S. Department of Defense's (DoD's) resource planning processes are too slow and inflexible to meet warfighter needs.² The DoD's Planning, Programming, Budgeting, and Execution (PPBE) system was originally developed in the 1960s as a structured approach for planning long-term resource development, assessing program cost-effectiveness, and aligning resources to strategies. Yet changes to the strategic environment, the industrial base, and the nature of military capabilities have raised the question of whether the DoD's budgeting processes are still well aligned to national security needs.

To consider the effectiveness of current resource planning processes for meeting national security needs and to explore potential policy options to strengthen those processes, Congress called for the establishment of a commission on PPBE reform in Section 1004 of the National Defense Authorization Act for Fiscal Year (FY) 2022.³ The Commission on PPBE Reform took shape as a legislative commission in 2022, consisting of 14 appointed commissioners, each drawing on deep and varied professional expertise in the DoD, Congress, and the private sector. In support of this work, the commission collected data, conducted analyses, and developed a broad array of inputs from external organizations, including federally funded research and development centers, to develop targeted insights of particular interest to the commission. The commission asked the RAND National Defense Research Institute to contribute to this work by conducting case studies of 16 comparative organizations: ten international defense organizations and six other U.S. federal government agencies.

The Planning, Programming, and Budgeting System (PPBS), the precursor to the DoD's PPBE process, took shape in the first decades after World War II and was introduced into the DoD in 1961 by then-Secretary of Defense Robert McNamara.⁴ Drawing on new social science methods, such as program budgeting and systems analysis, the PPBS was designed to provide a structured approach to weigh the cost-effectiveness of potential defense investments. A central assertion of the PPBS's developers was that strategy and costs needed to be considered together.⁵ As Charles Hitch, Secretary McNamara's first comptroller and a key intellectual leader in the development and implementation of the PPBS, and Roland McKean (1960) noted, "There is no budget size or cost that is correct regardless of the payoff, and there is no need that should be met regardless of cost."

To make decisions about prioritization and where to take risk in a resource-constrained environment, the DoD needed an analytic basis for making choices. Therefore, the PPBS first introduced the program budget, an *output*-oriented articulation of the resources associated with a given military capability projected out over five years.⁶ The PPBS then introduced an

² See, for example, Section 809 Panel (2018, pp. 12–13); McGarry (2022, p. 1); and Greenwalt and Patt (2021, pp. 9–10).

³ Public Law 117-81. National Defense Authorization Act (NDAA) for Fiscal Year 2022. (2021, December 27). Section 1004(f) of this Act is of particular relevance to our research approach: "Compare the planning, programming, budgeting, and execution process of the Department of Defense, including the development and production of documents including the Defense Planning Guidance (described in section 113(g) of Title 10, United States Code), the Program Objective Memorandum, and the Budget Estimate Submission, with similar processes of private industry, other Federal agencies, and other countries."

⁴ An oft-quoted assertion by Secretary of Defense Robert McNamara, which is pertinent to this discussion, is that "[y]ou cannot make decisions simply by asking yourself whether something might be nice to have. You have to make a judgment on how much is enough" (Enthoven & Smith, 1971; Young, 2009).

⁵ Or, as Bernard Brodie stated succinctly, "strategy wears a dollar sign" (Brodie, 1959).

⁶ On the need for an output-oriented budget formulation at the appropriate level to make informed choices, Hitch and McKean (1960) noted that the consumer "cannot judge intelligently how much he should spend on a car if he asks, 'How much should I devote to fenders, to steering activities, and to carburetion?'" Nor can he improve his decisions



approach for assessing cost-effectiveness, termed systems analysis, which was institutionalized in the Office of Systems Analysis. Since 2009, the institutional successor to the Office of Systems Analysis has been known as Cost Assessment and Program Evaluation (CAPE).⁷ At its inception, the PPBS was a process for explicitly linking resources to strategy and for setting up a structure for making explicit choices between options, based on transparent analysis of costs and effectiveness. Then, as today, the system introduced friction with other key stakeholders, including Congress and industry partners. Key features of the PPBS have become institutionalized in the DoD's PPBE System, and questions have arisen about whether its processes and structures remain relevant and agile enough to serve their intended purposes (Greenwalt & Patt, 2021).

