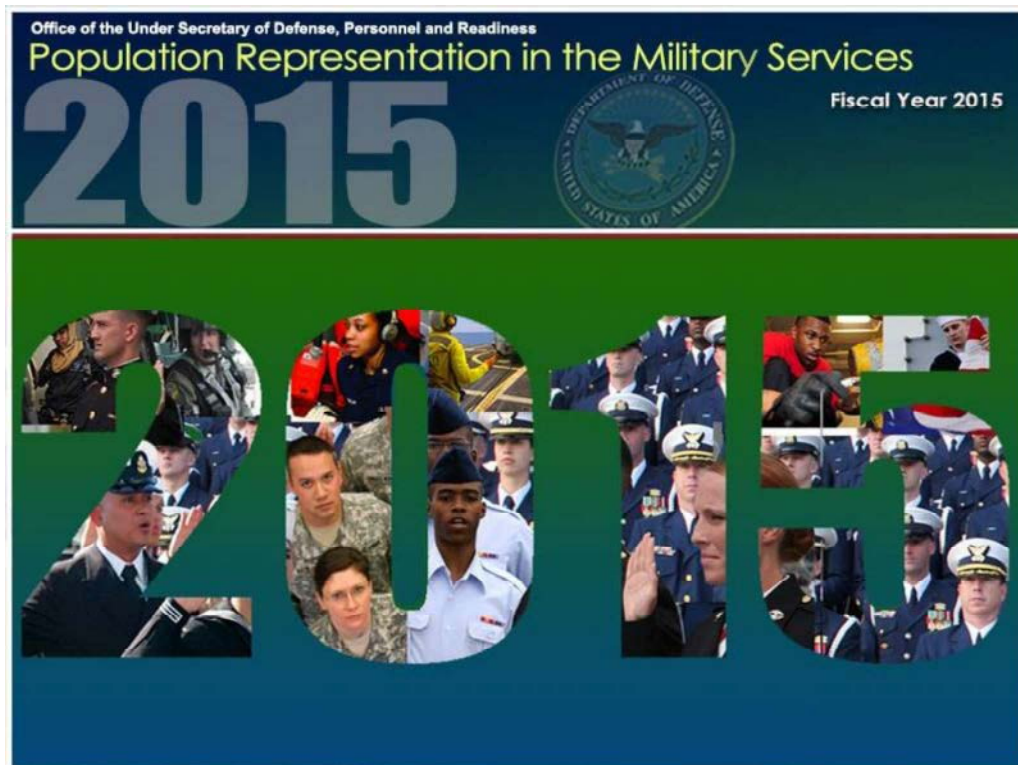


Population Representation in the Military Services: Fiscal Year 2015 Summary Report

Aline Quester and Robert Shuford

January 2017





This document contains the best opinion of CNA at the time of issue.
It does not necessarily represent the opinion of the sponsor.

Distribution

DISTRIBUTION STATEMENT A. Approved for public release: distribution unlimited.
SPECIFIC AUTHORITY: N00014-16-D-5003 1/24/2017

Other requests for this document shall be referred to CNA Document Center at
inquiries@cna.org.

January 2017

A handwritten signature in black ink, reading "Anita Hattiangadi".

Anita Hattiangadi, Research Team Leader
Resource Analysis Division

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 01-2017		2. REPORT TYPE Final		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE (U) Population Representation in the Military Services: Fiscal Year 2015 Summary Report				5a. CONTRACT NUMBER N00014-16-D-5003	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER N/A	
6. AUTHOR(S) Aline Quester, Robert Shuford				5d. PROJECT NUMBER R0148 N/A	
				5e. TASK NUMBER B792.20	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Center for Naval Analyses 3003 Washington Blvd Arlington, VA 22201				8. PERFORMING ORGANIZATION REPORT NUMBER DRP-2017-U-015567-Final	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Director, Accession Policy, OUSD (MPP/AP) 4000 Defense Pentagon Washington, D.C. 20301-4000				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT DISTRIBUTION STATEMENT A. Approved for public release: distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT A lot has changed in the 40+ years since the United States stopped the draft and transitioned to an All-Volunteer Force in 1973. To document these changes as well as the characteristics of U.S. military personnel, Congress mandated in 1974 that the Department of Defense (DOD) produce annual representation reports. The Population Representation in the Military Services (Pop Rep) report's goal is to provide the most comprehensive, reliable and consistent data tabulations on military personnel for policymakers, the media, and the general public.					
15. SUBJECT TERMS Population, Representation, Military Service, All-Volunteer Force					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Knowledge Center/Dana Smith
U	U	U	SAR	70	19b. TELEPHONE NUMBER (include area code) 703-824-2123

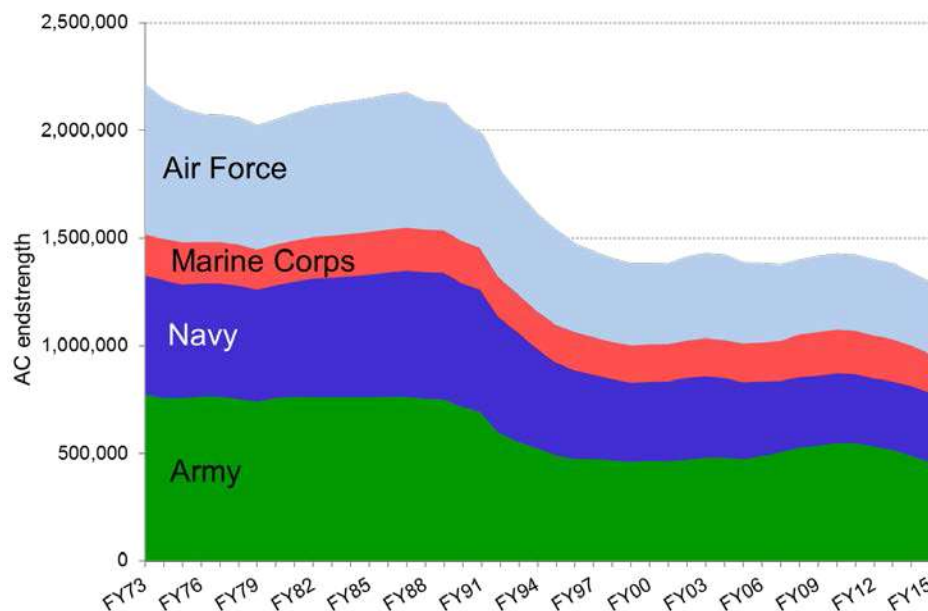
Population Representation in the Military Services: Fiscal Year 2015 Summary Report



Introduction

A lot has changed in the 40+ years since the United States stopped the draft and transitioned to an All-Volunteer Force in 1973. To document these changes as well as the characteristics of U.S. military personnel, Congress mandated in 1974 that the Department of Defense (DOD) produce annual representation reports. The *Population Representation in the Military Services* (Pop Rep) report's goal is to provide the most comprehensive, reliable, and consistent data tabulations on military personnel for policymakers, the media, and the general public.¹ To begin this fiscal year (FY) 2015 report, we focus on how the size of the active component (AC) has changed since FY73 (see figure 1).

Figure 1. AC endstrength, by service, FY73–FY15



Source: Table D-39.

At the end of the draft era, the U.S. AC military stood at 2.2 million men and women. In FY15, AC endstrength was just under 1.3 million.

Recent years

Since 2009, the U.S. military has experienced a favorable recruiting environment. This recruiting success is largely attributed to continued weakness in the civilian labor

¹ Summaries and appendixes (for FY97 through FY14) of the Pop Rep report are available online at <https://www.cna.org/research/pop-rep>.

market, which, although improving in FY15, produced a prolonged period of historically high unemployment. Young adults had difficulty finding employment; the unemployment rate for 16- to 24-year-olds ranged from 13.4 percent to 18.4 percent from FY09 to FY14. By FY15, the rate was back to the average for FY86 through FY08, but the economic problems' effects still lingered.² The relatively easy recruiting environment allowed recruiters to be increasingly selective, resulting in very high-quality newly enlisted recruits.

Without sufficient planning and resources, however, military recruiting can be characterized by “boom and bust” periods, as was the case in past years. When recruiting conditions worsen, care must be taken to ensure that the recruiting force is not cut too deeply. Excessive volatility in the size of the recruiting force leads to higher recruiting costs, in part because contracting and expanding recruiting resources are not symmetric processes. Cuts in the recruiting force, for example, can be achieved quickly; expansions, however, take much more time because recruiters must be selected and trained. Newly trained recruiters are not immediately productive. Some estimates indicate that their learning curves are almost a year long.³ Thus, considerable care must be taken now as the economy recovers to ensure that recruiting resources are augmented before recruiting failure and reduced military readiness occur. Because there is no lateral entry into the military, new accessions constitute both tomorrow's career force and tomorrow's leaders. If smaller recruiting forces causes the military to accesses lower quality recruits, it jeopardizes future readiness.

