



Summary

In fiscal year 2015, the Department of Defense (DoD) spent a total of roughly \$390 billion on operation and support (O&S) of military units. The O&S budget covers the costs associated with the day-to-day running of units. Those costs include pay and benefits for military personnel, compensation for most civilian employees, health care costs for military and civilian personnel, and the daily expenses of operating a unit, such as equipment maintenance, training, support contractors, and so on. The O&S budget makes up about two-thirds of DoD's total "base" budget, which is the defense budget excluding additional funds provided specifically for wartime operations. (The rest of DoD's base budget is spent on acquiring weapon systems and constructing buildings and other infrastructure.)

The size and complexity of the U.S. armed forces can make it difficult to determine how the O&S budget is distributed among units. In this report, the Congressional Budget Office analyzes the structure and cost of the military from the perspective of major combat units, such as Army brigades, Navy aircraft carrier strike groups, Marine Corps task forces, and Air Force squadrons. CBO allocates most of the O&S budget and DoD's total number of military personnel among major combat units—and their associated support units and overhead activities—to provide a clearer picture of the size and cost of the major elements of the military's force structure. Such information can help policymakers evaluate proposals to change the structure or budget of the armed forces.

CBO's analysis indicates that major combat units by themselves account for roughly one-quarter of DoD's operation and support costs and contain about one-third of DoD's military personnel. Most of the rest of DoD's O&S costs and military personnel are associated either with units that support major combat units (which CBO considers part of the cost of maintaining fully supported major combat units) or with overhead activities necessary

for manning, equipping, and training combat and support units. In addition, the total operating costs associated with a major combat unit include a share of the costs of "defensewide" activities, such as the Defense Health Program, that provide various forms of administrative support to DoD as a whole.

As an example, by CBO's calculation, an armored brigade in the Army's active component has about 4,200 military personnel assigned to it. But that number rises to about 17,450 military personnel if it includes the units that support the armored brigade (by providing transportation and maintenance, for example) and the brigade's proportional share of overhead activities that support DoD and the Army (such as recruiting, basic training, and administrative support). By itself, such an armored brigade costs \$500 million a year to operate, including compensation for its military personnel. Those operating costs rise to about \$2,600 million per year if the costs of support units and overhead activities are included (see Summary Table 1). Those patterns are similar for major combat units in the Department of the Navy (which includes the Marine Corps) and the Department of the Air Force.

What Are the Major Elements of the Military's Force Structure?

Each of DoD's three military departments provides different kinds of forces. The composition, functions, capabilities, and costs of the departments' major combat units are often difficult to determine from budget documents and from the various reports that the military provides to the Congress. The critical roles that support units play in making major combat units function effectively are even more difficult to discern, as are the costs of supporting each type of combat unit.

This primer describes how each department is organized into major combat units, what each type of unit does,

Summary Table 1.

Number, Size, and Costs of Selected U.S. Forces

	Number of Units in 2017	Military Personnel per Unit		Annual Cost per Unit (Millions of 2017 dollars)	
		Direct	Total	Direct	Total
Department of the Army					
Active-Component Armored Brigade Combat Team	9	4,200	17,450	500	2,610
Active-Component Stryker Brigade Combat Team	7	4,440	17,180	500	2,560
Active-Component Infantry Brigade Combat Team	14	4,230	16,250	450	2,410
Department of the Navy					
Aircraft Carrier	11	3,200	6,590	470	1,180
Carrier Air Wing	10	1,630	4,860	330	910
Arleigh Burke Class Destroyer (DDG-51)	66	340	720	60	140
Attack Submarine	51	190	390	70	140
Amphibious Ship	33	710	1,450	110	270
Active-Component Marine Corps Infantry Battalion	24	1,490	5,780	140	740
Department of the Air Force					
F-16 Fighter Aircraft Squadron ^a	45	450	1,250	70	220
B-1B Bomber Aircraft Squadron ^a	4	940	3,980	270	810
C-17 Cargo Aircraft Squadron ^a	14	450	1,390	90	270
KC-135 Tanker Aircraft Squadron ^a	30	610	1,930	110	360
MQ-9 "Reaper" Unmanned Air System Squadron ^a	23	340	920	50	160

Source: Congressional Budget Office, using data from the Department of Defense's 2017 budget request.

