

APRIL 2021

FINANCING THE FIGHT

A HISTORY AND ASSESSMENT OF DEPARTMENT OF DEFENSE BUDGET FORMULATION PROCESSES

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EXECUTIVE SUMMARY

The U.S. Department of Defense (DOD) needs a budget formulation process capable of creating budgets that meet national security needs effectively and efficiently. In 1947, the first secretary of defense, James Forrestal, professed embarrassment regarding the budget formulation process he inherited because, at that time, each military service submitted its own budget without following overall guidance or checking for duplication. Forrestal and the DOD's first comptroller, Wilfred McNeil, made important improvements in the formulation process. Then in 1961 Secretary of Defense Robert McNamara and his comptroller Charles Hitch implemented a major change, putting in place a system that has become known as the Planning, Programming, Budgeting, and Execution System (PPBES).

PPBES examined defense initiatives in program groups (e.g. strategic forces) to minimize duplication, applied analytic techniques to hold down costs while meeting key military requirements, and examined budgets over multiple years to take into account longer term effects. In the early 1970s Secretary of Defense Melvin Laird made an important change to McNamara's top-down, highly centralized PPBES. Laird provided the military services with fiscal guidance and broad planning guidance and then allowed them to create their own budgets, which Laird and his staff reviewed. This shift probably permitted PPBES to survive to the present day because, unlike McNamara, many secretaries would not have wanted to make most budget decisions themselves.

While the DOD still uses PPBES, it is much criticized. Critics assert that it fails to consider a sufficiently wide range of alternatives and that it creates too much work, in part because of the time spent seeking approvals from stakeholders. Unfortunately, history shows that efforts to streamline PPBES (such as biennial budgeting) have generally not succeeded. Critics also lament the time needed to navigate PPBES, which makes it difficult to integrate rapidly shifting technologies into DOD programs. But PPBES has also provided major benefits to the Pentagon. The system examines initiatives in broad categories which helps identify duplication. PPBES identifies costs of initiatives, measures benefits

against broad guidance, and compares costs and benefits systematically over multiple years. PPBES also ensures that voices germane to the budget process have a chance to be heard.

Overall, history and the author's experience suggest that PPBES has many useful features that should be retained because they clearly have improved DOD budget formulation, especially compared to the system in place in the 1950s and earlier. But PPBES needs improvements. Most critically, the Pentagon needs to persuade Congress to alter PPBES in ways that better accommodate rapidly changing technology initiatives, including budgeting for them in broader categories to provide more flexibility during budget execution.

OVERVIEW AND KEY FINDINGS

This paper documents the history of the processes used during all phases of budget formulation in the U.S. Department of Defense (DOD). Today those phases include planning, programming, and budgeting — though the focus is mostly on the latter two because they involve defense financial managers most heavily. The paper also provides an assessment of the current budget formulation process.

The National Security Act of 1947 created what would soon become the Department of Defense, and James Forrestal served as the first secretary of defense. Forrestal sought to integrate military service budgets to eliminate duplication. He urged the services to create an integrated plan and then fund it, temporarily appointing General Dwight Eisenhower to help in the integration. Forrestal also persuaded Congress to create the position of DOD comptroller along with comptroller positions in the military departments. Wilfred McNeil served ably as the DOD's first comptroller for 10 years and, among other things, helped create a more rational structure for the budget. However, despite efforts by Forrestal, McNeil, and others, by the end of the 1950s military service budgets were still not tied closely to defense plans and were not well integrated.

In 1961 Secretary of Defense Robert McNamara and his comptroller Charles Hitch introduced the Planning, Programming, and Budgeting System (PPBS), which was renamed as PPBES in 2003 to emphasize the execution phase. (This paper uses the current acronym throughout to avoid confusion). Initially PPBES was a top-down, centralized management system. It began with a defense plan, then identified alternatives to meet plan requirements, and finally employed analytic techniques to choose alternatives that supported the plan at least cost. The new approach looked across programs (for example, all forces involved in the strategic retaliatory mission) to ensure coordination and minimize duplication. PPBES gained favor and, in 1966, President Lyndon B. Johnson ordered all federal agencies to use it. That experiment failed, but the DOD continued to use the system. With continued use came initiatives designed to improve PPBES.

Some initiatives sought to improve budget management and decisionmaking by altering incentives. In the early 1970s Secretary of Defense Melvin Laird introduced the most important of these incentive changes, shifting from a centralized system to one that provided fiscal guidance to the military services, who then created budgets that were reviewed by Laird and his staff. This important PPBES change is still in place. Other changes, such as expanded use of the working capital funds (funds that buy and sell goods to DOD users like private businesses) have also taken root and survived.

Another set of change initiatives sought to streamline PPBES so that it consumed less of the time of management and staff, but these initiatives have generally not succeeded. Biennial budgeting — which required the DOD to submit a budget for two years in order to reduce second-year workload sharply — represents the most significant of the major streamlining initiatives. The DOD's 1986 experiment with biennial budgeting failed largely because the appropriations committees in Congress never enacted a two-year budget. The Pentagon also found it difficult to avoid altering the second year of a two-year budget because of the many changes that occur each year. Secretary of Defense Donald Rumsfeld again tried a form of biennial budgeting during his second term as secretary in the early 2000s, but the effort did not survive after he left. Rumsfeld also sought to combine the programming and budgeting phases of PPBES, again without much success.

Wartime budgeting deserves special attention because of its importance to the nation and because it places stress on PPBES. Wars require rapid changes in budgets and the flexibility to move funds to new missions, which PPBES struggles to provide. To fund wars, especially during their early years, the Pentagon has made extensive use of supplemental appropriations — that is, appropriations that are generally requested and approved during the year the funds are to be spent. During the Korean War, for example, President Harry S. Truman submitted four requests for supplemental appropriations in the first year of the war. Large supplemental appropriations cause problems, however, especially if Congress approves them late in the fiscal year. Beginning with the fiscal year (FY) 2010 budget request, the president began submitting budgets for the Afghanistan and Iraq Wars along with regular budgets under a technique called the Overseas Contingency Operations (OCO) fund.

PPBES has many critics. Academic and outside critics have accused PPBES of ignoring political factors and failing to consider a sufficiently wide range of alternatives. Critics have sharply assailed the OCO wartime process because it has been misused to fund costs not directly associated with war, and the Biden administration has decided to stop using OCO after the end of FY2021. Some practitioners within the DOD decry the lengthy and complex PPBES processes, including much time spent seeking approvals from stakeholders, and the workload they create. Practitioners also note that the time required to navigate PPBES, along with the congressional approval process, makes it difficult to integrate rapidly shifting new technologies into DOD programs. Given the need to use technology to improve DOD warfighting capability, this may be the most important criticism of PPBES.

PPBES has also benefited the Department of Defense. While the process has limited effect on the DOD's total budget level, it does improve program decisionmaking. The process helps identify the costs of programs, measures benefits, and then compares costs and benefits in a systematic manner. It does so over multiple years, helping decisionmakers focus on the longer-term effects of their decisions. In most cases PPBES ensures that voices germane to budget debates have a chance to be heard before decisions are made, which builds consensus and helps with later implementation. PPBES also includes a process to bring issues before decisionmakers, which facilitates timely governance in one of the world's largest and most complex organizations.

In sum, the introduction of PPBES constitutes the seminal event in DOD budget formulation. But history shows that many other events have shaped today's DOD budget formulation process, making clear that no single event can claim to have determined

all aspects of the current version. History, and the author's experience — including as under secretary of defense (Comptroller) / chief financial officer from 2009 to 2014 — provide the basis for an assessment of the effectiveness of the current PPBES. They lead the author to conclude that the current version has many features — such as linking budgets to plans, using analysis to choose among alternatives, and a multi-year approach — that should be retained because they have helped the Pentagon formulate sound budgets, clearly better than those formulated in the 1950s and earlier.

But today's DOD budget formulation process also needs to be improved. History and the author's experiences offer lessons that should help guide improvements. These include:

- A decentralized approach involving service use of PPBES to create budgets, followed by oversight by the secretary of defense, has been in place since the early 1970s. It helped PPBES survive and prosper and should be maintained;
- Program budgeting, which considers issues together (for example, all tactical aircraft or all strategic forces) has helped achieve coordination and minimize duplication and should remain a key part of PPBES;
- Attempts to streamline PPBES to reduce workload have generally not succeeded. But efforts to streamline PPBES should continue, perhaps by reducing numbers of approvals and through changes involving Congress and, most important;
- The Pentagon needs to persuade Congress to alter PPBES to better accommodate rapidly changing technology initiatives, including budgeting for them in broader categories to provide more flexibility during budget execution.

These conclusions follow from the history of DOD budget formulation. The paper begins with the history of budget formulation before PPBES and then turns to the creation of PPBES and significant changes made to the system in subsequent years. The paper also addresses two special topics whose issues can best be discussed together — wartime budgeting and budgeting for cost reductions — before concluding with an assessment of PPBES and suggestions for improvements.

HISTORY OF BUDGET FORMULATION

The early years

In the early years of this nation, federal agencies transmitted their estimates to Congress in what was known as the “Book of Estimates.” The first such estimate for the War Department, in connection with the budget for 1789, resulted in a lump-sum appropriation of \$137,000 (about \$6 million in today's dollars).¹ While the earliest budgets simply provided defense organizations with a lump sum of money, budgets gradually increased in detail.²

The Treasury Department usually reviewed early agency budget estimates, though at times the president became personally involved. Some aspects of these reviews seem familiar today. In 1803, Secretary of the Treasury Albert Gallatin objected to the Navy Department's budget estimate, telling President Thomas Jefferson that the estimates were much beyond what the Navy needed. The size of defense budgets generated controversy even in the early 1800s! Early budgeteers also kept Congress in mind. During the John Quincy Adams administration, the secretary of the treasury pressed the

president to approve the lowest possible agency budget estimates. Adams advised that a little padding was appropriate because congressional committees always felt they had to make cuts.³

The Budget and Accounting Act of 1921 required that the president submit a budget for the entire federal government along with requests, to be submitted from time to time, for supplements to that budget. The law also requested information on federal accomplishments, an early version of program evaluation. Finally, the act established the Bureau of the Budget, which began life as part of the Treasury Department but reported directly to the president starting in 1939. Early in its history the Budget Bureau gained the authority to review and clear budgets from each federal agency before they were sent to Congress, a key role that it retains today. Before World War II the Budget Bureau had a staff of only about 40 persons but, as its power and the size of federal budgets grew, staff levels rose sharply, numbering about 600 after the war.⁴

In the days before World War II, defense budgets were relatively small. In 1930 the U.S. defense budget totaled less than \$1 billion, and stayed at about that level throughout most of the subsequent decade. Even by 1940, with World War II already raging in Europe, the United States devoted only \$1.7 billion to defense (about \$50 billion in today's dollars).

But by 1945, as World War II ended, the defense budget had skyrocketed to about \$34 billion (a bit more than \$800 billion in today's dollars). By 1947, as what would become the Department of Defense was created, demobilization pushed the budget back to about \$11 billion (roughly \$200 billion in today's dollars) — sharply lower than wartime levels but still many times larger than pre-war budgets. It was time for a better approach to budget formulation.