In FY15, the recruiting market still has not returned to pre-recession levels. Although the unemployment rate fell in FY15, the number of discouraged workers and those who had dropped out of the labor force remained very high. Most commentators no longer believe that the unemployment rate provides as accurate a picture of the labor market as it once did. And the labor market participation rate is the lowest it has been in over 30 years. However, it is reasonable to conclude that the labor market will continue to improve and recruiting will again become more difficult. In addition, other patterns are adding to recruiting difficulties. High school graduates are more likely to enroll in college immediately and thus be unavailable for military service.⁴ Budget constraints have created pressure for DOD to reduce military pay growth; with slower or no pay growth, fewer young Americans may view the military as an attractive career path.

² During the 1986-2008 period, the average annual unemployment rate for 16- to 24-year-olds was 11.7 percent; in FY15, it was 11.6 percent.

³ The time period from initial selection to full productivity may be as long as 18 months (see Dana Samuelson, Amanda Kraus, David Reese, and Michael Moskowitz, *Productivity Effects of Changes in the Size of the Enlisted Recruiter Force*, CNA CRM D0013975. A2/Final, May 2006).

⁴ The immediate college enrollment rate (the year after high school or a General Educational Development (GED) award) was 60 percent for high school graduates in 1990 and 68 percent in 2014, the most recent year available. See <https://nces.ed.gov/fastfacts/display.asp?id=51>.

Another significant concern for DOD is that the population of potential recruits has become increasingly unqualified for military service. Accession Policy, in the Office of the Under Secretary of Defense (OUSD-AP), sponsored a recent study to estimate the “qualified military available,” or QMA.⁵ This is an estimate of the proportion of the 17- to 24-year-old U.S. youth population who would qualify without needing a waiver and be available to enlist in the AC military. The 2013 QMA report estimates that only 17 percent of 17- to 24-year-olds are available (i.e., not enrolled in college) and qualified to enlist without a waiver. In practice, the services typically deny enlistment to youth who score in the bottom 30 percentiles (i.e., categories IV and V) on the Armed Forces Qualification Test (AFQT).⁶ Incorporating this criterion, only 13 percent of youth would qualify for military service without a waiver, be available, and score above the 30th percentile on the AFQT. Disqualification reasons include obesity and other medical/physical issues, drug use, poor conduct, dependents, and aptitude.⁷

There are, however, some encouraging signs. Relative to their representation in the civilian labor market, women are underrepresented in the military, making up 15.6 percent of the AC military population in FY15. The recruitment and retention of women has become a hot topic throughout DOD, and several services already have taken steps to attract more female recruits. The Department of the Navy was especially aggressive in this regard, including a dramatic increase in maternity leave time (from 6 weeks to 18 weeks) for Navy and Marine Corps mothers.⁸ Secretary of Defense Ashton Carter later overruled the Department of Navy, authorizing paid maternity leave of 12 weeks for all servicewomen.⁹ Although maternity leave changes received significant media attention, the services were taking other steps to attract more women. For instance, the Army is attempting to train more female recruiters, in the hope that these soldiers will have more success at attracting female recruits.¹⁰ West Point also is taking steps to increase the number of female cadets,¹¹ and the Marine Corps is looking to high school sports teams to find more female recruits.¹² Finally, the Secretary of Defense’s decision to open

⁵ See The Lewin Group, Inc., *Qualified Military Available (QMA) Final Technical Report*, Oct. 10, 2013.

⁶ The AFQT score is computed from Armed Services Vocational Aptitude Battery (ASVAB) subtests.

⁷ Many youth have more than one disqualifying factor. In fact, 31 percent of all youth are predicted to be disqualified from military enlistment for more than one reason. Medical/physical issues, being overweight, and drug use are the most common multiple disqualifiers.

⁸ See <http://www.navytimes.com/story/military/2015/08/05/navy-triples-maternity-leave-sailors-starting-now/31168645/>.

⁹ See <http://www.defense.gov/News/Article/Article/645958/carter-announces-12-weeks-paid-military-maternity-leave-other-benefits/>.

¹⁰ See <http://www.usatoday.com/story/news/nation/2015/10/14/army-recruiting-women-combat/73885956/>.

¹¹ See <http://www.afba.com/newsroom/articles/article/article/west-point-officials-take-steps-to-increase-number-of-female-cadets/>.

¹² See <http://www.bigstory.ap.org/article/286be7fd7ec643f984c7bc581d8e479f/marines-looks-few-more-good-women-recruiting-drive/>.

all military occupations to women may increase interest in military service among young women.

This summary report highlights recent and historical personnel trends in the DOD services (the Army, Navy, Marine Corps, and Air Force) and the U.S. Coast Guard, which is part of the Department of Homeland Security. It examines both the AC and the reserve component (RC) in all services. It describes demographic characteristics of applicants, accessions, enlisted personnel, and officers, referencing data from the tables in the technical appendices, as well as from previous Pop Rep reports. Finally, it includes information on the socioeconomic characteristics of the neighborhoods of AC non-prior-service recruits accessed into the military in FY15.

The rest of this report is organized as follows: In section I, we present an overall summary of the armed services. Section II covers DOD's AC, focusing primarily on AC non-prior-service accessions. Section III addresses AC diversity and other characteristics of the AC force. Section IV describes the RC. In section V, we discuss the U.S. Coast Guard. Section VI presents concluding highlights.

The FY15 technical appendices (A through E), located on this website, provide FY15 data on the demographics—including education and aptitude—of new recruits, enlisted personnel, and officers of the AC and RC, as well as historical data on their selected demographic and service-related characteristics. Except where otherwise noted, data are provided by the Defense Manpower Data Center (DMDC), and all data are derived from the technical appendices.

Section I: Summary Statistics

Each year, Congress sets authorized endstrength—the maximum number of servicemembers allowed—for each service. Actual endstrength may differ from authorized endstrength, however, in that the former refers to the number of servicemembers as of the 30th of September in a given FY. To meet authorized endstrength, each service balances retention (those remaining in the service) with accessions (those entering the service). In this report, the word *endstrength* refers to *actual* endstrength. In table 1, we show individual service total endstrength—the sum of enlisted members, commissioned officers, and warrant officers—for the past three FYs. The table also shows FY15 endstrength by personnel type.

Table 1. Actual endstrength, by service and personnel type, FY13–FY15

Component and service	Endstrength			FY15 endstrength, by personnel type		
	FY13	FY14	FY15	Enlisted	Commissioned officers	Warrant officers
Active (AC)						
Army	528,070	504,330	472,312	392,434	79,878	15,054
Navy	319,839	321,599	321,685	269,128	52,557	1,649
Marine Corps	195,848	187,891	181,348	162,769	18,579	2,069
Air Force	326,573	312,453	307,326	246,322	61,004	0
DOD total	1,370,330	1,326,273	1,282,671	1,070,653	212,018	18,772
Reserve (RC)						
ARNG	357,735	354,072	350,023	304,318	37,121	8,584
USAR	198,209	195,438	198,552	161,963	33,287	3,302
USNR	62,444	59,254	57,359	42,914	14,361	84
USMCR	39,501	39,450	38,906	34,706	3,954	246
ANG	105,708	106,380	105,728	90,644	15,084	0
USAFR	70,913	69,784	68,494	54,557	13,937	0
DOD total	834,510	824,378	819,062	689,102	117,744	12,216

Notes:

1. The RC consists of the Army National Guard (ARNG), the U.S. Army Reserve (USAR), the U.S. Navy Reserve (USNR), the U.S. Marine Corps Reserve (USMCR), the Air National Guard (ANG), and the U.S. Air Force Reserve (USAFR).
2. Data come from appendix tables B-17, B-23, B-34, D-20, D-21, D-39, and D-41.
3. The Air Force does not have warrant officers.

FY15 DOD AC endstrength totaled 1.28 million servicemembers, 44,000 fewer than in FY14 and 88,000 fewer than in FY13. In FY15, the AC was almost 7 percent smaller than it was in FY13, with the Army’s endstrength falling most rapidly in the last two years. AC Army endstrength, however, was still 2.6 times the size of the Marine Corps and about 47 percent larger than the Navy and 54 percent larger than the Air Force.¹³ The

¹³ We will discuss the Coast Guard in a later section. It is small, about one-fifth the size of the Marine Corps, making it the smallest AC service.

small overall reduction in AC endstrength since FY13, however, masks somewhat different patterns among the services' ACs; Navy endstrength increased slightly, while Army, Air Force, and Marine Corps endstrength decreased. The Army and Marine Corps were programmed for further AC endstrength reductions in FY16.

At 819,062 members in FY15, the RC was 64 percent the size of the AC. The RC has two National Guard elements—the Army National Guard (ARNG) and the Air National Guard (ANG)—and four reserve elements—the U.S. Army Reserve (USAR), the U.S. Marine Corps Reserve (USMCR), the U.S. Navy Reserve (USNR), and the U.S. Air Force Reserve (USAFR). In terms of size, the Army dominates the RC; its guard and reserve forces made up 67 percent of reserve endstrength in FY15. In recent years, RC endstrength declines have been proportionally less than those in the AC.

Table 2 shows the number of accessions and gains for the past three years by component and service.¹⁴ For enlisted personnel, we include non-prior-service (NPS) and prior-service (PS) accessions.¹⁵ For officers, we include commissioned and warrant officer gains. (The gain percentages for PS and warrant officers are shown in parentheses below the numerical gains.)