To set up the discussion of case studies, it will be helpful to outline the key features of the PPBE process and clarify some definitions. Today, consideration of PPBE often broadly encapsulates internal DoD processes, other executive branch functions, and congressional rules governing appropriations. Internal to the DoD, PPBE is an annual process by which the department determines how to align military programs and resources to strategic guidance. The process supports the development of DoD inputs to the President's Budget and to a budgeting program with a five-year time horizon (McGarry, 2020), known as the Future Years Defense Program (FYDP). Department of Defense Directive (DoDD) 7045.14, *The Planning, Programming, Budgeting, and Execution (PPBE) Process*, states that one intent for PPBE "is to provide the DoD with the most effective mix of forces, equipment, manpower, and support attainable within fiscal constraints." PPBE consists of four distinct processes, each with its own outputs and stakeholders. Select objectives of each phase include the following:

- **Planning:** "[I]ntegrate assessments of potential military threats facing the country, overall national strategy and defense policy, ongoing defense plans and programs, and projected financial resources into an overall statement of policy" (DoD, 2017).
- **Programming:** "[A]nalyze the anticipated effects of present-day decisions on the future force; detail the specific forces and programs proposed over the FYDP period to meet the military requirements identified in the plans and within the financial limits" (Tyszkiewicz & Daggett, 1998).
- **Budgeting:** "[E]nsure appropriate funding and fiscal controls, the phasing of the efforts over the funding period, and the feasibility of execution within the budget year" (Tyszkiewicz & Daggett, 1998); restructure budget categories for submission to Congress according to the appropriation accounts; and prepare justification material for submission to Congress (McGarry, 2020).
- **Execution:** "[D]etermine how well programs and financing have met joint warfighting needs" (DoD, 2017).

Several features of congressional appropriations processes are particularly important to note. First, since FY 1960, Congress has provided budget authority to the DoD through specific appropriations titles (sometimes termed *colors of money*), the largest of which are operation and maintenance (O&M); military personnel; research, development, test, and evaluation (RDT&E); and procurement (Tyszkiewicz & Daggett, 1998). These appropriations titles are further broken down into appropriation accounts, such as Military Personnel, Army, or Shipbuilding and

much by lumping all living into a single program and asking, 'How much should I spend on life?'"

⁷ In a discussion of the founding of PPBS, Enthoven (the first director of the Office of Systems Analysis) and Smith (1971) described "the basic ideas that served as the intellectual foundation for PPBS" as follows: (1) decision making should be made on explicit criteria of the national interest, (2) needs and costs should be considered together, (3) alternatives should be explicitly considered, (4) an active analytic staff should be used, (5) a multiyear force and financial plan should project consequences into the future, and (6) open and explicit analysis should form the basis for major decisions.



Conversion, Navy (SCN). Second, the budget authority provided in one of these accounts is generally available for obligation only within a specified period. In the DoD budget, the period of availability for military personnel and O&M accounts is one year; for RDT&E accounts, two years; and for most procurement accounts, three years (although for SCN, it can be five or six years, in certain circumstances). This specification means that budget authority must be obligated within those periods, or, with only a few exceptions, it is sent back to the U.S. Department of the Treasury (Tyszkiewicz & Daggett, 1998).⁸ There has been recent interest in exploring how these features of the appropriations process affect transparency and oversight, institutional incentives, and the exercise of flexibility, should resource needs change (McGarry, 2020). Importantly, PPBE touches almost everything the DoD does and, thus, forms a critical touchpoint for engagement among stakeholders across the DoD (e.g., Office of the Secretary of Defense, military departments, Joint Staff, combatant commands), in the executive branch (through the Office of Management and Budget), in Congress, and among industry partners.

Study Objectives and Approach

In close partnership with the PPBE Commission, we selected ten case studies of international defense organizations to explore decision making in organizations facing challenges like those experienced in the DoD: exercising agility in the face of changing needs and enabling innovation. Two of those case studies are documented here: China and Russia.

For all ten case studies, we conducted extensive document reviews and structured discussions with subject matter experts having experience in the budgeting processes of the examined international defense organizations. Case study research drew primarily on government documentation outlining processes and policies, planning guidance, budget documentation, and published academic and policy research. For the near-peer competitor cases, the assigned experts had the language skills and methodological training to facilitate working with primary sources in Chinese or Russian. In general, the analysis was also supplemented by experts in the U.S. PPBE process, as applicable. Although participants in structured discussions varied in accordance with the decision-making structures across case studies, they generally included chief financial officers, representatives from organizations responsible for making programmatic choices, and budget officials. While these inputs reflected the research approach generally across case studies, Russia and China case studies presented unique challenges of data availability and access to interview subjects with experience in government roles.