After the DOD's establishment

The National Security Act of 1947 created the National Military Establishment, renamed the Department of Defense in 1949. The first secretary of defense, James Forrestal (who served as secretary from 1947 to 1949) had worked with Navy budgets since 1940. At first Forrestal argued for a decentralized competition among the services with the defense secretary playing only an oversight role.⁵ But Forrestal quickly altered his approach, apparently convinced that the defense secretary needed to take a more active role in activities including budgeting. In regard to budgeting, he was embarrassed that the services each submitted separate defense budgets that were not integrated and vowed to change the process.⁶

Some early reform efforts did not succeed. Performance budgeting sought to identify performance measures associated with activities and then budget amounts necessary to achieve performance goals established using the measures. In 1949 the Commission on the Organization of the Executive Branch of the Government (better known as the Hoover Commission) recommended performance budgeting, and a 1949 law directed that the DOD submit its budget using performance measures. After much work on measures within the Department of Defense, the results still generally consisted of workload counts rather than true performance measures that assessed the outputs achieved by budgets.⁷ While performance budgeting moved beyond line-item budgeting, the notion of budgeting based on goals and specific measures did not survive, probably because it is too hard to develop comprehensive performance measures for defense that are both understandable and useful.

Other reforms fared little better. The Hoover Commission criticized the stock and industrial funds — funds used to buy goods and services and then resell them to defense users — and proposed significant changes in the funds and other aspects of DOD accounting. But Wilfred McNeil, a special assistant to Forrestal for budgetary and fiscal affairs, disagreed strongly with the recommendations and was able to rewrite the report so that it only advocated incremental changes.⁸ In 1966 a DOD initiative called Project Prime, the brainchild of DOD comptroller Robert Anthony, recommended major changes in defense financial management to move the system closer to ones typically used in private businesses. Among other things, Project Prime called for the DOD to use accrual accounting, which matches costs to the years when they occur and is required for the auditable financial statements currently being pursued in DOD. Project Prime also called for widespread use of internal fee-for-service payments, which are part of the working capital funds described below. While prescient in some notable respects, at the time Congress refused to support Project Prime’s recommendations.⁹

While some reforms failed, other succeeded and began creating the foundation for the system of budget formulation that the DOD uses today. An integrated budget remained a key Forrestal goal, and the secretary focused his efforts on the budget for FY1950. He directed the Joint Chiefs of Staff to create a strategic plan and an agreed-to list of forces necessary to achieve the plan. His special assistant McNeil met regularly with the service budget chiefs to promote greater budget integration. Budget integration presented a challenge in the 1950s because, according to statements made by McNeil in a 1974 oral history, the services knew very little about each other’s forces, equipment, and operations.¹⁰ Forrestal also requested that yet another group that remains important today, the National Security Council, formulate a National Security Strategy.¹¹



Budget integration presented a challenge in the 1950s because the services knew very little about each other’s forces, equipment, and operations.

Secretary Forrestal realized that, to create an integrated defense budget, he needed someone to act in the role of chairman of the Joint Chiefs of Staff to reconcile differing opinions. He prevailed on General Dwight Eisenhower to take on that task temporarily. Eisenhower, who had become the president of Columbia University after leaving active duty, served as “principal military advisor and consultant” to the president and the secretary of defense starting in January 1949, while also continuing as Columbia’s president. Despite the stress of commuting between New York and Washington and bouts of illness, Eisenhower had some success in reconciling divergent points. He developed what he called his “Red Brick” plan for allocating funds based on DOD-wide strategic priorities and worked to resolve inter-service friction regarding the allocation. In June 1950, however, North Korea’s invasion of South Korea took budgeting in a different direction.¹² Eisenhower’s status as principal military advisor to the president presaged changes in the duties of the chairman of the Joint Chiefs of Staff that were mandated in 1986 by the Goldwater-Nichols legislation.

Improvements during this period included important organizational changes that are still in place today. McNeil possessed financial knowledge and experience that gave him considerable authority both in the DOD and Congress. In 1949 he helped Forrestal¹³ and his successor Louis Johnson (who served as secretary of defense from 1949 to

1950) persuade Congress to pass an amendment to the National Security Act of 1947. The amendment added a Title IV to the 1947 act, and McNeil later claimed that he wrote the new title.¹⁴ Title IV created the position of DOD comptroller to assist the secretary in all aspects of budgeting and financial management. The new position had many of the same duties as today's DOD comptroller including supervising and directing budget formulation, supervising budget execution, establishing and overseeing accounting, and internal audit. In addition the 1949 amendment created comptrollers for the military departments.¹⁵

McNeil, an officer in the Navy supply corps during World War II, became the first DOD comptroller, serving in that role from 1949 to 1959. During those 10 years, a record tenure for DOD comptrollers, McNeil supported five different secretaries of defense in addition to Forrestal. McNeil was well respected at the Pentagon and in Congress, and trusted by Forrestal and his successors. However, the Army and Air Force felt strongly that McNeil had a pro-Navy bias.¹⁶

McNeil persuaded Congress to support a more rational structure for the defense budget. At the time the budget was divided into numerous categories. McNeil highlighted the structure problem using the Bethesda Naval Hospital as an example. He noted that the hospital had to operate with 269 different pots of money including separate appropriations for water coolers, newspapers, travel, and some civilian hires.¹⁷ The new structure, a forerunner of an organization still widely used today, consisted of a few broad categories that cut across services such as procurement, maintenance and operations, and research and development. Now the secretary of defense could compare spending across services more readily.¹⁸ During his service as DOD comptroller, the author used the data created by this important change to brief senior DOD leaders at the end of the budget formulation phase, often using broad budget categories as proxies for key policy issues such as service progress toward modernization (procurement funding served as the proxy) and improvements in military readiness (operation and maintenance funding as the proxy).

The services also began experimenting with program budgets. They grouped together funding provided for different activities — for example, the Air Force grouped funding for a weapon project, similar to the approach used by system project offices today. The services varied in their implementation of program budgets and they were not always successful.¹⁹ But the technique became key to the future budget formulation system with its program orientation.

After taking office in 1953, President Dwight Eisenhower mandated another process change in response to his concern that defense costs kept increasing. Eisenhower required that the justification for each major defense program contain a financial appendix that identified the costs of the program. This approach carried over into McNamara's new budget system to help control defense spending and, in varying forms, remains in place today in documents such as the Selected Acquisition Reports, important reports that were first introduced in 1969. Secretary of Defense Robert Gates, who served as secretary from 2006 to 2011, used a narrower version of Eisenhower's technique in the latter parts of his tenure. In an effort to reduce congressional demand for reports, Gates required that every DOD report to Congress contain an estimate of the cost to prepare the report. The approach made sense to the author as a way to force Congress to reconsider its demand for reports, but sadly it has not done much to control congressional appetites.

McNeil stayed on during the Eisenhower presidency and worked for Eisenhower's first secretary of defense, Charles Erwin Wilson, who served from 1953 to 1957. McNeil persuaded Wilson that budgets could be a potent tool for controlling and monitoring policy, an approach that is clearly still in place today in the DOD.²⁰ For example, the author used budget data to monitor and report to the secretary of defense and other senior leaders regarding cost reduction policies put in place after defense budgets declined sharply following enactment of the Budget Control Act in 2011.

Other new policies emerged that would further shape the future of defense budget formulation. In 1957, in response to problems in the Navy shipbuilding program, George Mahon — the influential chairman of the defense subcommittee of House Appropriations — urged the DOD to put in place a concept, under consideration since the early 1950s, that would eventually be referred to as full funding. The DOD subsequently issued a directive that embraced full funding.²¹ The concept requires that, for programs in the procurement appropriation, each annual appropriation request must contain an estimate of all funds needed to complete delivery of a given number of usable end items such as aircraft, ships, missiles, or vehicles. So, if the Army proposes to buy 20 new vehicles in a particular fiscal year, under full funding the service would have to include in that year's budget request all the costs to buy the vehicles as well costs for any needed spare parts or other support items. Full funding, which the Bureau of the Budget directed in the 1962 version of its A-11 circular governing budget formulation, helps to ensure that Congress and DOD leaders understand the full costs of a year's procurement purchases.²² Full funding also helps ensure that a future Congress will not have to appropriate added funds to provide the DOD with usable end items. There is a significant exception to full funding for items that take much longer to build than the weapon itself,²³ and Congress sometimes permitted programs (especially Navy ship programs) to ignore full funding.²⁴ But today most DOD procurement programs still conform with full funding, and the current Circular A-11 still requires it.

The 1950s also witnessed important work at the RAND Corporation on defense economics. RAND developed the notion of a defense program — that is, an organized effort to achieve a capability or an objective including all the elements necessary to do so. Drawing on this work, the Air Force began considering forces along program lines such as strategic forces, tactical forces, and airlift. The Air Force also began budgeting over multiple years and used cost analysis in making decisions. While sometimes embraced with less than complete enthusiasm, these new concepts helped establish the foundation for major shifts that would occur starting in 1961.²⁵

However, despite significant progress, as the 1950s drew to a close, budget formulation in DOD still had important shortcomings. Budgets were not tied closely to defense plans. The secretary of defense had limited capability to review and revise service budgets, which led to imbalances in military capability and duplication of effort. Budgets also focused largely on the next budget year even though decisions for the budget year could have significant effects on funding needed in future years.²⁶ In sum, there was still not a well-coordinated process for budget formulation in the DOD.

That would soon change.



Despite significant progress, as the 1950s drew to a close, budget formulation in DOD still had important shortcomings.

The creation of PPBES

Robert McNamara assumed duties as secretary of defense in early 1961 and held the position until 1968. Even though he came to the job with no defense or government background, McNamara had extensive experience at the Ford Motor Company, including financial management duties and brief service as its president. McNamara was aware of the DOD budget formulation concerns noted above, and he also criticized the lack of an analytic basis for making choices among forces and weapons as well as the absence of written documentation about the choices.²⁷ In addition, the use of appropriations budget categories (such as military personnel and procurement) made it difficult to determine whether budgets accomplished the defense objectives set by the Joint Chiefs and senior civilian leaders. Assessing success in meeting these objectives required knowledge of spending by program rather than by appropriation category.²⁸

McNamara got advice about DOD budget formulation from his new boss President John Kennedy. Based on his congressional experience, Kennedy distrusted having defense planning and budgeting led by uniformed military personnel. He wanted civilians to take charge of the process.²⁹

McNamara considered major changes to reorganize the Department of Defense and centralize control of its many organizations, including proposals contained in the Symington Report, the results of a study requested by President Kennedy that were available at the time McNamara became defense secretary. The Symington Report offered far reaching recommendations, including making all DOD appropriations to the secretary of defense and eliminating the departmental structures of the military services.³⁰ During an oral history interview, McNamara stated that he had agreed, in principle, with many of Symington's recommendations but felt that such far-reaching organizational changes would not be accepted by Congress. Instead McNamara sought change by implementing new planning tools including a major new budget formulation process.³¹ To work budget formulation issues, he chose as his comptroller Charles Hitch, a soft-spoken economist and Rhodes Scholar. Hitch came to the Pentagon from RAND, where he had worked on defense and economic issues since 1948, using his time there to and develop expertise and ideas. While at RAND, Hitch codified his thoughts in an influential book, *The Economics of Defense in the Nuclear Age*,³² that has been described as a "bible" for program planning and analysis in government.³³

Hitch met with McNamara in January 1961 in a meeting characterized as "love at first sight."³⁴ Hitch and his wife had just had a child, and he was reluctant to move from RAND in California to Washington. But McNamara aroused his interest, and Hitch eventually agreed to serve as his comptroller. In January 1961, just as he was taking over as secretary of defense, McNamara accepted Hitch's recommendation to create a new approach to budget preparation known as the Planning, Programming, and Budgeting System (PPBS).³⁵ In 2003 PPBS was renamed as the Planning, Programming, Budgeting, and Execution System (PPBES) to reflect more emphasis on execution and evaluation.

The first year

Hitch wanted to move slowly and experiment with the new process, applying it first to strategic forces. But when Hitch briefed McNamara on his plans, McNamara banged his fist on the table and directed that the new PPBES be implemented quickly, in time to be used in evaluating the entire FY1963 budget request which was being formulated during 1961. Start-up efforts slowed when Hitch contracted pneumonia toward the end

of January 1961. But once back to work, Hitch sought to speed up implementation as much as possible.