While AC enlisted accessions fell substantially in all services from FY13 to FY14, they regained some of those cuts in FY15 in all services except the Air Force. RC enlisted gains declined each year, falling by over 8,000 from their FY14 level in FY15.

PS accessions for the AC are small, only 1.6 percent of FY15 accessions. In sharp contrast to enlisted AC gains, PS personnel represent more than 40 percent of yearly reserve force enlisted gains, and these percentages vary considerably by element. The largest reserve element, the ARNG, recruits the smallest percentage of PS and the largest percentage of NPS recruits each year relative to the other reserve elements.

From FY13 to FY14, AC Army officer gains fell sharply and Marine Corps officer gains rose sharply; both moderately increased in FY15. Over the period, Navy and Air Force officer gains were relatively constant. The result overall is little change in DOD AC officer gains over the last three years.

¹⁴ Our DMDC data track “accessions” for AC enlisted personnel and “gains” for officers and all reservists. Gains data count officers and RC members who exit one component and enter another. We follow the definitions from the Office of the Secretary of Defense for accessions and gains:

- *Accessions*: Number associated with recruiters' productivity and used in reporting the achievements of the services' recruiting commands (and other accessioning agencies).
- *Gains*: Number associated with transactions in a database that reflects the addition of a Social Security Number (SSN) that was not in the previous file.

¹⁵ We use each service's definition for AC PS and NPS accessions. In the Army, Navy, and Air Force, PS accessions are those that served previously in any of the four services. In the Marine Corps, PS accessions are only those who served previously in the Marine Corps.

Table 2. Number of accessions and gains, by service and personnel type, FY13–FY15

Component and service	Enlisted (% PS)			Officers (% Warrants)		
	FY13	FY14	FY15	FY13	FY14	FY15
Active						
Army	68,776 (3.4)	56,926 (3.1)	59,010 (3.4)	7,109 (14.5)	6,517 (15.2)	6,553 (13.8)
Navy	39,970 (0.2)	33,707 (0.2)	34,973 (0.3)	4,253 (3.9)	4,217 (5.0)	4,189 (4.3)
Marine Corps	32,185 (0.3)	26,059 (0.3)	29,483 (0.3)	1,267 (13.3)	1,632 (15.7)	1,775 (10.8)
Air Force	26,586 (1.2)	24,252 (0.5)	24,234 (0.9)	4,152 (0.0)	4,182 (0.0)	4,318 (0.0)
DOD total	167,517 (1.7)	140,944 (1.4)	147,700 (1.6)	16,781 (8.1)	16,548 (8.8)	16,835 (7.6)
Reserve						
ARNG	52,966 (26.5)	49,832 (23.0)	44,995 (23.4)	4,479 (15.9)	4,328 (16.4)	4,018 (14.4)
USAR	26,863 (52.0)	27,049 (53.2)	26,615 (51.0)	4,873 (6.5)	4,897 (6.0)	5,125 (6.3)
USNR	11,319 (71.7)	9,980 (70.6)	8,325 (85.1)	2,162 (0.8)	2,097 (0.6)	1,985 (0.8)
USMCR	9,220 (34.8)	8,661 (34.3)	8,411 (36.1)	1,092 (4.2)	909 (3.9)	938 (2.9)
ANG	9,213 (46.8)	9,166 (42.0)	8,538 (47.1)	1,293 (0.0)	1,455 (0.0)	1,299 (0.0)
USAFR	7,940 (59.6)	7,399 (68.6)	7,131 (66.5)	1,438 (0.0)	1,420 (0.0)	1,770 (0.0)
DOD total	117,521 (41.2)	112,087 (40.0)	104,015 (41.3)	15,337 (7.1)	15,106 (7.0)	15,135 (6.2)

Notes:

1. Enlisted accessions for all components include both non-prior-service (NPS) and prior-service (PS) accessions.
2. The RC consists of the Army National Guard (ARNG), the U.S. Army Reserve (USAR), the U.S. Navy Reserve (USNR), the U.S. Marine Corps Reserve (USMCR), the Air National Guard (ANG), and the U.S. Air Force Reserve (USAFR).
3. Data come from appendix tables B-14, C-10, C-18, C-28, D-16, D-38, and D-40.
4. The Air Force has no warrant officers.

Enlisted personnel make up the bulk of total endstrength and accessions or gains for all DOD services (AC and RC). In FY15, enlisted personnel made up between 80 percent (Air Force) and 89 percent (Marine Corps) of AC endstrength. This follows the historical pattern of the Air Force having the richest mix of officers and the Marine Corps having the leanest.

Warrant officers

Most officers are commissioned officers. Across DOD, warrant officers accounted for almost 8 percent of AC officer strength. There are no warrant officers in the Air Force,¹⁶ but warrant officers made up 14 percent of Army, 11 percent of Marine Corps, and 4 percent of Navy AC officer strength in FY15. In the RC, warrant officers averaged 6 percent of the officer corps, except in the ARNG, where the percentage was over 14 percent. Warrant officers are generally technical leaders and specialists, and most are PS enlisted, although the Army does have a direct accession program for helicopter pilots.¹⁷

¹⁶ The Air Force stopped accessing warrant officers in 1958 when the services expanded enlisted paygrades to include E8s and E9s. The last warrant officer retired from the Air Force in 1984.

¹⁷ In the remainder of this report, we focus almost exclusively on enlisted personnel and commissioned officers.

Section II: DOD Active Component (AC)

In this section, we focus on the AC, beginning with a historical analysis of trends in the size of the enlisted force and the commissioned officer corps. We then focus on non-prior-service enlisted accessions, as well as on applicants for the enlisted force. After discussing trends, we provide descriptive statistics on the quality, age, geographic background, and neighborhood median household income for enlisted NPS recruits. We then turn to a section on gender and racial diversity for AC personnel, also examining marital patterns for AC personnel. After that, we look at separation and continuation rates for enlisted personnel and how continuation rates translate into different retirement probabilities for the various services. We conclude by comparing trends in years of completed service for AC enlisted personnel and commissioned officers.

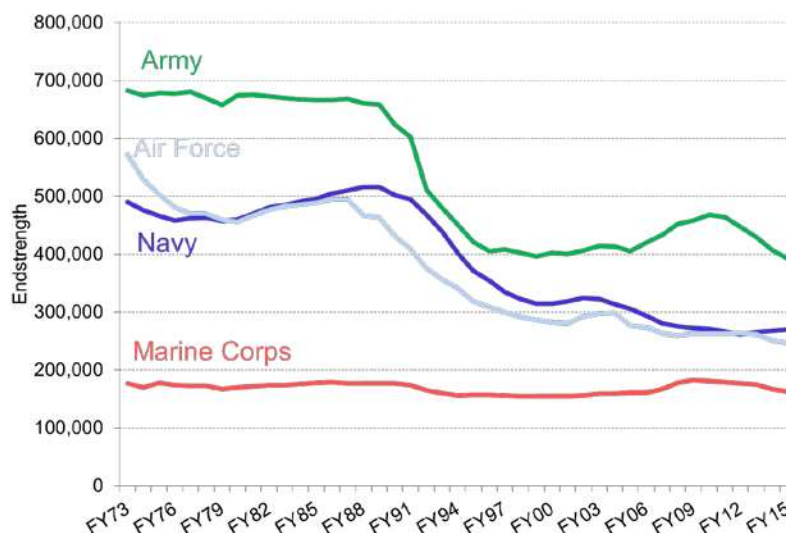
Strength over time

After examining patterns in enlisted and commissioned officer endstrength, we review how the enlisted-to-officer ratio has changed over time.

Enlisted endstrength

The AC's enlisted endstrength was 1,070,653 in FY15, accounting for 83 percent of total AC endstrength for the year. Figure 2 shows AC enlisted endstrength by service over the past 42 years.

Figure 2. AC enlisted endstrength, by service, FY73–FY15



Note: Data are from appendix table D-11.

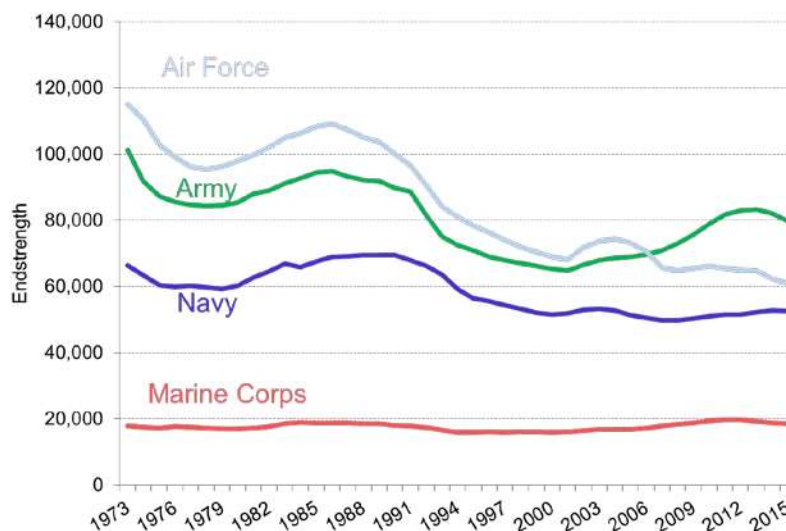
At the beginning of the All-Volunteer Force (AVF) in FY73, 1.9 million servicemembers were in the enlisted force. The end of the Cold War in the early 1990s led to a significant drop in force size and, from FY97 to FY15, the enlisted force fluctuated between 1.1 million and 1.2 million servicemembers. The wars in Iraq and Afghanistan increased the size of the Army and the Marine Corps, but this increase was at least partly offset by decreases in the size of the Air Force and the Navy. Reflecting reduced operational commitments in recent years, the Army and Marine Corps have been drawing down their forces.