To facilitate consistency, completeness in addressing the commission's highest-priority areas of interest, and cross-case comparisons, we developed a common case study template. This template took specific questions from the commission as several inputs, aligned key questions to PPBE processes and oversight mechanisms, evaluated perceived strengths and challenges of each organization's processes and their applicability to DoD processes, and concluded with lessons learned from each case. To enable development of a more consistent evidentiary base across cases, we also developed a standard interview protocol to guide the structured discussions.

Near-Peer Competitors Focus

The 2022 National Defense Strategy (NDS) describes a security environment of complex strategic challenges associated with such dynamics as emerging technology, transboundary threats, and competitors posing "new threats to the U.S. homeland and to strategic stability" (DoD, 2022). Among these challenges, the NDS notes that "[t]he most comprehensive and

⁸ For a discussion of the availability of funds appropriated to the DoD for RDT&E activities, see Section 3131 of Title 10, *United States Code*, Availability of Appropriations.



serious challenge” is the People’s Republic of China (PRC). The NDS points to China’s military modernization and exercise of whole of government levers to effect “coercive” and “aggressive” approaches to the region and international order (DoD, 2022). Although the NDS designates China as the “pacing challenge” for the DoD, it also highlights the threat posed by Russia as an “acute threat” (DoD, 2022).

To better understand and operate in the competitive environment, the Commission on PPBE Reform is considering “budgeting methodologies and strategies of near-peer competitors to understand if and how such competitors can address current and future threats more or less successfully than the United States” (Public Law 117–81, 2021, Section 1004(f)(2)(F)). Notably, this focus on internal processes as key enablers of military outcomes is well aligned to the NDS’s imperative to “build enduring advantage,” “undertak[e] reforms to accelerate force development, [get] the technology we need more quickly, and mak[e] investments in the extraordinary people of the Department, who remain our most valuable resource” (DoD, 2022). This imperative has prompted reflection on the extent to which internal DoD processes, including PPBE, are up to the challenge of enabling rapid and responsive capability development to address the emerging threats.

China

China’s rise from a technologically backward and poorly equipped military in the 1970s to the U.S. pacing challenge in 2022 has made it a case study of particular interest to DoD policymakers with regard to the apparent drivers of relative comparative advantage. China’s military modernization is especially remarkable given the speed with which it has occurred.

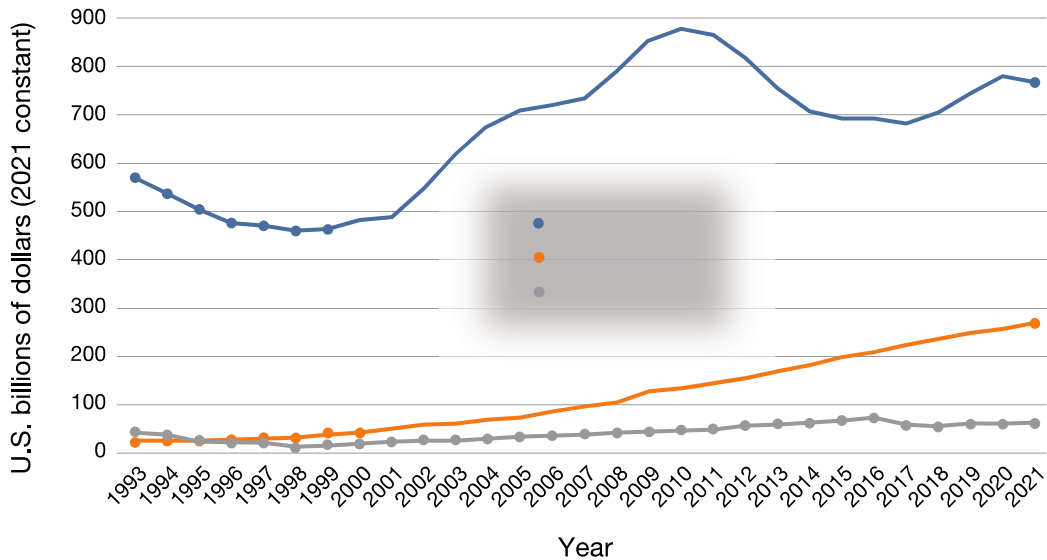
In 1979, Beijing abandoned Maoist economic policies in favor of more pragmatic, market friendly reforms. In the 1980s, the country prioritized rapid economic growth, and military modernization progressed slowly. However, over the following decade, the defense budget soared. From 2000 to 2016, China’s military budget increased annually by about 10%, although this growth has slowed to about 5%–7% per year (DIA, 2019).