The first implementation of PPBES made several significant changes in the budget formulation process including:

- No fixed budget ceilings by service lest later analysis suggest a different allocation.
- Weapons and programs considered in force packages to avoid duplication (early Hitch proposals for force packages included strategic retaliatory forces, continental air and missile defenses, general purpose forces, airlift/sealift forces, and general support).³⁶
- Five-year projections of forces and costs.
- Use of analytic techniques to hold down costs while meeting high-priority military requirements identified during the planning step.³⁷

The new process introduced “program elements” as the building blocks necessary to consider budgets in terms of programs. The program elements could be aggregated into force packages or into appropriations categories.³⁸ To this day program elements remain the building blocks for DOD budgets. In the current version of PPBES, program elements can be aggregated into what are termed major force programs (many of which — such as strategic and general purpose forces — are similar to the Hitch proposals). Some of today’s major force programs — such as strategic and mobility forces — are used to display DOD budgets. But more often program elements are aggregated into categories that better fit how today’s leaders assess budgets — such as tactical aircraft or surface ships — and aggregations like these find much use during today’s PPBES process. Program elements can also be aggregated into the appropriations categories that are still used by the DOD and especially by Congress.

Hitch carved out 31 positions in his 200-person comptroller organization to assist in applying analytic techniques. Hugh McCullough led the group and placed Alain Enthoven, a former RAND analyst, in charge of weapons analyses. This group became known as the “whiz kids,” a title that had been applied to McNamara and his colleagues at Ford.

Enthoven sometimes had a brash attitude toward the military. An Air Force general, in the process of challenging Enthoven’s analysis of nuclear forces, noted the analyst’s lack of military experience. Enthoven replied curtly: “General, I have fought just as many nuclear wars as you have.” Enthoven played an important role in the new budget formulation process. In 1971 he documented the budget formulation efforts during the McNamara years by co-authoring an influential book entitled *How Much Is Enough*.³⁹

McNamara got the new process started in March 1961 by directing more than one hundred studies of military requirements, an early implementation of the planning phase in PPBES. As the year went on, Hitch applied the new process to the analysis of contentious issues, making use of the new and innovative programming phase. The Air Force wanted to replace B-52 bombers — which were described as “aging” even in the 1960s — while also installing more fixed Minuteman missiles, which they argued were more cost-effective than Polaris submarines with sea-based missiles. Most of the other service chiefs favored the Polaris approach. The Navy wanted to begin construction of another nuclear-powered aircraft carrier, and the Air Force wanted to procure additional F-106 aircraft to replace F-102s. The Army wanted to increase divisions from 14 to 16. In another forerunner of things to come, budget targets for FY1963 were cut late in the cycle due to economic concerns.⁴⁰

As analyses responded to these issues and changes, Hitch drafted and sent to McNamara documents called Draft Presidential Memoranda. As the name implies, these documents sought to document major decisions for presentation to the president. The documents may not have been useful at the White House level and were not always transmitted — hence the term “draft” in the title.⁴¹ But McNamara and his team found them quite useful, both as an aid to getting service comments and to document results.⁴²

Changes at the Bureau of the Budget complemented the new defense budgeting system. The Budget Bureau conducted a spring review that focused on major issues and, rather than issuing binding ceilings for spending, they provided preliminary guidelines. Bureau analysts followed with a list of policy questions that would guide later reviews and also examples of where, in their view, the DOD could save money.⁴³

Eventually the new system led to a budget, but not without what Hitch termed “lots of resistance” from the services. Admiral Arleigh Burke felt that Navy forces did not fit well into the force packages. The new system required much more detailed information and so imposed a large workload on service staffs, which probably did not please them. Service budget analysts also felt that attempts at quantification and their reduced decisionmaking authority impugned their ability to make objective program decisions.⁴⁴

Despite pains at birth, the introduction of PPBES in 1961 represents a seminal event in the history of defense budget formulation. But the new process built on a foundation laid in earlier years. As noted earlier, these foundational efforts included RAND’s work and Air Force experiments with program budgeting. Efforts to tie budgets to plans echoed similar work started by Eisenhower in 1949. Though the two men did not have a high regard for each other,⁴⁵ McNamara built on progress made by McNeil, who persuaded Congress to rationalize the structure of the defense budget and supported experiments with program budgeting.

Changes in the 1960s

Changes to PPBES continued in the 1960s. Starting in 1962, the DOD documented decisions in the Five-Year Force Structure and Financial Program, known by the acronym FYFS&FP.⁴⁶ Mercifully this cumbersome program name, and its unpronounceable acronym, eventually became the Five-Year Defense Program (later known as the Future-Years Defense Plan) with the now well-known FYDP acronym. Early FYDPs simply recorded the secretary’s near-term decisions and did not always fully describe the effects of these plans on later years, a drop-off sometimes described in those days as “FYDP droop.”⁴⁷ Today the FYDP does a better job of recording long-term plans for military personnel, acquisition, and research programs. FYDP projections for day-to-day operating costs, however, still do not always capture changes beyond the budget year, especially increases associated with newer and more sophisticated weapons. This FYDP failing makes it more difficult for the DOD to focus on and control the costs of weapon and other operating costs, which the author and many other analysts have highlighted as one of the Pentagon’s key financial problems. In 2016 congressional testimony the author argued that better FYDP projections of operating costs, along with thresholds that require reporting if breached (similar to the Nunn-McCurdy thresholds for acquisition costs), should be put in place to help control operating costs.⁴⁸

During the 1960s the Pentagon continued to pursue program budgeting, submitting budgets in functional categories but without the detailed performance measures required by performance budgeting. Congress, however, did not embrace program

budgeting even though it was central to the new PPBES approach, preferring to focus on service budgets as measured by appropriation categories such as military personnel and procurement. To a large extent that congressional preference has survived to this day.

An important organizational change occurred in 1965. During that year Charles Hitch departed his post as DOD comptroller; Robert Anthony succeeded him. Anthony believed that programming and budgeting required different information and sought to undermine the programming process. Hitch demanded that the Office of Systems Analysis, which oversaw programming, be moved out of the comptroller's office. Adding to the pressure, Enthoven threatened to resign if he had to work for the new comptroller.⁴⁹ McNamara, who remained sympathetic to Hitch and Enthoven and the programming process, created a separate assistant secretary to run systems analysis and had that assistant secretary report directly to the secretary of defense, with Enthoven serving as the first incumbent. This reorganization led programmers to have less involvement, and sometimes no involvement, in the budgeting phase of PPBES.⁵⁰

Organizational shifts between systems analysis as a separate office or as part of the comptroller's office would be repeated several times in coming decades. The systems analysis office changed its name to the Office of Program Analysis and Evaluation in the early 1970s, probably because of the negative attitudes toward systems analysis that had developed in Congress and elsewhere. Finally, in 2009 Congress likely ended the organizational shifts by passing the Weapon Systems Acquisition Reform Act, which made the systems analysis office separate by statute and changed its name again, this time to Cost Analysis and Program Evaluation (CAPE), to emphasize the importance of cost analysis in the weapons process. Effective integration of the programming and budgeting phases now depends on close collaboration between the CAPE and comptroller's office which, based on the author's experience, generally occurs but is not automatic.

The military services made the most important PPBES change during the 1960s — they adopted the system. Before the end of Secretary McNamara's tenure in 1968, the military had trained their own officers in PPBES techniques, permitting them to deal with the Office of the Secretary of Defense with a high level of competence. As one McNamara critic conceded, his "greatest contribution... to our military structure was to force the services to learn" the techniques of systems analysis.⁵¹ To this day, the services maintain a cadre of trained officers who understand PPBES well and can use its techniques to make efficient defense decisions.



The military services made the most important PPBES change during the 1960s — they adopted the system.

In his annual report for FY1962 McNamara described PPBES as a "test (that) proved most successful,"⁵² and the system continued to grow in stature. In 1966 President Lyndon B. Johnson called PPBES a "revolutionary system of planning and programming and budgeting" and directed all federal agencies to adopt it. But this experiment failed perhaps because, as former comptroller Hitch asserted, the non-defense agencies lacked trained personnel and had difficulty defining objectives.⁵³ PPBES also required substantial staff time, no doubt a problem in smaller agencies. In 1969 President Richard Nixon suspended the requirement that all agencies use PPBES.⁵⁴

The DOD's version of PPBES continued to grow in stature and, by 1967, had gained enough stature, and attracted enough critics, to generate congressional hearings. During those hearings Alain Enthoven defended PPBES vigorously, not surprising since he was one of the "whiz kids" who created it. But critics like Aaron Wildavsky decried the extreme centralizing bias of the new system. Senator Henry "Scoop" Jackson, an influential legislator who served on the Government Operations Committee, took a more centrist view, asserting that while technical PPBES specialists can make a contribution, there is no substitute for wise generalists with skill and experience. Jackson's centrist view appeared to prevail among the witnesses at the hearing.⁵⁵

Despite the criticism, the Pentagon continued to use the new system. With continued use came proposed changes.

Efforts to alter PPBES by changing incentives

Just as PPBES built on a foundation developed in the 1950s, PPBES evolved in the years after its introduction. Some changes focused on altering incentives to improve budget management and decisionmaking. A number of these initiatives succeeded and remain in place today.

Laird changes

In 1970 Secretary of Defense Melvin Laird (who served as secretary from 1969 to 1973) and his comptroller Robert Moot instituted one of the most important changes to PPBES. McNamara clearly believed in central control by the secretary of defense. He once stated that programming results should guide the budgeting process but only "after close review and approval by the Secretary of Defense."⁵⁶ Laird sought greater decentralization, relying on what he termed "participatory management." He mandated more involvement in resource management by the Joint Chiefs of Staff and extended the PPBES deadline by four months to allow more time for analyses and decisionmaking. Importantly, beginning with the FY1972 budget, Laird assigned each service a budget ceiling, telling them that they should perform their own budget analyses to produce the most effective force so long as that force fit within the dollar ceiling and met the most important elements of his strategic planning guidance. Each service recorded its plan in new documents called Program Objective Memoranda (POM), which replaced Draft Presidential Decision Memoranda and are still in use today.

The services immediately tested Laird's budget ceilings. For FY1972 the ceilings totaled \$76 billion. Deputy Secretary of Defense David Packard admonished the services to stay within these ceilings by cutting support costs. Instead the services proposed programs that could have cost as much as \$80.5 billion, arguing that they needed higher funding to replace aging equipment while meeting urgent operational needs in Vietnam. Packard directed the services to remain within the fiscal ceilings while meeting strategic guidance to the extent possible, thus establishing the principle of binding fiscal ceilings.⁵⁷

Fiscal ceilings run the risk of shutting off important initiatives or new ideas that need funding in excess of service ceilings, which led McNamara to reject them. But the services can propose initiatives in excess of their ceilings. As noted above, they did so in their FY1972 requests, though Packard rejected their proposals. As he prepared his budget for FY1980, Harold Brown (who served as defense secretary from 1977 to 1981) had concerns about the growth in Soviet capabilities and let the services make

proposals in excess of their guidance. In more recent years the author has observed the military services making above-guidance proposals. Congress also permits military leaders to submit potential budget adds in what are termed Unfunded Priority Lists.