The Marine Corps has been the smallest of the DOD services for the past 50 years. But, while all the services shrank in the 1990s, the Marine Corps decreased the least and, by FY08, its enlisted force was back to the size it had been at the beginning of the AVF. By FY15, the Marine Corps' enlisted force was 92 percent of its FY73 size. In contrast, the enlisted Air Force, Navy, and Army were 43, 55, and 58 percent of their respective sizes in FY73.

Commissioned officer corps

Figure 3 shows AC commissioned officer endstrength by service over the last 42 years.

Figure 3. AC commissioned officer endstrength, by service, FY73–FY15



Note: Data are from appendix table D-16.

Starting from a high of 300,000 at the start of the AVF, the commissioned officer corps fell to 260,000 by FY80, grew to 292,000 by FY86, fell to 201,000 by FY01, and grew back to approximately 212,000 in FY15 (see appendix table D-16). Commissioned officer gains followed similar patterns. In percentage terms, officer gains have fallen more than officer corps endstrength since the start of the AVF, resulting in a more experienced commissioned officer corps.

We saw earlier that, since the onset of the AVF, the Army has had the highest number of AC enlisted personnel. For commissioned officers, however, the Air Force had the highest number until FY07 when the Army overtook it. In FY15, AC Army commissioned officer endstrength was almost 19,000 larger than AC Air Force commissioned officer endstrength.

Ratio of enlisted to commissioned officers

Although Congress sets authorized endstrength, each service determines its own enlisted and officer mix. Figure 4 illustrates how the ratio of enlisted to commissioned officers for each service has changed over time.

Figure 4. Ratio of AC enlisted to commissioned officers, by service, FY73–FY15



Note: Data are from appendix tables D-11 and D-16.

The Marine Corps had the highest ratio of enlisted personnel to commissioned officers, ranging from 10.4 to 8.8 over 42 years. The Air Force is at the other end of the spectrum; in FY73, there were only 5.0 enlisted personnel for every commissioned officer, and, since about FY95, that ratio has been 4.0. The Army and Navy have similar historical trends; both had highs of 8.0 enlisted personnel per commissioned officer in the late 1970s, but their ratios fell steadily to 4.9 and 5.1, respectively, in FY15. Over the 42 years of the AVF, in all services, enlisted forces have been reduced more than the commissioned officer corps. With warrant officers included, the Marine Corps still had the most – and the Air Force the fewest – enlisted personnel per officer in FY15.¹⁸

Whether the current mix of commissioned officers to enlisted personnel or the very different mixes across the services will be sustained under current budgetary pressures is an open question. Even with the increase in enlisted compensation associated with the AVF, commissioned officers still are considerably more expensive than enlisted personnel.

Enlisted accessions over time

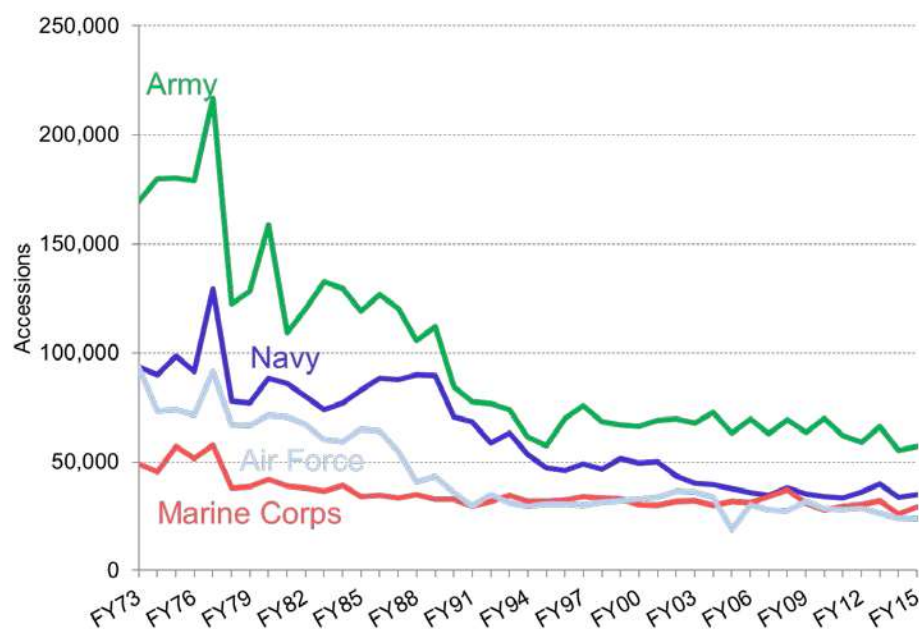
Additions to the enlisted force come entirely from accessions; there is no lateral entry. As suggested earlier, virtually all enlisted accessions are NPS. It was NPS accessions who were subject to the draft prior to the AVF. Figure 5 shows the number of NPS enlisted accessions from FY74 to FY15. Similar to enlisted endstrength, overall accessions declined between FY74 and FY15; however, unlike enlisted endstrength, which declined sharply during the 1990s, accessions fell more steadily between the late 1970s and early 1990s.

In FY15, Army, Air Force, and Navy NPS accessions were about one-third of their pre-AVF levels,¹⁹ while enlisted endstrengths for the three services were generally a larger proportion of their pre-AVF levels. Fewer accessions for a given endstrength contributed to a more senior enlisted force, especially in the Army, Air Force, and Navy. Marine Corps accessions fell by smaller percentages, and, in recent years, Marine Corps accessions have been approximately equal to those of the Navy and Air Force despite the Marine Corps' smaller size. By design, the Marine Corps has opted for a more junior force.

¹⁸ If we include warrant officers, the ratios of enlisted to commissioned officers in FY15 change as follows: the Marine Corps' ratio of 8.8 goes to 7.9, the Army's ratio of 4.9 goes to 4.1, the Navy's ratio of 5.1 goes to 5.0, and the Air Force's ratio of 4.0 stays at 4.0.

¹⁹ They were 34, 26, and 37 percent, respectively.

Figure 5. NPS AC enlisted accessions, by service, FY74–FY15



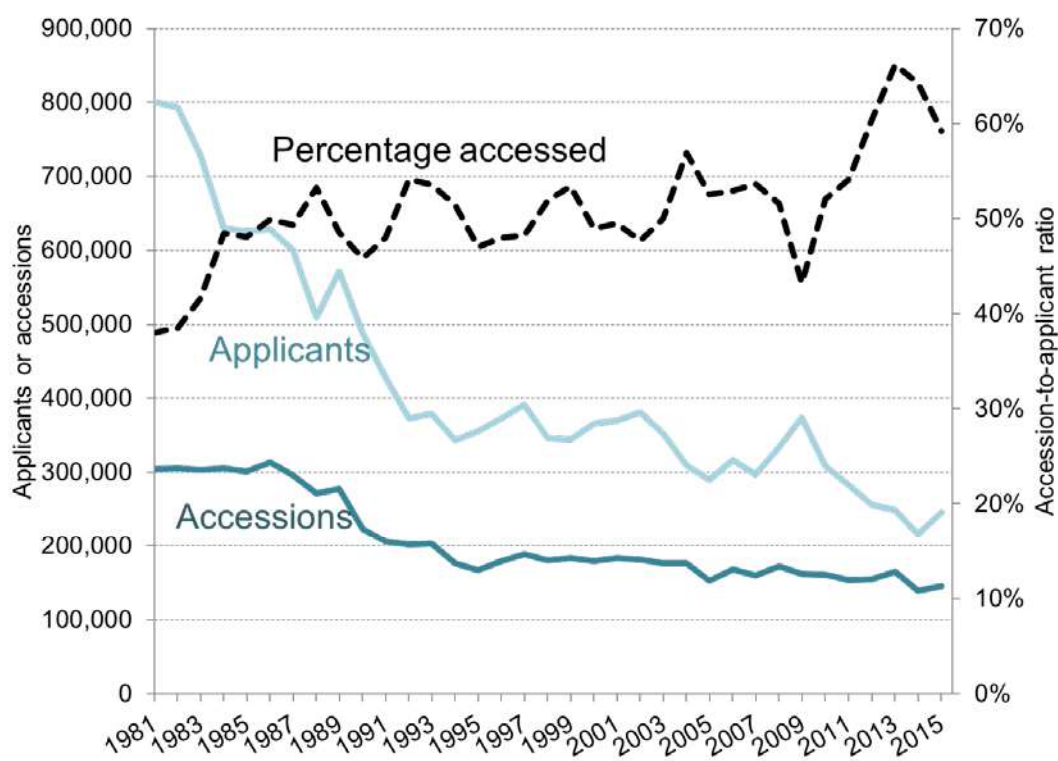
Note: Data are from appendix table D-4. The data point for FY77 is unusually high because of an extra “transition quarter” when the end of the fiscal year was changed from June 30 to September 30.