Figure 1 illustrates the steady rise in China’s military expenditure over time; however, estimating the actual size of China’s defense budget has remained difficult because of Beijing’s lack of transparency and the country’s incomplete transition to a market economy. According to government sources, China’s defense budget was \$230 billion in 2022, second only to that of the United States (Zhao, 2022). Years of major budget increases have yielded an increasingly lethal and capable People’s Liberation Army (PLA). As we describe in detail in the full report (McKernan et al., 2024) the story of China’s recent military successes is difficult to disentangle from the country’s broader story of economic development, the sheer scale of increased investment in the military, workforce development, the development of advanced manufacturing and industrial capabilities, and other transformative social and economic factors. This is a case, it might be argued, for which the ruling leaders of the Chinese Community Party (CCP) have made substantial and sustained investment in building enduring advantage.⁹

What has enabled China’s achievements in the science and technological innovation underlying military modernization? Analysts have pointed to several contributing factors.

⁹ For a broader look at factors associated with a country’s competitive posture, see *The Societal Foundations of National Competitiveness* (Mazarr, 2022).





SOURCE: Features information from SIPRI, "SIPRI Military Expenditure Database," homepage, undated. Data shown are as of March 17, 2023.

Figure 1. Military Expenditures, by Country, 1993–2021

China’s technological innovations build on the advantages of the country’s industrial base. China has a large manufacturing capacity, ample mineral resources, and a strong science and technology sector (Weinbaum et al., 2022). China’s science and technology workforce has grown dramatically, and government spending on research and development has grown at a compounding annual rate of 15% since 2010 (Ashby et al., 2021). An analysis of China’s innovation-related capabilities has noted steady improvements over time, owing to the combined effects of a more educated workforce, strong manufacturing capacity, investments in infrastructure to support scientific and technological research and development, technology transfer, and gains from civil-military technological collaboration (Cheung, 2022). Technology transfer in China focuses in part on U.S. and Western technologies that are transferred or stolen by China’s PLA, state-owned enterprises (SOEs), or other enterprises, which has helped decrease the time needed to build capabilities. Indeed, part of what has enabled China’s rapid achievements is intellectual property theft from the West, including the siphoning of U.S. scientific research (Weinbaum et al., 2022).

China’s military budgeting practices could also play a role in its military’s successes in research and development and technological innovation. Beijing’s emphasis on long-term strategic planning and the ability to allocate resources to projects deemed nationally important could contribute to the country’s sustained investments in priority technologies. However, given the uneven successes in China’s technological pursuits, the role of budget practices likely remains secondary to more critical factors related to the maturity of relevant industrial sectors.

Russia

Russia is 30 years past a painful transition from a Soviet planned economy to a partially market-based economy. Although Russia has largely left its Soviet planning model in the past, it has carried forward certain ideas and legacies of centralized economic control. For example, in Russia, competition between defense firms is not viewed as an inherently good thing that could spur innovation and increase productivity. Instead, it is viewed as a mechanism that dilutes available funds. State ownership is viewed as protection from international markets and



sanctions and as a mechanism to keep unproductive companies afloat.

Russia can be fiscally conservative at the federal level, avoiding deficits and engaging in little foreign borrowing, and its defense acquisition plans are often closely tied to military strategy and defense needs. However, opacity in multiple parts of Russia's PPBE-like process, even within Russia—compounded by insufficient oversight—often perpetuates corruption and generates outputs of varying quality from the defense industry.

Russian leaders realize that their defense budget is limited and that they are outspent by their rivals; they speak often about their desire for a modern, capable military (Tass, 2021). Although there have been attempts to reduce systemic graft and corruption in the past decade, the war in Ukraine has revealed these efforts to be insufficient (Anderson, 2016; Janes, 2012). The desire for a well-oiled defense industrial base often collides with the excessive concentration of power in Russia's executive branch and the informal practices that make business possible in modern Russia.

An understanding of Russia's defense industrial base is essential for understanding Russia's military resource decision making. Russia's defense industrial base comprises approximately 800 companies or entities with a workforce of nearly 3 million, consolidated under partial or majority state ownership (Janes, 2022). Consolidation began under a federal program known as Reform and Development of the Defense Industrial Complex, 2002–2006, which was motivated by a desire to vertically integrate various design, development, and manufacturing entities with a focus on distinct domains, in contrast to Soviet-era organizational structures (Janes, 2022; Cooper 1993). After 2007, Russia consolidated most of its defense firms under state control to protect them on the global market, create efficiencies in Russia, and ensure more-direct oversight to account for funds and reduce graft.