Another approach to minimizing problems of fiscal guidance involves withholding more funds from the services when ceilings are released. Today these withholds typically amount to only about 1% of the budget or less and are designed to handle unexpected problems at the end of the budgeting phase. The author believes that the withholds should be higher (perhaps 5%) so that, during the review by the Office of the Secretary of Defense, the military services can compete for funds to implement their new ideas or initiatives.⁵⁸

Today defense secretaries still follow Laird's lead and promulgate fiscal guidance as the programming process begins. Laird's fiscal guidance and the associated management decentralization probably allowed PPBES to survive and prosper. McNamara's strong centralization only works if the secretary is willing to personally make a huge number of budget decisions, which have been estimated to total about 700 per year during his tenure.⁵⁹ Most secretaries of defense want to delegate lesser decisions to the services in order to have time to address what they view as more important demands, including foreign policy issues and congressional interactions.

While Laird encouraged the services to perform their own budget analyses, he fought off congressional attempts to eliminate the Systems Analysis group that analyzed budgets for the secretary. During the McNamara years, some in Congress came to oppose the efforts of Systems Analysis, arguing that the group had usurped the authority of the Joint Staff and the civilian service secretaries. Mendel Rivers, the powerful chairman of the House Armed Services Committee, became a key opponent and threatened to abolish the position of assistant secretary of defense (Systems Analysis). To mollify the critics, Laird agreed to prohibit System Analysis from redesigning the force structure.⁶⁰ But the organization survived and continued to play a key role in analyzing initiatives. As noted above, it evolved into what today is known as the Cost Analysis and Performance Evaluation organization.

Laird had less success in fending off increases in authority granted by President Nixon to the Bureau of the Budget. Under Nixon the Budget Bureau set budget targets without formally consulting with the DOD. Laird objected strongly, saying that he favored a joint DOD/Budget Bureau review but not targets set by the Budget Bureau without that review. Nixon listened to Laird's concerns, but the Budget Bureau continued to wield considerable authority.⁶¹ Its successor, the Office of Management and Budget (OMB), was established in 1970 and continues to play an important role in establishing the size of total defense budgets. The current OMB staff also joins the staff of the Office of the Secretary of Defense in a joint review of all DOD budgets and programs, a modified version of a process that started in the 1950s at the request of the DOD's first comptroller Wilfred McNeil.⁶² Because of the small size of the OMB's defense staff compared to the size of the Pentagon, the OMB typically picks a few target programs and focuses staff attention on them during the joint review. For example, during the past decade the OMB has played a significant role in reviewing wartime funding budgeted in the Overseas Contingency Operations fund.

Lesser changes in the 1970s and early 1980s

In 1974 Congress made a change designed to provide more time for decisionmaking and increase the chances of on-time budgets. Starting in 1976, the U.S. fiscal year ended on September 30 rather than June 30. While this change provided more time for congressional review, it has not led to regular enactment of budgets prior to the beginning of the new fiscal year. Between fiscal years 1977 and 2017, Congress completed timely action on all federal appropriations only four times,⁶³ and the DOD has not been spared from late spending bills. The DOD received an on-time appropriation in only five of the 18 years between FY2002 and FY2019, and the length of delays before receiving an appropriation has gotten significantly longer since FY2010.⁶⁴



If the DOD and other federal agencies want on-time budgets, the author recommends that the fiscal year be changed to coincide with the calendar year... [which] would likely lead to more on-time appropriations.

Untimely budgets can create major problems during budget execution. But late budgets also create problems during budget formulation, resulting in much confusion if the basis for the next year's budget has not been finalized by the end of the budgeting phase. If the DOD and other federal agencies want on-time budgets, the author recommends that the fiscal year be changed to coincide with the calendar year. Christmas, along the prospect of a new Congress during election years, tends to force Congress to finalize and enact budgets and so would likely lead to more on-time appropriations.

In 1985 the DOD instituted another change designed to improve management and decisionmaking — accrual accounting for military retirement. Under this approach, the DOD calculates an accrual charge that reflects the funds that must be set aside each year to pay future military retirement costs. The accrual charge appears in the DOD budget but, after budget enactment, the charge transfers to a trust fund outside the DOD budget, which pays military retirees who are eligible for pensions. Accrual accounting ensures that DOD planners immediately recognize the costs or savings associated with changes in the size of the military or the provisions of the retirement law. The Pentagon supported the shift to accrual accounting,⁶⁵ and the OMB also strongly supported the change.⁶⁶ It was authorized by Congress and came into being in FY1985 largely through the efforts of Representative Les Aspin.⁶⁷ Accrual accounting for military retirement remains in place today.⁶⁸

Goldwater-Nichols

In 1986 Congress passed the Goldwater-Nichols Department of Defense Reorganization Act, one of the most far-reaching reforms of the U.S. military establishment. This paper focuses mainly on the effects of Goldwater-Nichols with regard to the budget formulation process.

Goldwater-Nichols is primarily known for reforms such as strengthening the role of the chairman of the Joint Chiefs of Staff, who under this law became the principal military advisor to the president. As noted above, James Forrestal — the first secretary of defense — realized that he needed someone to act as a stronger chairman to reconcile differing service views, especially about plans and budgets. In January 1949 Forrestal brought in Eisenhower to fill this role on a temporary basis. Under Goldwater-Nichols, Forrestal's temporary approach became permanent.

Goldwater-Nichols mandated that the commanders-in-chief — now known as combatant commanders — have command authority during military operations. The combatant commanders also play a role in the budget process by submitting budget proposals in documents known as Integrated Priority Lists and by reviewing budgets. Critics worry that combatant commanders focus mainly on near-term military needs but, in the author's view, their inputs create a healthy debate when juxtaposed to initiatives proposed by the military services, which often focus mainly on longer-term acquisition issues.

A lesser change in Goldwater-Nichols, but important to defense budget formulation and financial management, affected the comptroller position in each of the three military departments (the Departments of the Army, Navy, and Air Force). Title IV of the National Security Act, added by amendment in 1949, created the DOD comptroller position and also created comptrollers for each of the military departments. In 1954 each department designated their comptroller position as an assistant secretary (Financial Management and Comptroller). However, prior to Goldwater-Nichols, senior flag officers in each military service controlled much of the budget formulation process. Goldwater-Nichols amended the law so that, within the military and civilian staffs in each department's headquarters, the civilian secretariat and its comptroller had "sole responsibility" for comptroller issues including financial management.⁶⁹ The new law meant that flag officers overseeing service budget formulation had to report directly to the civilian assistant secretaries, though the law explicitly states that civilian and military budget staffs can provide advice to the military chiefs of staff. The author worked on defense issues at the Congressional Budget Office during the implementation of this change and recalls that the military services worried that their authority over budget formulation would be much reduced. That has not happened. While assistant secretaries (Financial Management and Comptroller) still retain sole responsibility for comptroller issues, military leaders continue to exert significant influence during all phases of PPBES.

Working capital fund changes

Yet another PPBES management reform came into being in 1991 and sought to centralize and expand the defense working capital funds. Since 1870 the military has had working capital funds that maintain equipment, buy parts and supplies, and provide other goods and services. The funds, which have gone by different names over the years, maintain a corpus of financial capital that they use to buy supplies and provide services. Then, like private businesses, they sell their goods and services to the military services and agencies at a fixed price. The military services must pay for their purchases using appropriated funds. The funds in turn use the service payments to replenish their stocks. Planners try to set prices so that the working capital funds break even over the long run. Working capital funds must maintain a positive level of cash in their accounts or risk violating the federal Anti-Deficiency Act.

In 1991 Secretary of Defense Dick Cheney (who served as secretary from 1989 to 1993) put in place a significant reform of the working capital funds, consolidating existing activities from the military services and adding new ones to create the Defense Business Operations Fund (DBOF).⁷⁰ This effort was led by then-Comptroller Sean O'Keefe and his deputy, Don Shycoff. Shycoff wanted the DBOF to make costs more visible to the services. The new DBOF was a single large fund managed by the Office of the Secretary of Defense. However, with the Office of the Secretary in charge, the military services did not have as much incentive to manage their costs carefully so as to maintain positive cash balances. The DBOF managers also struggled to put in place systems to keep track of their activities and set prices. In 1996, the DOD split the DBOF back into separate service funds and delegated management back to the services.⁷¹

The DBOF consolidation had failed. Moreover, critics have raised concerns about management of the working capital funds including mechanisms for setting prices.⁷² Improvements can surely be made to the working capital funds. But without them, the DOD would have to rely entirely on appropriated funding for support activities, and appropriated funds offer essentially no cost visibility to users. Indeed, working capital funds represent the only place where the DOD budget clearly establishes the unit costs of support activities. Also, because the working capital funds can use their capital to stockpile goods and services when appropriate, they provide the DOD with much-needed flexibility in managing the department's support establishment. As the author knows from first-hand experience as DOD comptroller, this flexibility can be crucial during wartime and during periods of budgetary instability, such as the sequestration and shutdown that occurred in 2013.

Changes in the 2000s

In the early 2000s Secretary of Defense Donald Rumsfeld (who served as secretary first from 1975 to 1977 and again from 2001 to 2006) sought to change PPBES so that it focused more on the execution of funds and assessments of program performance, topics that lie outside the focus of this paper. To underscore this effort, in 2003 Rumsfeld changed the name of PPBS to the Planning, Programming, Budgeting and Execution System (PPBES). Rumsfeld also directed changes designed to streamline PPBES, which are discussed in the next section.

The planning phase of PPBES has evolved over time. Even before the creation of PPBES, secretaries of defense recognized the need to better plan and integrate defense budgets. As noted above, Secretary Forrestal made use of the part-time services of Dwight Eisenhower to help accomplish this task and McNamara directed early studies and analyses, which probably constituted the first PPBES planning phase as well as an early version of programming. Secretary of Defense Caspar Weinberger (who served as secretary from 1981 to 1987) sought to revitalize the planning process through increases in front-end planning.⁷³ The Obama administration sought to improve front-end planning by identifying key issues at the beginning of the process, which allowed more time for study and implementation. The Obama-era approach continues to be used today.

Today the under secretary of defense (Policy) leads the planning process. The process reflects inputs from outside the DOD, including presidential direction along with substantial input from the Joint Chiefs of Staff. Planning begins with the National Security Strategy, which is signed by the president and lays out broad guidance for the DOD and other agencies involved in national security. Two documents follow from the National Security Strategy, including the National Defense Strategy (which focuses on DOD strategy and is signed by the secretary of defense) and the National Military Strategy (which indicates how the military will implement strategy and is signed by the chairman of the Joint Chiefs of Staff). The Defense Planning Guidance provides specific direction to the PPBES. This document has had a variety of names over the years including the Joint Programming Guidance, Guidance for Development of the Force, and the Defense Planning and Programming Guidance.⁷⁴ The document, which is issued each year and generally comes out in the spring, reflects significant inputs from the military services but ultimately reflects decisions by the secretary of defense regarding priorities to be considered during the budget formulation process. The Defense Planning Guidance has varied in its length and specificity, from a few pages to many, depending on the desires of the incumbent secretary. In recent years, the National Defense Strategy has sometimes provided influential planning guidance during the PPBES process.

Attempts to Streamline PPBES

The complex PPBES processes mean that budget formulation consumes a lot of the time of DOD personnel, including senior leaders. Several major initiatives have sought to streamline the process. For the most part, these initiatives have not succeeded.

Biennial budgeting

Biennial budgeting represents the most significant effort to streamline PPBES. Biennial or two-year budgeting envisions full use of PPBES during the first year of every two-year period in order to create a budget that covers two years. During the second year, the budget would only be updated in relatively minor ways.