Applicants and NPS accessions

We now turn to enlisted applicants and NPS accessions across all DOD services for the FY81–FY15 period. Both the number of applicants and the number of accessions have fallen, although, in the last few years, the number of applicants processed by the Military Entrance Processing Stations (MEPS) has fallen more rapidly than accessions. The enlisted percentage of applicants accessed has grown, albeit with much fluctuation, from 38 percent in FY81 to 59 in FY15 (see figure 6).²⁰ For most years, it has been between 50 and 60 percent. In FY15, the MEPS processed 245,309 applicants, 145,270 of whom were accessed as NPS accessions into the four services.

²⁰ DMDC applicant data come from the MEPS. Applicants cannot go directly to the MEPS; they must be sent by recruiters. Given the paperwork associated with sending applicants to the MEPS, not all those who want to enlist will be sent to the MEPS and counted as applicants. In fact, when recruiting is relatively easy, if the recruiter believes the applicant is marginally qualified, the recruiter will probably decide not to put together an applicant package and, instead, will look for more qualified applicants. In tough recruiting environments, however, the recruiter is willing to put in the time, on the chance that the marginally qualified applicant will qualify for service. This behavior leads to the phenomenon shown in figure 6: more applicants in FY07–FY08 when recruiting was tougher and fewer since FY09 when recruiting became easier.

Figure 6. AC enlisted applicants, NPS enlisted accessions, and the percentage of applicants accessed, FY81–FY15



Note: Data are from appendix table D-3. Enlisted accessions include only NPS enlisted personnel.

There are a number of reasons why an applicant for enlisted service may not be accessed, including having a low aptitude test score, disqualifying medical or physical conditions, too many dependents, disqualifying tattoos, a history of criminal activity, or testing positive or having a history of use for disqualifying drugs. Some of these people may be allowed to serve if they are granted an enlistment waiver. In addition, many applicants simply change their minds and decide not to enter military service.

Characteristics of enlisted NPS accessions

Next, we describe the characteristics of enlisted applicants and NPS accessions in the AC enlisted force.²¹ Specifically, we describe the quality of enlisted applicants and NPS accessions and the relationship between quality accessions and the health of the U.S. civilian labor market. We include a discussion of age and the neighborhood household income distributions for NPS accessions. Then we turn to a special section on their geographic backgrounds.

²¹ We focus entirely on AC NPS accessions. In FY15, AC prior service (PS) accessions represented only 1.7 percent of AC accessions (see appendix tables B12-B14 for information on AC PS accessions).

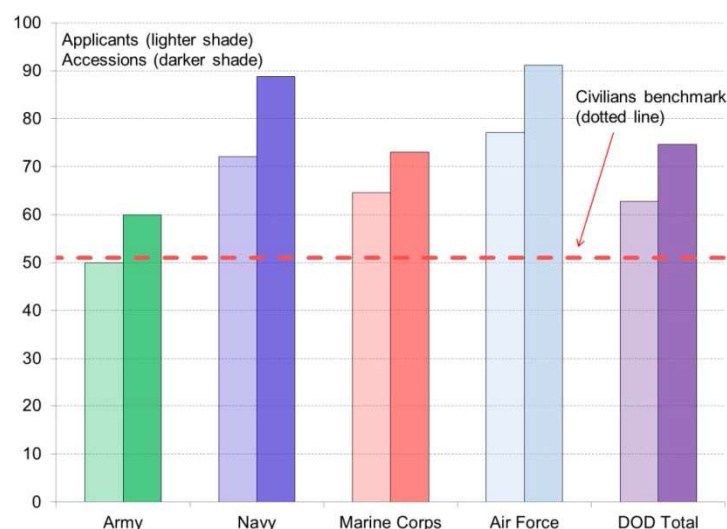
Quality of enlisted applicants and NPS accessions

DOD sets quality standards for the aptitude and educational credentials of recruits. The Armed Forces Qualification Test (AFQT), a nationally normed aptitude test of math and verbal skills, is used to predict training success and on-the-job performance. DOD requires that 60 percent of accessions score at the 50th percentile or higher on the AFQT. In FY15, 75 percent of accessions did so.

In addition, DOD requires that at least 90 percent of recruits be classified as Tier 1. Tier 1 recruits are primarily high school *diploma* graduates, but they also include people with educational backgrounds beyond high school, as well as those who have earned adult education diplomas, those with one semester of college, and those who have attended virtual or distance learning and adult or alternative schools. Other educational backgrounds include Tier 2 recruits (those with alternative high school credentials, primarily the GED certificates) and Tier 3 recruits (no secondary school credentials). Tier 1 recruits are sought after by the services because high school diploma graduates have been shown to be more likely than recruits with other credentials to complete their first term of service.

In figure 7, we show the percentage of FY15 applicants and enlisted accessions who scored at or above the 50th percentile on the AFQT. In every service, a higher percentage of accessions (dark-colored bars) than applicants (light-colored bars) scored above the 50th percentile. Both applicants and accessions scored considerably higher on the AFQT than did the 18- to 23-year-old civilian population (represented by the red dotted line).

Figure 7. Percentages of AC NPS enlisted applicants and accessions scoring at or above the 50th percentile on the AFQT, by service, FY15

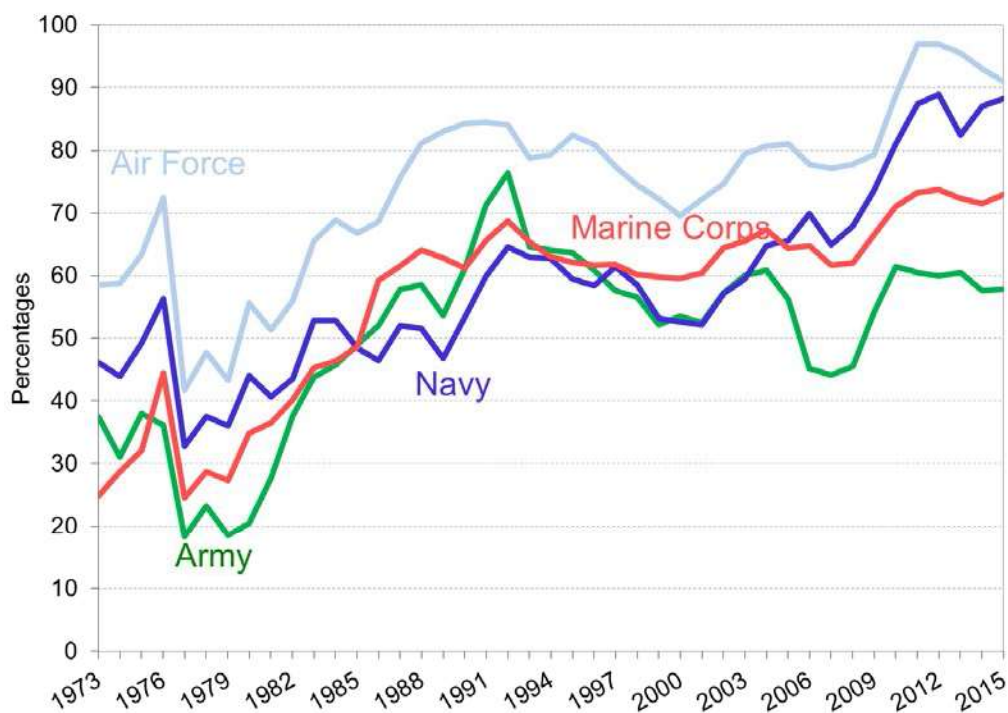


Note: Data are from appendix tables A-4 and B-4. Civilian benchmark is from 1997 Profile of American Youth Study. See <http://official-asvab.com/norming-res.htm>.

The Air Force had the highest percentages of applicants and accessions scoring at the 50th percentile or above (77 and 91 percent) on the AFQT, followed by the Navy (72 and 89 percent), the Marine Corps (65 and 73 percent), and the Army (50 and 60 percent). Overall, 75 percent of FY15 NPS AC accessions had AFQT scores at or above the 50th percentile – well above the DOD 60-percent benchmark and the civilian 50-percent benchmark observed in the population. Across the DOD services, a slightly higher proportion of male than female accessions scored in the AFQT’s 50th percentile or above (see appendix table B-4).²²

All services try to access as many high-quality recruits as possible. A recruit is considered high quality if he or she has a Tier 1 education credential *and* scores in the 50th percentile or above on the AFQT. Because 99 percent of DOD NPS FY15 accessions had Tier 1 educational credentials, the main delineation for becoming a high-quality applicant or accession is the AFQT score. When comparing the percentage of high-quality accessions since the beginning of the AVF, we observe some sharp quality changes, as well as an overall trend toward increasing percentages of high-quality recruits (see figure 8).