"Direct" personnel and costs are associated with a major combat unit. "Total" personnel and costs also include the "indirect" personnel and costs associated with units that support the major combat unit and the "overhead" personnel and costs associated with the major combat unit's share of administrative or overhead activities. For more information, see Chapter 1. The personnel and cost numbers shown here are rounded to the nearest 10 personnel or \$10 million; more detailed information is presented in Appendixes A and B.

a. Notional squadrons of 12 aircraft (actual squadrons vary in size).

how those units have been used in past conflicts, and how much it costs to operate and support those units. DoD also includes a number of smaller organizations that provide services or specialized capabilities to the military as a whole. In this analysis, CBO treats some of those defense-wide costs as part of the cost of a military unit, which means that the total cost to operate and sustain all of a military department's units is larger than the department's requested O&S budget (because each department

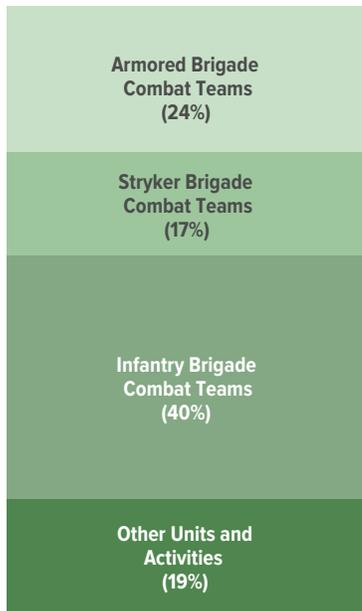
relies on services and activities funded from such defensewide accounts).

Department of the Army

According to its 2017 budget request, DoD plans to spend an average of about \$101 billion per year (in 2017 dollars) over the 2017–2021 period to operate and support Army units. The total O&S cost of those units includes an additional \$16 billion per year from defensewide accounts, CBO estimates.

Summary Figure 1.

Five-Year Average of Operation and Support Funding for Department of the Army Units



Source: Congressional Budget Office, using data from the Department of Defense's 2017 budget request.

The main units that the Army provides to the U.S. military are brigade combat teams (BCTs), large formations that officially contain about 4,400 to 4,700 soldiers.¹ Those units come in three major types: armored BCTs, Stryker BCTs, and infantry BCTs. All three types are similar in size; they differ primarily in how many wheeled or tracked vehicles are assigned to them. All BCTs are versatile ground combat units, capable of performing a wide variety of missions, and all rely on many support units assigned to them from higher-level commands. When deployed, a BCT can expect to be supported by almost twice as many personnel in support units as it has in its own unit. BCTs account for over 80 percent of O&S funding for Army units (see Summary Figure 1).

1. Those personnel numbers are based on the Army's Table of Organization and Equipment, which serves as an official template for different types of Army units. In practice, units do not always conform to their templates for a variety of reasons. As a result, the personnel numbers for BCTs shown in Summary Table 1—which are based on DoD's 2017 budget request—are smaller than the personnel numbers in the Army's Table of Organization and Equipment.

Department of the Navy

According to its 2017 budget request, DoD plans to spend an average of about \$95 billion per year over the 2017–2021 period to operate and support Navy and Marine Corps units. The total O&S cost of those units includes an additional \$10 billion per year from defensewide accounts, CBO estimates.

The Navy's primary units are various kinds of battle force ships: aircraft carriers, surface combatants (cruisers, destroyers, and some smaller ships), attack submarines, and amphibious ships. Each type of ship is specialized for particular missions—such as carrying attack aircraft or a task force of marines—and the types differ greatly in size and cost. Battle force ships are relatively self-contained when deployed, although they receive support from some other units, including logistics ships that refuel and rearm them while they are under way, maritime patrol aircraft that scout for them, and minesweeper squadrons that clear their path of sea mines. Of Navy units (as opposed to Marine Corps units), aircraft carriers and their associated air wings account for the largest single share of O&S funding, receiving 21 percent of appropriations for the Department of the Navy's units (see Summary Figure 2).

The Marine Corps' main units are Marine air-ground task forces—integrated combinations of ground combat units, air combat units, and support units that are tailored to specific operations (rather than being standardized units, as in the other services). Different kinds of task forces are distinguished primarily by the size of their ground combat forces, from the small Marine expeditionary units carried on Navy amphibious ships up to the large Marine expeditionary forces that engaged in combat operations in Iraq in 1991 and 2003. Marine Corps units account for the largest single share—33 percent—of O&S funding for the Department of the Navy's units (see Summary Figure 2).