In principle, biennial budgeting makes sense. Workload in the second year of each two-year period should be reduced, both in the DOD and Congress. DOD program managers could use the freed-up time to manage their programs rather than formulating another budget. Congress could use the time for oversight activities. It would also be easier to manage programs if available resources were known two years in advance. Portions of the Department of Veterans Affairs budget for and receive two-year appropriations, and some 20 states employ biennial budgeting. For all these reasons, eminent budget experts have recommended biennial budgeting for the DOD and other federal agencies. In 2015, for example, Alice M. Rivlin (the founding director of the Congressional Budget Office, a former director of the OMB, and a longtime Brookings expert) joined Pete Domenici (former chairman of the Senate Budget Committee) in recommending biennial budgeting.⁷⁵

The DOD experimented with biennial budgeting in the 1980s. The National Defense Authorization Act for 1986 required that the department submit a two-year budget, and the DOD initially supported the effort. In his annual report for FY1988, Secretary Weinberger strongly supported biennial budgeting, stating that it would enhance resource stability, improve the effectiveness of equipment purchasing, and enhance planning and execution.⁷⁶ Weinberger's DOD submitted a two-year budget for FY1988 and FY1989.⁷⁷ The Senate Armed Services Committee responded by providing a two-year authorization for about half of the defense budget. During this and a subsequent period the DOD followed the biennial approach and twice used the off year to focus on execution reviews, though it was difficult to persuade DOD analysts to concentrate on metrics and evaluations of past budgets rather than on future budgets.⁷⁸

Despite the partial two-year authorization in the Senate, the House Armed Services Committee provided only a one-year authorization for FY1988, and both Appropriations Committees provided one-year appropriations. The DOD's support for biennial budgeting gradually evaporated and, for its part, Congress as a whole never enacted a two-year budget authorization or appropriation.

The Pentagon's experiment with biennial budgeting failed primarily because of Congress. The appropriators never provided a two-year appropriation because they felt they needed to review budgets each year to maintain congressional control. Without a two-year appropriation, the Pentagon had no assurance that the requested level of second-year funding would be forthcoming.



The Pentagon's experiment with biennial budgeting failed primarily because of Congress.

Variability in the total level of the defense budget also worked against biennial budgeting. Numerous changes occur for reasons including laws that alter total budget levels, shifts in inflation assumptions and fuel prices, changes in the funding needed for acquisition programs, and congressional actions that alter financial needs. These shifts would make it difficult to execute a two-year budget without significant alterations in the second year.

Other streamlining changes were also tried in the 1980s, though it is not clear how much workload went away. For example, in his annual report for FY1983, Weinberger asserted that the documentation for the program review portion of PPBES had been reduced by half along with cuts in budget documentation.⁷⁹ While it is difficult to verify this claim, the author served as Air Force comptroller in the 1990s and found that plenty of PPBES documentation had survived.

Rumsfeld changes

The biennial approach got another chance under Secretary Rumsfeld, at least within the DOD. Rumsfeld was no fan of PPBES. He stated that PPBES was “really a relic of the Cold War — a holdover from the days when it was possible to forecast threats for the next several years because we knew who would be threatening us for the next several decades.” He also termed it one of the last vestiges of central planning left on earth.⁸⁰ Reforming PPBES was clearly one of Rumsfeld’s goals.

To that end, during his second term as defense secretary, Rumsfeld tried a version of biennial budgeting. He did not submit a biennial budget to Congress. However, arguing that the DOD planned too often, Rumsfeld changed the timing of the Defense Planning Guidance or DPG (which provides the secretary’s guidance for the PPBES) from annual to every-other-year, though he left open the possibility of a short DPG in the off years. Later the DPG split into two documents — the Strategic Planning Guidance (SPG) and the Joint Programming Guidance (JPG). Rumsfeld also mandated that the budget be redone from scratch only every two years. During off years, services and agencies could submit Programming Change Proposals or Budget Change Proposals. Changes that requested added funding had to be offset so that budgets for each service did not change.⁸¹

These process shifts did not last long after Rumsfeld left. The SPG and JPG soon either went away or morphed into other documents, and the DPG returned to being an annual document.⁸² The number of Program and Budgeting Changes grew so large during the off-years that the workload associated with the off-year budgets approached the same level as the workload with “from scratch” budgets.⁸³

In another attempt to reduce workload, Rumsfeld combined the programming and budgeting phases of PPBES into one phase, again without much long-term effect. The programming and budgeting phases of PPBES have different goals. Programming seeks effectiveness and efficiency by looking over multiple years at competing options for numbers and types of forces and weapons. Budgeting focuses more on the first or budget year, seeking correct pricing, adherence to fiscal guidance, compliance with laws and policies, and adequate documentation. Because of these differences the military services responded to Rumsfeld’s direction to combine the phases by continuing to perform programming and budgeting separately, using different staffs, but submitting one document to the Office of the Secretary of Defense at the end of the budgeting phase. The secretary’s office then conducted separate programming and budgeting reviews, with different offices having the lead during the two phases. There may have been some reduction in time spent during combined reviews because fewer issues

were revisited but, in the author's view, the reduction was not substantial. Moreover, the time spent focusing on major programming issues left insufficient time to prepare budgets accurately. As a result, congressional staff members, who are important to the success of DOD financial management, complained about a decline in the quality of the department's budgets. Perhaps for all these reasons, but especially because programming and budgeting accomplish quite different goals, the Trump administration experimented toward the end of its term with a return to full separation of programming and budgeting.⁸⁴

Streamlining in reverse

With the enactment of the Budget Control Act of 2011, the DOD and other federal agencies entered into a period of great uncertainty about the levels of future defense funding that would be approved by Congress. The uncertainty affected budget formulation. The 2011 budget act established binding ceilings on funding for federal agencies. Because the DOD ceilings were unrealistically low for wartime, President Barack Obama often allowed the Pentagon to budget at higher levels, which led to a dilemma for the department. For example, as it planned its budget for FY2013, the DOD did not know whether to budget at a level consistent with the ceilings in the 2011 act or at a level about \$40 billion higher that the president thought appropriate for national security. So for that year DOD prepared two budgets and, in addition, performed an out-of-cycle strategic review designed to provide guidance about how to accommodate the cuts if they occurred. Then in FY2014 the DOD prepared a budget at the president's recommended level but had to assist Congress as they made major revisions to the DOD proposal to comply with the budget act's limits.⁸⁵ The author served as DOD comptroller during this period and can attest that preparing two budgets in a year consumed many management hours that would have been better spent addressing other defense issues.

Nor was this period the only example of streamlining the budget formulation process in reverse. In the 1980s another law, the Balanced Budget and Emergency Deficit Reduction Act of 1985 (better known as Gramm-Rudman-Hollings), established budget caps for defense and non-defense agencies. The caps led to sharp annual changes in defense funding. For example, in its budget for FY1988, President Ronald Reagan asked for funding of \$303.3 billion for the DOD in FY1988 followed by \$323.3 billion in FY1989. By the next year, the negotiations associated with Gramm-Rudman-Hollings caused the president to reduce his request for FY1989 to \$290.8 billion, a reduction of \$32.5 billion. A senior DOD official who directed the programming process during that period stated that the uncertainty about future budget levels effectively forced DOD to create two budgets in some years.⁸⁶

During these two periods, DoD streamlined its budget formulation process in reverse, moving toward biannual rather than biennial budgeting.

Future streamlining efforts

Considering the limited success to date, is there any way to streamline the PPBES process significantly? Some budget scholars have recommended eliminating the programming process altogether and carrying out only a single budgeting process.⁸⁷ However, as was noted above, programming and budgeting each perform tasks which would still need to be done under a single process. Therefore, moving to a single phase would probably not reduce workload significantly, as has been the case with Rumsfeld's efforts to combine the programming and budgeting processes.

Other streamlining approaches should be considered. The National Defense Authorization Act for FY2021 directs DOD to modernize its budget justification material.⁸⁸ The act focuses on use of improved document management and data visualization software. But it also suggests streamlining the production process within the DOD, which might reduce the time required for this PPBES activity. Even greater streamlining would be possible if the DOD could significantly reduce the number of individuals and offices that must formally indicate approval at various stages of budget formulation, while still ensuring that key voices are heard. If DOD leaders want to streamline PPBES, a working group, including military services and defense agencies and personnel from the Office of the Secretary of Defense, could be tasked to review approvals to see if any could be eliminated.

Approaches that would potentially yield larger reductions in PPBES workload have been recommended but never tried because they involve Congress. Today two sets of congressional committees — authorizing committees and appropriations committees — both review defense budgets. For FY2021, the armed services committees produced almost 1,250 pages of bill text governing DOD activities. The appropriations committee produced only about 70 pages of bill text but made some entries in the tables in their committee reports legally binding, thereby adding to controls on DOD activities. If Congress wants the DOD to streamline PPBES and reduce overhead, it needs to reconsider the amount of detailed guidance it imposes on the department.

A much more far-reaching approach, which would significantly streamline PPBES, involves consolidating congressional committees. There is considerable overlap in the efforts of the authorizing and appropriations committees, especially in recent decades as the authorizers, who in earlier years concentrated mostly on policy issues, moved toward detailed authorizations covering the entire defense budget. In 1973 Alice M. Rivlin recommended restructuring and combining the authorizing and appropriating committees for all federal agencies.⁸⁹ For the DOD, this change would significantly reduce the time leaders spend testifying before Congress and the time spent changing budgets to accommodate the dictates of two sets of committees. Others have supported this proposal, including the author. However, while combining committees would streamline PPBES, the move would surely be politically difficult because it would require a major overhaul of congressional committees and would mean that some members of Congress would lose seats on defense committees, thereby losing authority to make detailed changes in defense budgets.

BUDGETING FOR WAR

Because wars are such an important part of the Department of Defense's mission, and so important to the nation, budget formulation during wartime merits special attention. Wars often require rapid increases in funding and the flexibility to shift funds rapidly to meet new missions. PPBES and its predecessors have struggled to meet these needs.

To help, funds for early wars sometimes took the form of lump-sum appropriations. During the Civil War, for example, the military requested and received \$76 million for “assorted items,” to be spent by the services as needed. On the eve of the Spanish-American War, President William McKinley requested and Congress appropriated \$50 million to be spent at the discretion of the president. Just after the attack on Pearl Harbor, Congress provided the president with an emergency fund containing \$100 million (equivalent to almost \$3 billion in today's dollars), including \$10 million to be spent on a confidential basis.⁹⁰

During several more recent wars the Pentagon has met needs by relying on supplemental appropriations — appropriations that are usually proposed and approved during the year when funds are to be spent. But supplemental appropriations (hereafter referred to simply as supplementals) often create their own problems, leading to use of other means to budget for the added costs of war.

Korean War

Budget formulation during the first year of the Korean War featured an amazing parade of supplementals. To hold down deficits, and to avoid signaling that war was likely, President Truman submitted a bare-bones budget of about \$13 billion to fund the DOD for FY1951. Then on June 25, 1950 — six days before the new fiscal year began — North Korea invaded South Korea. At the beginning of FY1951, the military services had about 1.5 million military personnel on their payrolls. By the end of FY1951, 3.3 million personnel served in the military. The DOD obtained additional funding for personnel and operating costs by submitting four different supplementals.

The first supplemental totaled \$10.5 billion, almost as much as the initial request for FY1951, and went to Congress on July 24, 1950. During hearings a couple of days later, even Congress questioned whether that was enough. General Omar Bradley, then chairman of the Joint Chiefs of Staff, agreed, saying that “we may have to come back later and ask for more.” “Later” came in a couple of weeks. On August 4 Truman sent Congress a second supplemental asking for \$1.2 billion. As hopes for a quick end to the war faded, the president sent Congress a third supplemental in December 1950 and a fourth one in May 1951. Congress approved most of these requests, causing the DOD’s budget for FY1951 to increase from an initial request of \$13 billion to about \$48 billion (\$150 billion to \$560 billion in today’s dollars).⁹¹ This nearly four-fold increase in the FY1951 budget surely made that year one of the most turbulent in DOD budget history.