Figure 8. Percentages of high-quality AC NPS enlisted accessions, by service, FY73–FY15



Note. Data are from appendix table D-9.

²² In the civilian population, 52 percent of men and 50 percent of women scored at or above the 50th percentile.

There is a difference between actual and contemporaneously reported AFQT scores for the FY77–FY81 period because of a “misnorming” of the AFQT. Figure 8 reflects the actual percentages of high-quality accessions. Because it took several years to realize that the test scores were incorrect, in the late 1970s, the services were reporting higher percentages of high-quality accessions than is shown in figure 8. The misnorming led to erroneous enlistment of many low-scoring recruits. After correcting the misnorming and increasing recruiting budgets, the percentage of high-quality recruits increased (between 20 and 30 percentage points in all services).

In the 1990s, we observe stability and, despite unfortunate fluctuations in recruiting budgets resulting in short-term setbacks in recruit quality (particularly in the Army), the quality of accessions in all services has increased since the mid-2000s. In all years of the AVF, the Air Force has had the highest percentage of high-quality recruits.

In FY15, the services had extraordinary success accessing high-quality personnel. The percentage of high-quality recruits was 91 percent in the Air Force, 88 percent in the Navy, 73 percent in the Marine Corps, and 58 percent in the Army.

Relationship between accessions and the civilian labor market

Recruiting has been more difficult when the economy is robust, civilian unemployment is low, and young people find it easy to secure civilian employment. During the recent recession when the unemployment rate was very high and jobs were difficult to find, recruiting was easier. Figure 8 shows this historical relationship between the civilian unemployment rate and AC high-quality accessions, with larger proportions of high-quality accessions associated with higher levels of civilian unemployment. In the last couple of years, and particularly in FY15, however, the unemployment rate has been essentially at the pre-recession levels identified with difficult recruiting, but recruit quality has remained at the historic levels associated with easier recruiting. What is the explanation?

In general, it is no longer believed that the unemployment rate accurately measures the overall state of the labor market.²³ Recent years have shown the numbers of discouraged workers at historic levels.²⁴ Economists at the Bureau of Labor Statistics (BLS) now look to broader measures for the health of the labor market. The most broadly defined measure of the state of the labor market, U-6, includes unemployed people, plus people who are “marginally attached” to the labor force, plus people who work part time for economic reasons. The marginally attached are neither working nor looking for work, but they are available for a job and have looked for work sometime in

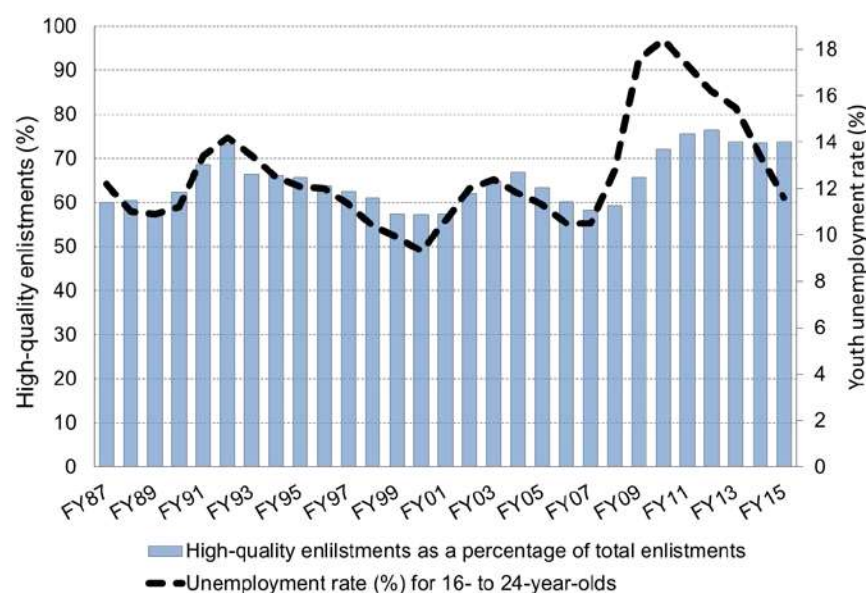
²³ One indication might be very low interest rates, indicating little demand for the new investment associated with high employment levels and robust economies.

²⁴ See <http://www.bls.gov/opub/ted/2015/unemployment-rate-and-u-6-measure-in-january-2015.htm>.

the past 12 months. While the overall unemployment rate was 5.7 percent in January 2015, U-6 was 11.3 percent. That is higher than it has been at any time since 1995.

Eventually, however, recruiting will become more difficult, and then we expect NPS recruit quality to fall. The challenge for the services at that point will be to ensure that recruiting budgets are sufficient to implement the various policy levers available—enlistment bonuses, educational benefits, numbers of recruiters, funds for recruiting operations, and advertising—so that recruit quality does not fall below the minimum DOD benchmarks.

Figure 9. The unemployment rate and high-quality AC NPS recruits



Note: Data are from appendix tables D-2 and D9.

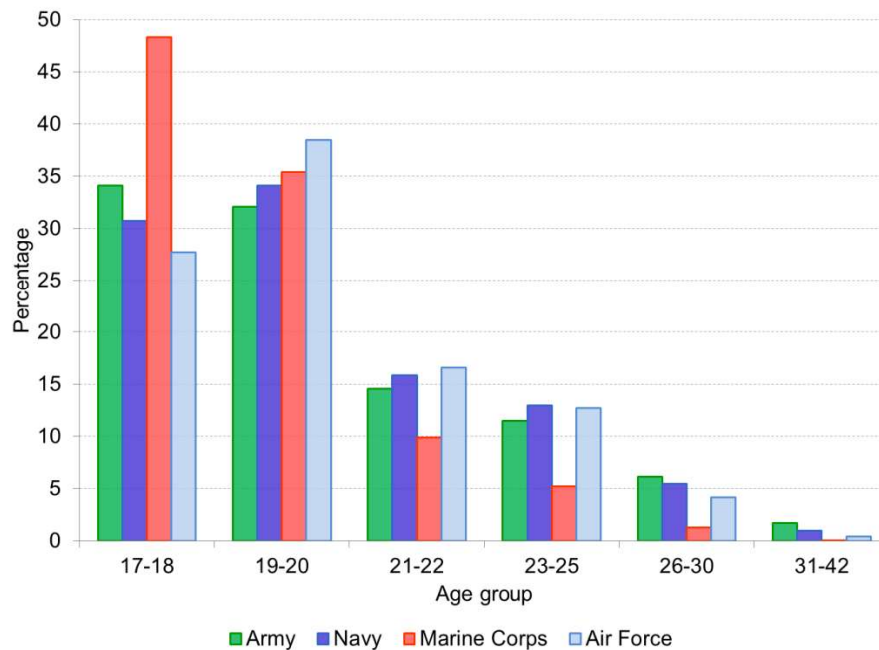
Age distribution of AC NPS enlisted accessions

We observe significant differences across the services in the age distributions of AC NPS enlisted accessions. Air Force accessions are generally older and Marine Corps accessions are much younger than those in the other services. Half of Marine Corps accessions are in the 17- to 18-year-old age group; virtually all of them are age 18.²⁵ Those who are age 20 and younger made up 84 percent of Marine Corps NPS accessions, while the percentages in that age group are 66 percent in the Air Force, 65

²⁵ Accessions cannot be younger than 17. Even then, a 17-year-old accession must have parental consent to enter military service. In appendix table B-1, we see that 2.9 percent of accessions were 17 years old. DOD sets the maximum age for NPS accessions at age 42. The Army briefly raised its maximum age limit to 42 but, in 2011, it reverted to age 35. In 2014, the Air Force raised its maximum age from 27 to 39. The Navy has a maximum age limit of 34 years for NPS accessions, and the Marine Corps sets age 28 as its maximum age.

percent in the Navy, and 66 percent in the Army. About 2 percent of Army accessions are in the oldest age group (31 to 42 years old). Figure 10 presents the age distribution of NPS enlisted accessions for the four services.

Figure 10. AC NPS enlisted accessions, by age group, FY15



Note: Data are from appendix table B-1.