Although consolidating firms under state control has generated efficiencies, the consolidation and protectionist policies have also stymied innovation, given the lack of domestic competition. Furthermore, corruption has long plagued Russia's defense industry and its government more broadly. In 2012, Russian and Western analysts estimated that 20%–40% of annual funding from the State Defense Order (SDO) for military procurement was lost because of corruption, inflated prices for military goods, or the use of earmarked allocations for other purposes (Anderson, 2016; Military Prosecutor, 2012). These findings led to various reforms: imposing larger fines and criminal penalties on individuals and organizations, moving responsibility for the SDO to the Russian Ministry of Defense (MoD), and paying defense industry entities through restricted accounts at state-owned banks (Anderson, 2016).

However, as evidenced by the 2022 war in Ukraine, corruption persists in Russia's defense industrial base. Official accounts from the United States and unofficial reports from Ukrainian and Russian social media have revealed a Russian Army that lacks appropriate equipment, logistics, and even first-aid kits (Cranny-Evans, 2022; Russian Military's; Schneider, 2022; Lee, 2022). Observers have documented Russian equipment without its necessary defensive components, including missing or hollowed-out explosive reactive armor on T-80 battle tanks (Shinkman, 2022). Transparency International, a nonprofit research, monitoring, and advocacy organization, attributes the high incidence of corruption in Russia's defense industrial base to a lack of external, transparent oversight of PPBE-like functions—specifically, oversight over the functions of defense policy, budgeting, and acquisition (Transparency, 2022).

Key Insights

The material presented in this section distills important themes for the commission to understand when trying to illuminate aspects of the competitive environment and better understand the resource planning process of strategic competitors and points of comparison



and divergence from the United States, while recognizing profound differences in governance structures, political cultures, and strategic orientations.

Key Insight 1: China and Russia Make Top-Down Decisions About Priorities and Risks but Face Limitations in Implementation

Senior leaders in these countries have the authority to make top-down decisions, but realizing returns on those decisions is contingent on key social, economic, and other factors. In China, modernization in such areas as jet engines, semiconductors, and hypersonics has not yielded consistent outcomes; other determinative factors are long-term investment stability, innovation enablers, and a workforce with relevant expertise.

Russia's invasion of Ukraine has shown that Russia can rapidly pivot to fulfill different military procurement needs, albeit under extreme pressure. In November 2022, Russia suspended SAP-2027 and announced that it would commit a significantly larger SDO to the war. However, Russia's new mobilization laws, which were meant to respond to wartime needs more rapidly, confronted limitations in industrial capacity, supply chain reliability, and the ability to call up required manpower even through conscription.

Key Insight 2: China and Russia Make Long-Term Plans but Have Mechanisms for Changing Course in Accordance with Changing Priorities

In China and Russia, centralized decision making can reduce the friction associated with course corrections, although the need to make hard choices is likely lower in China than in Russia because of China's economic growth over recent decades.

Key Insight 3: Especially in China, Political Leaders Provide Stable and Sustained Long-Term Support for Military Modernization Priorities

The lack of political opposition, the high degree of alignment between CMC and senior CCP leaders, and the sheer scale of military investment over decades have facilitated the stable planning and long-term investments that are essential for making progress toward complex modernization priorities. The synchronization of defense plans with budgets has offered long-term benefits to China's military modernization. In contrast, Russia has a 10-year SAP supported by a three-year budget—a combination that, in theory, balances stability with flexibility for the MoD and the defense industry. But in reality, the SAP is aspirational and has been rapidly jettisoned without political or legal blowback, leaving companies in a vulnerable position over the long term.

Key Insight 4: China and Russia Have Weak Mechanisms for Avoiding Graft or Ensuring Transparency, Efficiency, Effectiveness, and Quality Control in PPBE-Like Processes

The power dynamics and the structures of decision making in these countries provide limited guardrails for ensuring efficiency, effectiveness, or oversight of investments. Oversight is essential to control corruption and ensure proper budget execution. However, in China, there is weak oversight and the potential for corruption, misuse of funds, and waste. China's budgeting processes are hampered by clientelism (bribery), patronage (favoritism), and other forms of corruption that pervade the defense industries. Powerful SOEs continue to operate in a highly inefficient and wasteful manner, partly because of the political power they exert. Similarly, in Russia, execution of defense spending is subject to corruption within the MoD, cronyism throughout the defense industrial base, and a general lack of serious anticorruption measures.