Budgeting processes for FY1952 and FY1953 reversed the process for FY1951, with larger initial budgets but very limited supplementals. The military services correctly anticipated further increases in personnel and wartime operating costs, and they also wanted funds to modernize aging equipment. They submitted estimates for FY1952 totaling a whopping \$104 billion. Secretary of Defense Robert A. Lovett (who served as secretary from 1951 to 1953) described these requests as “letters to Santa Claus.” The success of the Inchon landing in September 1950, which occurred while the FY1952 budget was being formulated, led leaders to make cuts. After being pared down by the services and civilian leaders including Truman, the final request sent to Congress asked for about \$56 billion. Congress made still more cuts to the request, though the military did receive a small \$1 billion supplemental for FY1952. Later they asked for another FY1952 supplemental of \$5 billion to fund more personnel, but the president did not submit it to Congress. It was pretty much the same story in FY1953, with a pared-down budget request and no approved supplementals.⁹² The budgeting lesson seems clear: in a war get your extra funds early while the Congress and public remain supportive.

In hindsight, efforts by civilian leaders and Congress to cut funding requests for the Korean War proved well founded. Estimates of funding needs during the conflict proved so imprecise that, as of June 1958, \$32 billion of the funds approved for the Korean War had not been expended, even though \$19 billion of the excess funds were spent during the period from 1954-1958, after hostilities associated with the Korean War had ended.⁹³ In today’s dollars that \$32 billion equates to about \$370 billion.

Vietnam War

The Vietnam War followed the Korean War pattern in terms of supplementals, with early approvals giving way to problems and eventual denials of supplemental funds. The Vietnam buildup was smaller and more gradual than the one for Korea, with military personnel increasing by a total of about one third during the three years from 1965 to 1968 whereas personnel more than doubled in one year during the Korean War. But Vietnam still required supplemental funding. President Johnson requested a supplemental in FY1965, but kept it relatively small (\$700 million) because he did not want to panic the public about the war. As the size of U.S. forces in Vietnam grew, Johnson amended the FY1966 budget to ask for about \$1.7 billion more for Vietnam and then requested \$12.3 billion in supplemental funding.

The history of the \$12.3 billion request (which equates to slightly more than \$100 billion in today's dollars) illustrates one of the problems with large supplementals. As debate over the war and its funding heated up, Congress was slow to approve the added money, and the military ran short of funds. McNamara approved various emergency actions and the services got by until the supplemental was finally approved in March 1966.⁹⁴ But this problem would recur during Vietnam and other conflicts.

Wartime supplementals sometimes pose other problems. They represent a separate piece of legislation that invites debate in Congress over the war. With the Vietnam War becoming less popular, and to avoid further federal spending that would add to federal deficits and inflationary pressure and threaten support for Great Society programs, McNamara initially chose not to request supplemental funding in FY1967. Eventually, the secretary relented and asked the president to forward a supplemental request. McNamara's delay led to accusations that he was misleading Congress about war costs, a recurring criticism, but the supplemental request was approved late in FY1967. To get to that point the DOD had to rob monies from procurement and other accounts and take other extraordinary steps to avoid running out of funds.⁹⁵

As the war dragged on into FY1968, pressure for more wartime funding continued. But McNamara still sought to avoid asking for supplemental funding that would add to federal deficits and threaten social programs. Instead he tried what he termed a "zero supplemental" — requesting authority to move substantial sums from non-Vietnam spending to war costs without adding to total defense funding. When Clark Clifford replaced McNamara as secretary of defense in March 1968, he came to recognize the need to add funding for Vietnam in order to avoid damaging the military in the longer run. After much debate, he prevailed on Johnson to request a supplemental of \$7.3 billion for FY1968. The president requested modestly higher budgets for the Pentagon during the rest of the war and, by using these funds and shifting money from non-Vietnam activities, the DOD got by.⁹⁶



The military was left in disarray after Vietnam, its financial future mortgaged to pay for the war.

But the Vietnam War took an enormous financial toll on the Defense Department. McNamara financed nearly 40% of the costs of the Vietnam War by postponing modernization, delaying needed infrastructure improvements, and deferring research and development.⁹⁷ The military was left in disarray after Vietnam, its financial future mortgaged to pay for the war.

Gulf War

On August 2, 1990 Iraqi forces invaded and occupied Kuwait. The attack brought immediate international condemnation and a commitment to end the occupation. The United States supplied the majority of the troops deployed to oust Iraqi forces, but many other nations joined the effort and helped pay U.S. bills.

Funding for the Gulf War began like most U.S. wars since 1950, with a supplemental. In FY1990 President Bush submitted a supplemental for \$2.1 billion, with another supplemental expected in FY1991.⁹⁸

But the Gulf War ended quickly. Moreover, foreign nations opposed to the Iraqi occupation of Kuwait paid the United States substantial sums to offsets its costs, with Saudi Arabia and Kuwait itself each contributing especially large amounts. As a result the DOD did not request a supplemental in FY1991. Indeed some congressional experts estimated that the Defense Department made a small profit on the Gulf War by, for example, including fuel costs for U.S. forces worldwide as part of war costs in order to justify accepting the large contributions offered by partners.⁹⁹ The Pentagon denied this claim, though in vague terms. In his annual report submitted in January 1993, Secretary Cheney stated that the incremental cost of the war amounted to about \$61 billion, with U.S. bearing costs that should “not exceed” \$4.7 billion.¹⁰⁰

Afghanistan and Iraq Wars

The United States found itself at war again suddenly and unexpectedly with al-Qaida’s September 11, 2001 surprise attacks on the World Trade Center in New York and on the Pentagon itself. Under the rubric of the Global War on Terror, the U.S. ousted the ruling regimes in Afghanistan and Iraq in 2001 and 2003, but faced continued conflict against insurgencies in both countries.

From a financial standpoint, these 21st century wars began conventionally with supplemental funding in FY2001 totaling about \$13 billion. Since the fiscal year ended just 19 days after the 9/11 attacks, this supplemental had to be passed very quickly but, as was the case during the early days of past wars and especially so after the attack on the U.S. homeland, Congress acted quickly. FY2002 saw enactment of supplemental funding totaling about \$17 billion.

After that, the financial processes during the Afghanistan and Iraq Wars diverged from those of its predecessors. The DOD and Congress continued to support supplementals, which grew rapidly. The FY2003 supplemental totaled about \$72 billion. By FY 2006 supplementals exceeded \$100 billion for the first time. They peaked at \$187 billion in FY2008 and continued at levels exceeding \$100 billion a year through FY2012.

The size of these supplementals, coupled with congressional tardiness, caused the same types of problems as had occurred during the Vietnam War. In FY2006 late enactment of a large war supplemental nearly left the Army unable to shift enough money from non-war accounts to “cash flow” war costs until added funding became available. The same cash-flow problem recurred in FY2010. For FY2009 the DOD tried submitting a “bridge” supplemental totaling \$66 billion. This supplemental was submitted in May 2008 before the fiscal year began and presaged a new way of budgeting for wars that would soon be put into place.

Concerns about the large Iraq/Afghan supplementals were not limited to the DOD. After President Obama took office in 2009, the new White House criticized the content of the supplementals. In 2006, the Pentagon had issued guidance changing the criteria for supplementals, allowing the services to use them for all costs associated with the “longer war on terror.” There was no definition of this longer war, and the services responded by requesting wartime funding for initiatives not closely related to direct wartime costs, including funds for modernization of Army equipment, acceleration of equipment upgrades, and support for stateside bases. Early in its first term, the Obama administration sought ways to end what they saw as an abuse of supplementals.

Large supplementals also caused jurisdictional concerns in Congress. The president often submitted the supplementals in the middle of the year when they were needed, giving Congress little time to review them. Also, traditionally only the appropriations committees reviewed and recommended passage of supplementals, which typically were small relative to the overall size of the DOD budget. That tradition left the authorizing committees with no input into what, during the Afghanistan and Iraq Wars, became large wartime appropriations to the DOD.¹⁰¹

Starting with the FY2010 budget request, the Obama administration employed a new approach to funding wartime costs, which it announced with little fanfare and christened the Overseas Contingency Operations (OCO) fund.¹⁰² The president committed to estimating wartime funding one to two years in advance and submitting the OCO estimates along with the regular budget request. The OMB issued guidelines specifying what could be included in OCO, seeking to limit OCO funds to the incremental costs of the wars. Inevitably there were arguments about whether certain activities constituted incremental costs, and DOD financial managers sometimes found it hard to estimate wartime costs far in advance. But at first OCO generally functioned acceptably, and its name quickly became a new and easily pronounceable acronym in defense circles.

OCO’s honeymoon did not last long. Congress passed the Budget Control Act of 2011, which placed legally binding caps on spending for defense and non-defense activities. Congress effectively exempted wartime OCO funding from the caps, agreeing with president’s request that the caps be automatically increased by the amount of enacted OCO funding. As the caps began to require cuts in defense funding outside of OCO, the incentives to misuse OCO grew.

In some cases the administration bent the OCO rules. For example, the rules state that OCO funding cannot be used to pay for the total cost of military personnel involved in the war, only the incremental costs associated with the war (such as combat pay). But during the drawdowns from the Iraq and Afghanistan Wars, the Army and Marine Corps wanted to avoid hastily forcing out military personnel, including some still serving in war zones. The services sought and gained approval from the OMB to use OCO funds to pay for temporary strength overages.

While the administration bent some OCO rules, Congress sometimes ignored the rules entirely. By putting what should have been base-budget funding into OCO, Congress could exploit OCO’s exemption and remain technically within the budget caps while providing extra funding for defense. The amount of non-war funding in OCO — which began at about \$6 billion in FY2012 — was large in absolute terms though small as a fraction of total defense funding. Gradually, budget agreements between President Obama and Congress formalized the DOD’s authority to evade the budget caps by using OCO funds.

The misuse of OCO for non-wartime needs prompted widespread criticism. Representative Paul Ryan, a congressional budget expert who eventually served as speaker of the House, stated that use of OCO to fund non-wartime needs constitutes “a backdoor loophole that undermines the integrity of the budget process.”¹⁰³ In 2015, the Senate Armed Services Committee’s chairman, Senator John McCain, and its ranking member, Senator Jack Reed, both labeled the approach a gimmick.¹⁰⁴ Outside critics were also harsh, sometimes describing OCO as a slush fund.

The author believes that OCO created another problem that is often overlooked — the requirement to prepare budget estimates for wars as much as 24 months in advance. In two years, wartime needs can change substantially, and the military services understandably wanted as much of a cushion as possible to cover events they could not reasonably foresee. Budget reviewers in the OMB, on the other hand, sought to keep OCO budgets at as low as possible while also recognizing that war costs must be fully funded. The resulting give-and-take occasionally resulted in OCO budgets that were too low. But more often they were somewhat high, just as in the Korean War. OCO overestimates could be — and, based on the author’s experience, sometimes were — used to pay for base-budget requirements during the budget execution phase, another form of OCO misuse.

The Biden administration has recently decided that, starting with the FY2022 budget, it will end the use of OCO and move any still-needed OCO funding into the base budget, which after FY2021 will not be subject to the caps imposed by the Budget Control Act of 2011.¹⁰⁵ The author fully supports this decision. But even as it goes away, DOD financial managers should recognize the legitimate reasons for creating OCO and keep this technique in mind if future wars create similar funding issues.

BUDGETING FOR COST REDUCTIONS

Presidents and secretaries of defense have often sought ways to hold down costs. In 1905 President Theodore Roosevelt appointed the Keep Commission to seek efficiencies in order to reduce a sizable budget deficit. In 1910 President William Howard Taft established a Commission on Economy and Efficiency to achieve the same goal.¹⁰⁶

The search for cost reductions continued soon after creation of the Department of Defense. On March 28, 1949, Louis A. Johnson, the second secretary of defense (who served from 1949 to 1950), took office and immediately announced his intention to seek a reduction in defense expenditures through management efficiencies and changes in acquisition procedures.¹⁰⁷ Since then many secretaries of defense, including all in recent years, have established programs to reduce costs in the DOD and to improve its business operations. Even though the normal PPBES system handles the budgeting aspects of these initiatives, this paper addresses the topic separately because defense financial managers often lead or coordinate budgeting for cost reduction efforts.