Neighborhood median income of AC NPS enlisted accessions

At the advent of the AVF, there was concern about the representation of the force, particularly socioeconomic representation. Researchers found that accessions in the early years of the AVF were, for the most part, representative of the U.S. population in terms of their socioeconomic backgrounds.²⁶ More recent studies report similar findings on socioeconomic characteristics, such as neighborhood income, for the 1990s and early years of this century.²⁷

Because information on household or family income is not collected from the families or households from which recruits come, these studies must identify a proxy for household income of recruits. In a recent study, Lien, Lawler, and Shuford used the

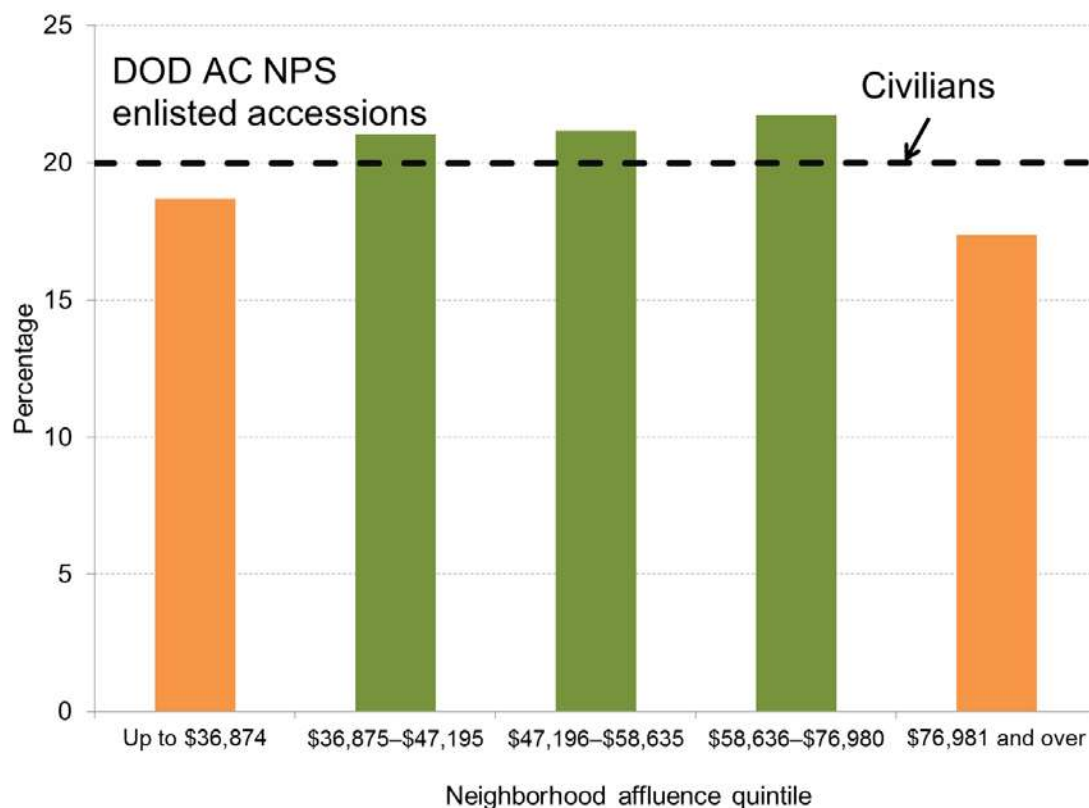
²⁶ See, for example, Richard N. Cooper, *Military Manpower and the All-Volunteer Force*, RAND Publication R-1450-ARPA, 1977.

²⁷ See, for example, Shanea J. Watkins and James Sherk, *Who Serves in the U.S. Military? Demographic Characteristics of Enlisted Troops and Officers*, Heritage Foundation Center for Data Analysis Report CDA 08-05, Aug. 21, 2008.

median income for recruits' census tracts as a proxy for recruit household income.²⁸ In short, they measured “neighborhood affluence” or how well-off (i.e., well-to-do) recruits' neighborhoods were. Each neighborhood is synonymous with a census tract.

We updated the Lien, Lawler, and Shuford study for FY15 AC NPS accessions, mapping each accession to his or her home-of-record census tract and computing neighborhood affluence (median household income) for each tract. We then divided neighborhood affluence income measures into income quintiles.²⁹ Figure 11 shows FY15 AC NPS enlisted accessions by the median income quintile of their home-of-record census tracts.³⁰ The 20-percent line defines each income quintile based on census-tract-level median household income data.

Figure 11. Neighborhood affluence (median census tract household income) for FY15 AC NPS enlisted accessions



²⁸ Diana S. Lien, Kletus Lawler, and Robert Shuford, *An Investigation of FY10 and FY11 Enlisted Accessions' Socioeconomic Characteristics*, CNA Research Memorandum DRM-2012-U-001362-Final, Aug. 2012.

²⁹ In comparison to quintiles constructed from household income, quintiles constructed for median census tract income, or neighborhood affluence, will be attenuated toward the mean of household income.

³⁰ The quintile ranges are based on all households in census tracts with non-missing median household incomes. FY15 AC NPS enlisted accession data were provided by DMDC and linked by census tract to median household income data from the Census Bureau's 2009-2013 American Community Survey.

Note: Data are found in the first panel of table B-41. These quintiles were constructed using 2009-2013 American Community Survey (ACS) data at the census tract level. FY15 NPS home-of-record accession data from DMDC were used to link NPS accessions with the census tract data.

Relative to all households, FY15 NPS accessions are underrepresented in census tracts with the lowest and the highest median incomes, while those in the middle three quintiles are overrepresented. Lower income neighborhoods tend to have fewer people qualified to serve. In FY15, for example, virtually all NPS accessions were high school diploma graduates, and high school dropout rates are higher in low-income neighborhoods. For the highest neighborhood median income quintile, the lower representation is probably due to higher college attendance rates among youth in these census tracts.³¹

The findings depicted in figure 11 are important because they dispel the myth that the military obtains the majority of its recruits from the lower socioeconomic classes – those neighborhoods with the lowest income levels. Quite the opposite is true. The military actually gets the largest proportion of its recruits from the three middle quintiles.

Special section: Geographic characteristics of AC NPS enlisted accessions

The Census Bureau divides the country into four regions:

- Northeast – includes New England and Middle Atlantic division states
- Midwest – includes East North Central and West North Central division states
- South – includes South Atlantic, East South Central, and West South Central division states
- West – includes Mountain and Pacific division states³²

Figure 12 shows the geographic distribution of AC NPS enlisted accessions since FY73.³³ We observe differences in the regional distribution of AC NPS enlisted accessions before and after FY85. Until about FY85, roughly 35 percent of AC NPS enlisted accessions came from the South and 25 percent from the Midwest, while the remaining 40 percent of accessions came from the West and the Northeast. After FY85, accessions were increasingly drawn more heavily from the South and the West and less so from the Northeast and Midwest. This partly reflects general population trends because the “Sunbelt” states in the South and West regions made up an increasingly

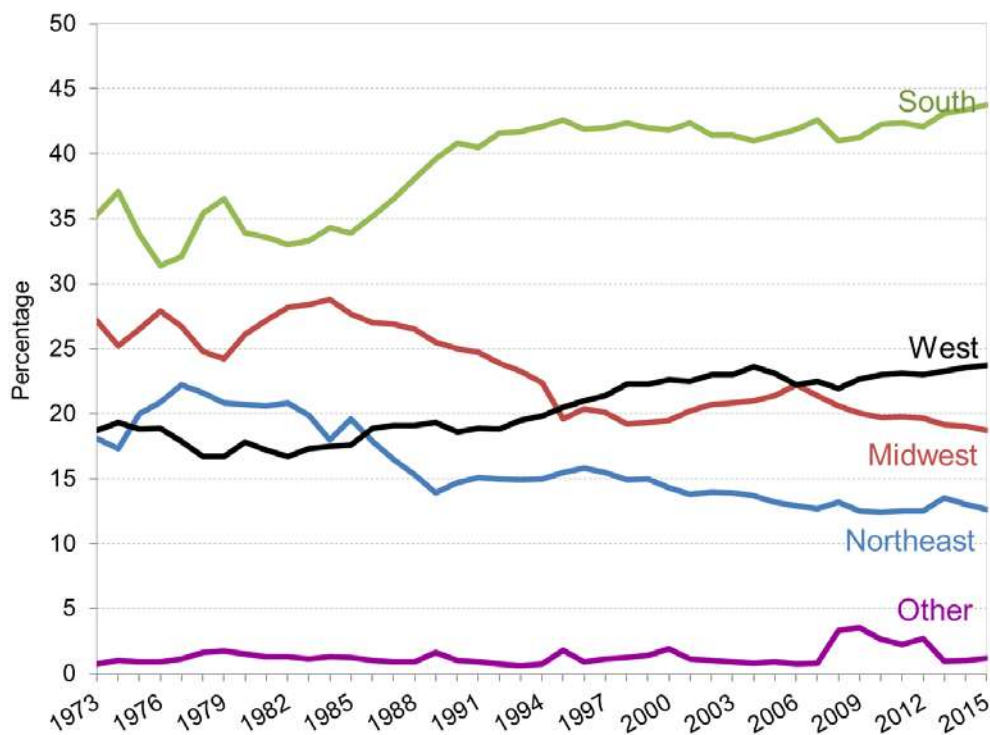
³¹ See http://www.huffingtonpost.com/2011/10/04/children-low-income-neighborhoods-high-school_n_994580.html and <http://nces.ed.gov/fastfacts/display.asp?id=51>.

³² For completeness, accessions from U.S. territories, possessions, or “unknown” regions are grouped together in the “other” category.

³³ We do not include data on the geographic representation of officer gains. Officers are primarily recruited from colleges and universities; geographic location would reflect the location of these universities and not necessarily the region in which the officers grew up.

larger share of the U.S. population. In FY15, the Northeast had 18.1 percent, the Midwest had 20.8 percent, the South had 36.9 percent, and the West had 24.3 percent of the 18- to 24-year-old civilian population. As recruiting commands determine where to place recruiters across the country, they account for geographic shifts in the population as well as the propensity to serve in each region.