Department of the Air Force

According to its 2017 budget request, DoD plans to spend an average of about \$82 billion per year over the 2017–2021 period to operate and support Air Force units. The total O&S cost of those units includes an additional \$8 billion per year from defensewide accounts, CBO estimates.

The majority of Air Force units consist of squadrons of different types of fixed-wing aircraft that perform a

Summary Figure 2.

Five-Year Average of Operation and Support Funding for Department of the Navy Units



Source: Congressional Budget Office, using data from the Department of Defense's 2017 budget request.

variety of missions: short-range tactical aircraft (for engaging in air-to-air combat with other aircraft or for striking targets on the ground), long-range bombers, airlifters (for transporting cargo and personnel), tankers (for refueling other aircraft in flight), and unmanned air systems (also known as drones). Short-range tactical aircraft account for the largest single share—33 percent—of O&S funding for the Department of the Air Force's units (see Summary Figure 3).

Defensewide Activities

DoD also includes a number of defensewide organizations, which are not part of a military service, that perform specific functions. Most of those organizations—such as DoD's military health care system—provide centralized forms of support that assist each of the services. But a few—such as Special Operations Command, which organizes units from the different services' special-operations forces into an integrated force—provide distinct military capabilities to the nation (as well as generating distinct costs). Together, defensewide organizations and activities account for about \$39 billion per year of the O&S funding that DoD requested in its 2017 budget.

What Does This Analysis Indicate About the Budgetary Effects of Altering the Force Structure?

This report breaks down DoD's total number of military personnel and total operation and support budget and ascribes almost all personnel and O&S costs to major combat units according to three categories:

- Direct personnel and O&S costs—for a major combat unit itself;
- Indirect personnel and O&S costs—for the deployable units that support the major combat unit; and
- Overhead personnel and O&S costs—for the administrative functions within a service or DoD that are necessary to field the major combat unit and its supporting units.

CBO's numbers are based on information in DoD's latest five-year budget plan, the Future Years Defense Program for the 2017–2021 period. Thus, to the extent that DoD has overestimated or underestimated the funding needed

Summary Figure 3.

Five-Year Average of Operation and Support Funding for Department of the Air Force Units



Source: Congressional Budget Office, using data from the Department of Defense's 2017 budget request.

to operate its forces, the estimates in this report will reflect that. The only O&S costs not divided among major combat units in this analysis are health care costs for current military retirees and their families, because those costs represent a major expense that DoD could not alter in the near term through future policy decisions.

If DoD or lawmakers decided to eliminate a major combat unit from DoD's plans, the savings might not be as large as CBO's estimate of the total O&S costs for that type of unit. DoD would achieve savings from the support units associated with a combat unit only if it also eliminated those units. And DoD would achieve savings in overhead functions only if it trimmed those activities to reflect the smaller force. In addition, some overhead activities, such as operating bases, might take several years to cut, which would delay the full savings. For related reasons, if policymakers decided instead to add a major combat unit to the military's force structure, the costs might not be as large as CBO's estimate of the O&S costs for that type of unit, at least in the near term.

However, the estimates of O&S costs for combat units presented in this report do not include the costs of developing and acquiring new weapon systems. Thus, if DoD or lawmakers chose to eliminate a major combat unit and stopped purchasing the weapon systems intended to equip that unit, the savings would be larger than CBO's estimate of the costs to operate and sustain the unit.

Similarly, if policymakers chose to add a major combat unit and to purchase weapon systems to equip that unit, the total additional costs would be larger than CBO's estimate of the corresponding O&S costs.

How Is This Report Organized?

This primer is designed to be a reference work rather than a linear narrative. Chapter 1 describes CBO's conceptual approach to analyzing the military's force structure and costs, and the following three chapters discuss the particular organizational structures and roles of the Departments of the Army, the Navy, and the Air Force. All of a department's major types of combat unit have their own entries, which discuss the size, cost, function, advantages, disadvantages, and past use of that type of unit. The final chapter includes similar entries for some major defense-wide organizations, such as Special Operations Command and the military's health care system. Each chapter also focuses on some special topics that are important for understanding the military's force structure, such as the integration of different types of units or the military's ability to conduct certain kinds of operations.

The structure of this report means that readers who are interested mainly in learning, for example, about the organization of the Marine Corps or the costs of an Air Force bomber squadron can, after reading Chapter 1, go straight to the relevant section.