Secretaries of defense seek cost reductions and business reform for several reasons. One is good government. Given the large size of the DOD’s budget, the taxpayers expect that defense leaders will seek reductions to hold down the costs of providing adequate national security. Defense secretaries also seek cost reductions to make room for new programs without increasing the total defense budget. Finally, defense secretaries use cost reductions to garner political support. If Congress and the taxpayers believe that the DOD is taking steps to be more efficient, they may be more likely to support large defense budgets.

Defense secretaries, and in one case a president, have sometimes tried to provide memorable names for their efforts to cut costs and reform business operations. James R. Schlesinger, who served as secretary from 1973 to 1975, drew on management literature and described his cost and reform efforts as management by objectives which, he stated, focused on “hammering fat into swords.”¹⁰⁸ William Cohen, who served as secretary from 1997 to 2001, dubbed his effort as DOD’s “revolution in business affairs.”¹⁰⁹ While serving as governor of Georgia, Jimmy Carter became enamored of zero-based budgeting — a technique that requires a review of all aspects of a program every year in search of ways to lower costs and improve performance. As president, Carter required use of zero-based budgeting at DOD and other federal agencies. Carter’s secretary of defense, Harold Brown (who served from 1977 to 1981), did not share the president’s enthusiasm, however, once commenting that “you can’t keep pulling up the plants to look at the roots every year.”¹¹⁰

DOD cost reduction efforts come in several flavors. Most often the efforts trim or end lower-priority programs — for example, recent administration actions to reduce contracts for support services. Competitive sourcing (allowing private companies to bid for DOD support work) has saved money as has strategic sourcing (grouping together buys from various military services in order to receive quantity discounts). Logistics and acquisition reforms fit into this category, though it is sometimes difficult to ascertain the amount of savings. Actions like these can result in legitimate cost reductions. However, because of the size and diverse nature of the defense budget, after a year or two it is often difficult to track such initiatives to ensure that savings continue to be realized.

If a defense secretary seeks lasting savings, structural changes deserve extra attention. Structural changes involve shifts in major policies or laws or the termination of weapon programs. Usually the savings associated with these types of changes can be tracked over time. Some structural reforms focus on ending lower-priority programs. For example, Secretary Gates and others produced savings by ending the development of major weapons programs and terminating production of others — including, in Gates’ case, the Army’s Future Combat Systems, the Navy’s DDG-1000 destroyer, and the Air Force’s C-17 and F-22 aircraft. These Gates changes occurred while the author served as DOD comptroller, and he observed firsthand the challenge associated with making changes in major weapon programs. Gates not only had to consider the cost effectiveness of these changes; he also had to work personally with the affected military services and the Congress in order to win approval of his controversial proposals.

Other structural changes produce savings from true efficiencies — that is, changes that save money while maintaining or even increasing defense capabilities. Closing or realigning unneeded military bases constitute structural changes that achieve true efficiencies because the bases closed or consolidated are no longer needed. Base closures have also produced some of the largest savings among cost reduction efforts. From 1988 to 2005 the DOD conducted four rounds of base closures and realignments involving 97 bases. The General Accounting Office (now known as the Government Accountability Office) estimated that savings from reduced basing costs eventually amounted to at least \$5.6 billion a year, savings that will continue in perpetuity unless bases are reopened.¹¹¹ Other examples of structural changes that achieve efficiencies include automation of business practices. For example, the use of commercial credit cards for small DOD purchases and for travel has reduced paperwork and accounting costs while still supporting needed acquisition and travel. In the 2010s the DOD held down military health care costs by requiring use of generic drugs and mandating mail-order pharmacy delivery, changes that saved money while producing the same or better service for military personnel.

Savings from the structural cost reduction initiatives in a particular year typically save no more than several billion dollars once fully implemented. While a few billion a year is a huge sum of money, and well worth pursuing, it is small compared to savings that outside studies have asserted the DOD could realize. In 1996 the Pentagon's Defense Science Board concluded that the department could eventually save about \$30 billion a year by outsourcing its logistics functions. A 2001 study by the Business Executives for National Security identified 18 studies performed since 1986 that led the group to conclude that the DOD could save at least \$15 billion to \$30 billion a year.¹¹² In 2015 the Defense Business Board, a DOD advisory group, suggested that the DOD could save \$125 billion over five years (an average of \$25 billion a year) by improving productivity.¹¹³

Some of these studies made incorrect assumptions that led to inflated estimates of savings. For example, the Defense Business Board study based its estimate of \$125 billion in savings on assumptions about productivity improvements, which later reviews found to be inappropriate for the DOD and not even fully representative of private-sector experience.¹¹⁴ But the DOD also faces roadblocks that limit its ability to reduce costs and improve operations, roadblocks that are greater than those faced in the private sector. The most important roadblock is that cost reduction is not fundamental to the DOD's mission. Commanders know that they will be judged primarily on how well the planes fly or the tanks run, and not so much on whether they reorganize the motor pool to achieve savings. In contrast private-sector managers who cut costs while maintaining sales contribute to profit, which is fundamental to the mission of a private company.

DOD managers also face pressure to spend all their allotted funding lest their superiors, or Congress, feel that they don't really need the money and reduce their future budgets. This so-called "use-it-or-lose-it" problem is especially acute for funds in DOD operating accounts, which must be obligated in the year for which they are appropriated. This leads to sharp spikes in year-end spending. The funds obligated at year end are not necessarily wasted, but they are sometimes spent on lower-priority projects, some of which might have been good candidates for cost reductions. Many leaders, including the author, have urged Congress to make simple changes (such as extending the life of operating appropriations) to allow DOD managers to use year-end spending for higher-priority tasks.¹¹⁵

Finally, Congress is sometimes an obstacle to cost reduction and business reform. Congress appropriates some funding for "pork barrel" projects that benefit local constituents but represent lower-priority programs for the Pentagon. Congress may also stop the DOD from saving money because the cost reduction initiatives would harm employment in their states or districts. Base realignment and closure constitute the best example. Currently Congress won't even allow the DOD to spend money planning for base changes, let alone putting them into effect, largely because of concerns about jobs. Yet the department has estimated that another round of base closures and realignments could eventually save several billion dollars a year.

These problems should not lead defense financial managers and other leaders to avoid efforts to reduce costs. Instead, as a recent study of defense reform suggested, they should pick their reduction targets carefully, develop a strong rationale, and work with DOD leaders and Congress to get the projects passed.¹¹⁶ Financial managers should also urge DOD leaders to be realistic about the amounts that they can expect to save, lest overestimates lead to budgets that cannot be executed. In other words, with regard to cost reduction efforts, keep trying to achieve them but be realistic about likely savings.

ASSESSING PPBES

Today's version of DOD budget formulation consists of complex processes that take place during the first three PPBES steps — planning, programming, and budgeting. Many pages of regulations and a number of lengthy books detail the players, committees, and processes involved in these three steps which are often described using a veritable blizzard of acronyms.¹¹⁷ But what gets accomplished during these three steps can be summarized, at least in general terms, much more succinctly. Figure 1 outlines the process, focusing on the Office of the Secretary of Defense (OSD), with typical submission dates illustrated for the upcoming FY2023 budget. The figure assumes that the programming and budgeting phases take place separately, a decision that may still be in flux.

Has this PPBES process served the DOD well? PPBES certainly has limitations and has been widely and sharply criticized, but the system has also improved DOD decisions in important ways.

HOW DOD BUDGET FORMULATION WORKS TODAY

PLANNING

OSD lead: Under secretary of defense (Policy)

- Follow policies set by National Defense Strategy and National Military Strategy
- Defense Planning Guidance may provide specific guidance (typically available in spring 2021 for FY2023 budget submission)
 - Covers force structure, troop strengths, weapon buys, readiness
 - Also issues of special concern to secretary of defense

PROGRAMMING

OSD lead: Director, Cost Analysis and Program Evaluation

- Military services/agencies receive five-year fiscal guidance (typically early 2021)
- Services/agencies develop and submit five-year budget proposals consistent with fiscal guidance (typically summer 2021)
 - Using budget formulation processes similar to those described here for OSD
- Where appropriate, OSD proposes alternatives to military service/agency submissions
- OSD analyzes costs and effects of service/agency submissions along with alternatives, working with services/agencies
- Where possible, OSD seeks agreement with services/agencies
- If needed, OSD presents alternatives to deputy secretary, with service/agency leaders participating, and seeks a decision
- Secretary of defense approves programming results (typically fall 2021)

BUDGETING

OSD lead: Under secretary of defense (Comptroller)

- Comptroller ensures budget rules are followed and corrects pricing
 - Focus on first of five-year budget plan (budget year)
- OSD adjusts for any changes made by president in total DOD budget levels
- Comptroller oversees final review of budget and submits to OMB (typically early January 2022)
- Comptroller oversees preparation of budget documentation (typically January/February 2022)
- DOD budget submitted as part of President's Budget (typically February 2022)

Limitations

PPBES has arguably not had much effect on defense topline (that is, the department's total budget), a significant limitation because the topline strongly influences budget formulation. In the author's experience the DOD topline gets determined based on high-level debates between the president, along with key White House advisors, and the secretary of defense. These discussions began shortly after the creation of the DOD, when Secretary Forrestal had lengthy debates over the defense budget with President Truman, a drama that has played out many times since. These high-level debates continued while the author served as comptroller for three secretaries of defense. Many factors enter into the debates including threats to U.S. security as perceived by the DOD and the president, presidential concerns about the size of the federal budget and associated deficits, desired defense force levels and major weapon programs, and assessments of likely congressional reaction to the defense topline. Laws such as the Balanced Budget and Emergency Deficit Control Act of 1985 and the Budget Control Act of 2011, both of which placed legally binding limits on defense and other spending, definitely affect the topline debate, though the president is not required to submit a budget at a particular level, even one specified in law.

The PPBES provides information that is used during the debate about the topline, but the process itself does not significantly influence the topline debate. Instead senior defense leaders, usually assisted by the comptroller and others, prepare options and assist the secretary of defense and sometimes the chairman of the Joint Chiefs in preparing for discussions with the president, who typically makes the final decision about the defense topline.

Trends in defense topline funding lend support to this conclusion. After adjustment for inflation, topline funding from 1950 to the present indicates that periods of high threats to U.S. security — including wars and also the Reagan buildup during the 1980s as President Reagan sought to end the Cold War — strongly influence defense funding. It is not obvious that these trends have been influenced by the implementation of PPBES in 1961. Statistical analysis also supports the conclusion that deficits did not have major effects on the defense topline during this period.¹¹⁸

Criticisms

PPBES has been widely criticized. Budget scholars in academia have described PPBES as “the most influential and poorly disciplined process in the Pentagon.”¹¹⁹ Another academician, who has PPBES experience in the DOD, described the system as “DoD's Soviet-style budget process.”¹²⁰ As noted above, Secretary Rumsfeld characterized PPBES as a relic of the Cold War, though he only proposed incremental changes to the current system.