Key Insight 5: Reforms in China and Russia Have Been Designed to Increase Oversight of Resource Allocation Processes

In recent years, both countries have recognized the inefficiencies and the limited avenues for competing voices in their top-down budget processes. Both countries have looked to other international models, including that of the United States, for lessons on the



development and implementation of budget reforms.

Chinese officials have sought to imitate some practices that are commonly used in Western countries to improve their government's ability to execute budgets. In accordance with centrally directed reforms to all branches of the government, the PLA has carried out multiple rounds of reforms in its budgeting and financial system. Moreover, Chinese leaders have long recognized that the military's budget system, like that of the government overall, suffers from severe problems related to corruption and weak accountability, owing in part to the country's adherence to outdated centralized budgetary practices in which most economic decisions are made by high-level government authorities instead of market participants. Russia's budget has been based on best practices and recommendations from the IMF and OECD, such as the use of a three-year or medium-term expenditure framework. In addition, the Ministry of Economic Development and the Ministry of Finance produce macroeconomic and socioeconomic forecasts, respectively, and allocate funding annually within reasonable constraints.

The Russian government's spending practices are fiscally conservative in that it does not engage in excessive debt spending or foreign borrowing, and it maintains a sovereign wealth fund to manage shocks or unforeseen events. Although Russia's budget process has been developed with best practices in mind, budget execution is done with few safeguards, little oversight, and meager quality control.

Applicability of These Insights to the DoD's PPBE System

Although the 2022 NDS calls out China and Russia as posing particular challenges to the United States and the international order, the nature of the challenges posed are distinct and situationally dependent. China and Russia have unique histories, economic conditions, industrial capacities, and military capabilities; thus, they pose unique challenges to the United States. Societal fundamentals for building military capability are critical factors in determining the success of military modernization; therefore, it is unclear how much success can be meaningfully attributed to resource planning processes. Additional critical inputs to success include the following:

- workforce capacity, capabilities, and productivity
- scale and focus of defense investment over time
- industrial capacity and capability
- industrial policy
- innovation policy.

China and Russia are also both extraordinarily different from the United States in political culture, governance structure, values, and strategic orientation. China and Russia have demonstrated that strong central authority (without opposition) can provide long-term planning that aligns resources to priorities and redirects resources to meet changing needs, but there are constraints and trade-offs that come with a top-down approach. A top-down approach can hamper innovation and yield weak mechanisms for oversight and quality control of budget execution.

Given this context, the lessons for U.S. PPBE reform efforts cannot be directly applicable. In addition, there is immense information asymmetry regarding what little we understand and know from open-source reporting on China's and Russia's budgetary processes versus the abundance of critiques in open-source reporting on the U.S. PPBE process. The risk is that China's and Russia's processes may sound more ideal because of a lack of publicly available information about execution. Despite these differences, the case studies suggest several considerations that are relevant for the United States.



The applicability of lessons, mostly from China, will invariably be constrained by the differences between the political systems of the United States and China. The DoD will not likely find any simple way of replicating China's advantages by imitation, given the stark differences between the governmental systems of the United States and China. However, finding analogous measures to achieve similar effects could be worthwhile. In particular, two types of measures could have beneficial effects on DoD budgeting practices: (1) finding ways to ensure sustained, consistent funding for priority projects over many years and (2) delegating more authority and granting greater flexibility to project and program managers—without compromising accountability—so that they can make changes to stay in alignment with guidance as technologies and programs advance.

Russia can be fiscally conservative at the federal level, avoiding deficits and engaging in little foreign borrowing, and its defense acquisition plans are often closely tied to military strategy and defense needs. However, opacity in multiple parts of Russia's PPBE-like process—compounded by insufficient oversight—often perpetuates corruption and generates outputs of varying quality from the defense industry. Although there have been attempts to reduce systemic graft and corruption in the past decade, the war in Ukraine has revealed these efforts to be insufficient. Furthermore, the desire for a well-oiled defense industrial base often collides with the excessive concentration of power in Russia's executive branch and the informal practices that make business possible in modern Russia. Russia's PPBE-like process does not allow sufficient oversight to ensure that it works effectively or produces uniformly high-quality products.

Despite the frequent public discussion in the United States that oversight adds time to the DoD's PPBE process, it is clear from the experiences of China and Russia that oversight is a critical element that ultimately helps lead to successful capabilities for use during operations and, therefore, should not be haphazardly traded away for speed during resource allocation.

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