Academic critics have leveled more specific criticisms. Some fault PPBES for focusing too much on defining the means of achieving alternatives and not enough on identifying new alternatives.¹²¹ The author agrees that PPBES could do better in this regard and has proposed an approach to foster more consideration of alternatives. This approach would withhold more funds until the review by the Office of the Secretary of Defense and then permit the services to compete for the withheld funds by proposing new ideas which, if accepted, would add to their toplines.¹²² While more alternatives should be considered, it should be noted that PPBES has been used to support major changes in the DOD's approach to warfare ranging from the use of stealth technology to the Global

Positioning System (GPS) and smart weapons. Critics also assert that PPBES fails to recognize political factors. Politics certainly play a role in formulating defense budgets, and the DOD receives a lot of political advice — including from the president, Congress, and its own political appointees. In the author’s experience, internal PPBES debates involving senior officials take these political factors into account.

Some academic critics, joined by critics from Congress and elsewhere, have focused on the Overseas Contingency Operations budget, which they assert is not subject to the same PPBES cost-effectiveness analysis applied to the remaining base budget. Originally OCO mostly financed the added costs of war, a category of spending that benefits less from cost-benefit assessments and more from analysis based on wartime experience. But OCO has been misused and now contains significant base-budget funding. While the wartime portions of OCO are thoroughly analyzed based on wartime experience, the base-budget portions of OCO should be allocated using the PPBES process so that decisions are based on costs and effects and consider effects over multiple years. This issue will become moot in FY2022 when OCO goes away but could arise again in future wars.

Practitioners criticize PPBES for other reasons. Critics in the military services have stated that the planning phase of PPBES does not provide guidance that is sufficiently specific and timely. Disagreements during the planning phase do sometimes lead to compromises that result in vague guidance, and the Defense Planning Guidance document does sometimes arrive after the services have begun their programming processes. Practitioners also commonly complain about the complex procedures in PPBES, including substantial time spent coordinating results with stakeholders, because they consume too much staff and management time. As we have seen, efforts to streamline PPBES have generally not succeeded, but efforts should continue perhaps by considering some of the alternatives noted above.

Finally, and perhaps most importantly, practitioners criticize PPBES for being too slow to approve new programs, a concern that troubled the DOD’s first comptroller way back in the 1950s.¹²³ This criticism is particularly important for technology programs, which can change significantly during the period required for PPBES and congressional approval.

A recent study from the Hudson Institute focuses on this problem for all acquisition programs, not just technology programs. The study presents extensive data on acquisition cycle times, arguing that they rose substantially in the 1970s and have continued to rise. The report’s principal author, an acquisition expert and former congressional staffer, acknowledges that other studies have reached different conclusions about growth in acquisition cycle times. But his study concludes that, despite recent efforts designed to achieve more rapid acquisition, PPBES remains a fundamental obstacle to this agility. The study recommends several new budgeting approaches including a portfolio approach under which funding for, say, all fighter aircraft would be in one program element, and the portfolio manager could move monies to new programs during budget execution without seeking congressional approval. The Hudson Institute report, which focuses solely on acquisition, also calls for a commission to consider broad changes in PPBES.¹²⁴

History shows that PPBES managers have sought more agility during budget execution. McNamara sought to move monies to finance the Vietnam War. During the Afghanistan and Iraq Wars, the author sought to use reprogramming and transfer funds (small pots of money that can be allocated during budget execution) to meet wartime needs quickly. These and other approaches have achieved limited success. But generally the

limits came not from PPBES, but from Congress. Congress remains reluctant to approve acquisition funds that pay for a portfolio of programs but are not linked directly to a weapon program. It particularly opposes starting new programs without its explicit approval.

Despite congressional reluctance, the DOD needs to persuade Congress to let the department make better use of existing techniques, such as using reprogramming and transfer funds, to meet the needs of DOD programs, especially those involving rapidly changing technologies. The DOD should also seek authority to budget for technology initiatives in broader categories, more like the broad budget activities used in the budgets for operation and maintenance rather than the project line items used in today's budgets for research and development. This approach would permit the department to move funds during execution to accommodate rapid shifts in technology. Flexibility would be much enhanced if Congress permitted the DOD to start new programs within these broader budget categories, perhaps after advance notification. The FY2021 National Defense Authorization Bill permitted a pilot program for software initiatives that would provide DOD with modest added flexibility. But more needs to be done.



The DOD should also seek authority to budget for technology initiatives in broader categories... [which] would permit the department to move funds during execution to accommodate rapid shifts in technology.

Benefits

President Kennedy, speaking after the failed Bay of Pigs invasion, commented that “Victory has 100 fathers and failure is an orphan.”¹²⁵ PPBES suffers from this problem in reverse. While PPBES has survived for about 60 years, and at least some academic experts acknowledge that the system has done an “admirable job” of supporting the DOD’s mission, few experts have devoted much effort to defending the process.¹²⁶ Yet the system has provided important benefits to the DOD.

PPBES helps ensure that the effects on defense capability are considered as the DOD formulates budgets. Today all the military services have PPBES staffs with both training and experience, capabilities they developed soon after McNamara introduced PPBES in 1961. The services start the process of assessing initiatives by specifying measures of effectiveness and reaching judgments based on them. Then experts in the Office of the Secretary of Defense suggest revisions, new measures, or alternative judgments. This partially adversarial system helps ensure that program effects are correctly identified. PPBES also helps ensure that costs are correctly estimated, with the partially adversarial process and trained staffs helping generate the best available cost estimates both in the short and longer term. Both these attributes lead to more cost-effective defense budgets. PPBES also causes senior leaders to examine programs over multiple years, which helps them focus on the longer-term effects of their decisions.

Full-up analyses of costs and effects, which are at the heart of the programming phase of PPBES, are not always performed for smaller initiatives. But in the author’s experience, even smaller issues often get analyzed using the general framework of PPBES — identifying options, estimating costs, and assessing effectiveness. Less time is spent on each step for smaller issues, but the philosophy of PPBES pervades decisionmaking in the Pentagon.

PPBES also helps ensure that personnel germane to the PPBES process have a chance to be heard during budget formulation. While the specifics of the PPBES process vary by military service, PPBES sometimes starts at the base and installation level. Decisions at that level make their way to major service commands for review and eventually to the service headquarters (or agency heads at defense agencies). Ultimately, the staff in the Office of the Secretary of Defense reviews decisions made by the services and agencies and then presents options for decisions that are made or approved by the secretary of defense (with the deputy secretary usually making the decisions on all but the most important initiatives). This process provides a forum for those involved in the PPBES process at many levels to argue their case for issues. Wide exposure leads to a higher quality review. Especially for contentious issues, wide exposure also makes it more likely that, once decisions are made, DOD personnel will support them during the congressional review and during budget execution.

Finally, the DOD's implementation of PPBES has created a systematic process for resolving issues, which provides information to decisionmakers and leads to a decision meeting. A large and complex organization like the DOD needs such a process. Nor is the serious problem of late defense budgets the fault of the PPBES process because almost all the tardiness occurs during the congressional review. The PPBES trains generally run on time unless congressional delays interfere with schedules.

Overall assessment and lessons learned

In sum, prior to World War II the military services formulated their budgets largely independently, with little integration. Efforts to integrate budgets after the creation of the Department of Defense in 1947 made only modest progress. But those post-1947 changes — including early efforts at program budgeting and the rationalization of budget categories — laid the foundation for Secretary McNamara's introduction of PPBES in 1961. At first PPBES constituted a top-down, highly centralized system. The new system produced better integrated budgets that reduced duplication, and budgets were based more on analysis that sought cost-effective solutions. But PPBES might not have survived without Secretary Laird's introduction of fiscal guidance and the associated decentralization of authorities along with other significant post-McNamara changes. Thus, history makes clear that while the creation of PPBES represents the most important single event in the history of DOD budget formulation, it is by no means the only significant event.

There are valid criticisms of PPBES, especially the time it requires of staff and senior leaders and the difficulty budgeting adequately for rapidly changing technology initiatives. But PPBES also brought more analysis to bear on budget issues, created a multi-year perspective, and provided a forum for relevant voices to be heard. PPBES clearly led to better DOD budget decisions, especially compared to the less integrated approach in place during the 1950s and before. After taking into account both criticisms and benefits, the author concludes that many elements of PPBES have served the DOD well and should be retained, but improvements are needed, particularly with regard to funding for technology initiatives.



The author concludes that many elements of PPBES have served the DOD well and should be retained, but improvements are needed, particularly with regard to funding for technology initiatives.

The debate over the desirability of PPBES will no doubt continue, as it should. Changes to PPBES will be considered in the future, as they should. The history of budget formulation, coupled with the author's experience, suggest some lessons that should inform future debates over PPBES. Lessons include:

- A decentralized approach involving service use of PPBES to create budgets, followed by oversight by the Office of the Secretary of Defense, has been in place since the early 1970s and seems the best approach because it avoids requiring that many hundreds of important decisions be made by the secretary of defense or his most senior staff.
- Program budgeting, which considers issues together (for example, all tactical aircraft or all strategic forces) has helped achieve coordination and minimize duplication. More sophisticated techniques such as performance budgeting, which establishes metrics and then funds goals specified by those metrics, have not worked in the past and probably never will because it is too hard to measure much of what DOD does.
- Late approval of budgets by Congress have caused problems during budget formulations. To minimize late approvals, the DOD should propose making the fiscal year coincide with the calendar year because Congress is more likely to complete its business by the end of the calendar year.
- To generate more budget alternatives, the Office of the Secretary of Defense should withhold larger portions of the defense budget (perhaps 5%) and then let the services put forward their best ideas as they compete for added funding.
- Attempts at streamlining PPBES to reduce workload have generally not succeeded but need to continue, perhaps by reducing the number of required approvals or through changes involving Congress.
- The Overseas Contingency Operations wartime budgeting technique solved serious problems associated with large supplementals, but the misuse of OCO has led to widespread and justified criticism. The author fully agrees with the Biden administration's decision to end the use of OCO starting with the FY2022 budget. But defense financial managers should document the benefits and limitations of OCO should a technique like it be needed during future wars.
- Cost reduction efforts should continue in order to hold down DOD costs. But the department should be realistic about potential savings, which at most tend to be a few billion dollars for any one year's initiatives. Making unreasonable savings assumptions leads to budgets that cannot be executed.
- Perhaps most importantly, the DOD needs to seek to persuade Congress to consider ways to speed up the PPBES process, especially for technology initiatives. Options might include creating larger spending categories with tradeoffs permitted within a category, along with better use of existing techniques including reprogramming and transfer accounts.

Whatever one's opinion of PPBES, one conclusion seems clear. The broad outlines of the process Robert McNamara and Charles Hitch first introduced in 1961, and many of its details, remain in place today. PPBES has stood the test of time.

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ABOUT THE AUTHOR

Robert F. Hale has spent most of his professional career working with defense budgets. From 2009 to 2014 he served as under secretary of defense (Comptroller) and chief financial officer for the Department of Defense. From 1994 to 2001 he was the Air Force assistant secretary (financial management and comptroller). He headed the defense analysis group at the Congressional Budget Office from 1980 to 1994. Early in his career he served as a Navy officer, first on active duty and then in the reserves. Currently he is a senior executive advisor at Booz Allen Hamilton and an adjunct senior fellow at the Center for New American Security. Hale has received numerous senior-level awards for his federal service and is a Certified Defense Financial Manager (Level 3) and a Certified Defense Financial Manager (CDFM) with acquisition specialty.

ACKNOWLEDGEMENTS

The author wishes to thank several people who provided helpful comments and information. These include David Chu, John Roth, Peter Levine, Michael O'Hanlon, and an external peer reviewer assigned by Brookings. The author also thanks Ted Reinert for editing this paper and Rachel Slattery for performing the layout work. The author, of course, assumes full responsibility for all the conclusions and any errors or omissions.

The author's advisory role at Booz Allen Hamilton is a paid, part-time position. This paper was not supported financially or otherwise by Booz Allen Hamilton, nor did the company have a role in reviewing its substance. It was prepared in the author's own time and with his own resources.

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