Figure 12. Geographic distribution of NPS enlisted AC accessions, FY73-FY15

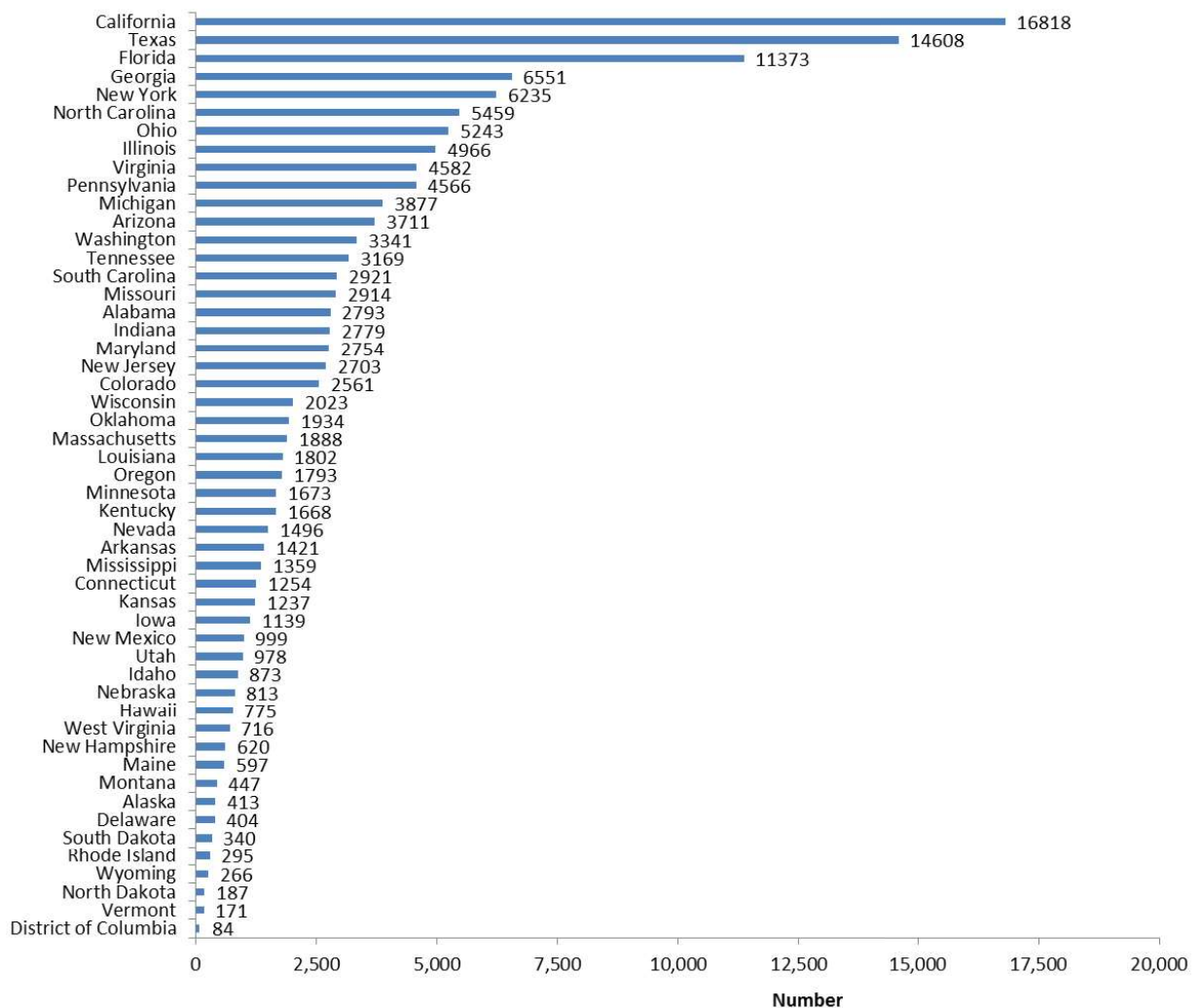


Note: Data are from appendix table D-10.

Enlisted NPS accessions by state: numbers, accession shares, and high-quality percentages

Figure 13 details the number of FY15 AC NPS enlisted accessions by state. Although the largest number of NPS accessions is drawn from the big states of California and Texas, smaller states such as Georgia, Florida, and North Carolina also contribute large numbers of NPS accessions. Clearly, it is not just population but also propensity to join the military that plays a role.

Figure 13: AC NPS enlisted accessions, by state, FY15



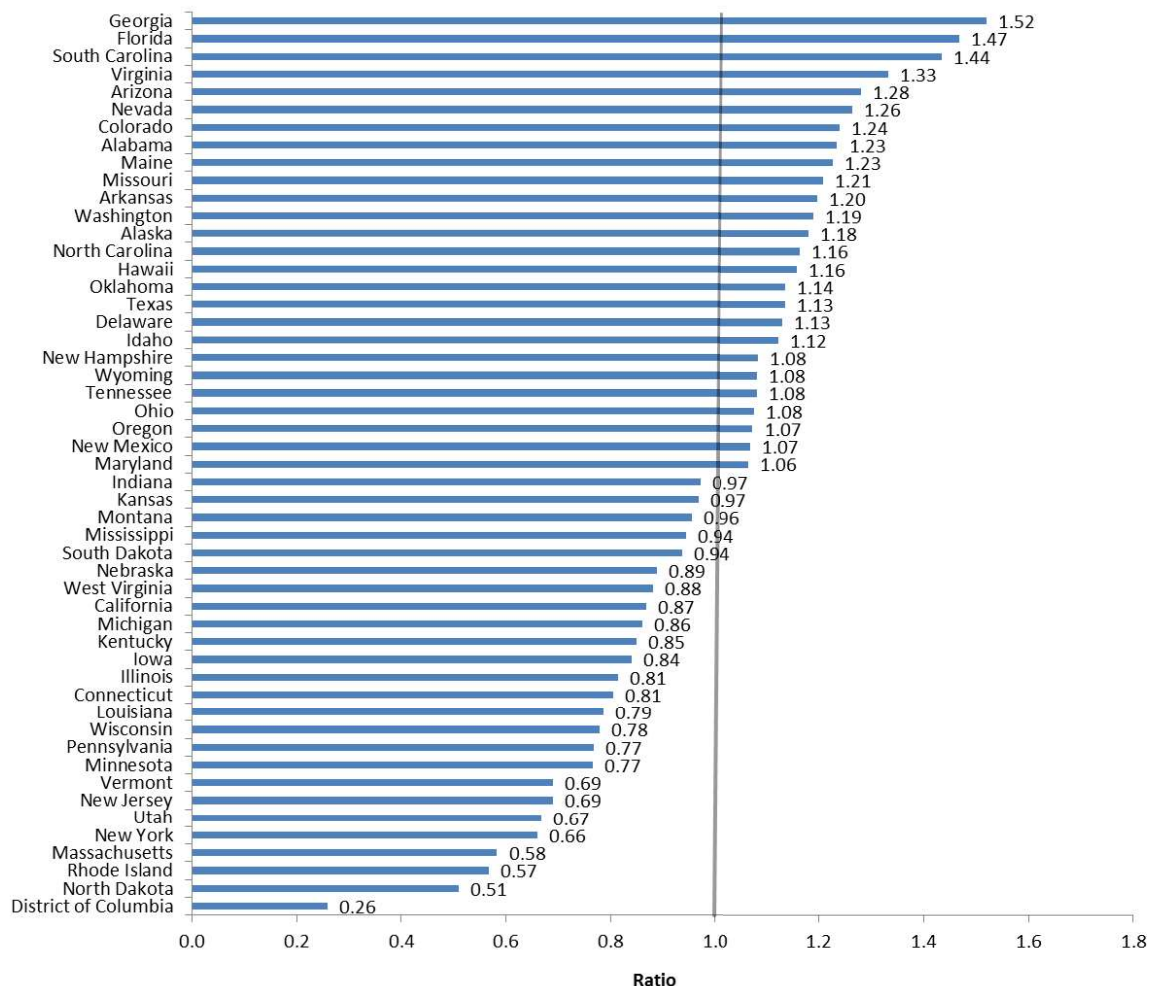
Note: Data are from appendix table B-46.

Figure 14 integrates the recruitable geographic population data with the geographic distribution of recruits. More precisely, it shows the ratio of a state's accession share to the state's share of the U.S. 18- to 24-year-old population.³⁴ We call that the states' representation ratio.

³⁴ In previous Pop Rep reports, we have identified the 18- to 24-year old civilian population as the recruitable population. These recruitable population figures do not account for the qualified population, which could differ significantly by region or state.

While California and Texas were the top two states in the percentage of the 18- to 24-year-old population, they are number 34 and number 17, respectively, in the state's relative representation ratios shown in figure 14.

Figure 14: Enlisted NPS accession-share to civilian-share ratios, by state, FY15



Note. The representation ratio is calculated by dividing a given state's FY15 NPS accession share by the state's 18- to 24-year-old population share. Data are from appendix table B-46.

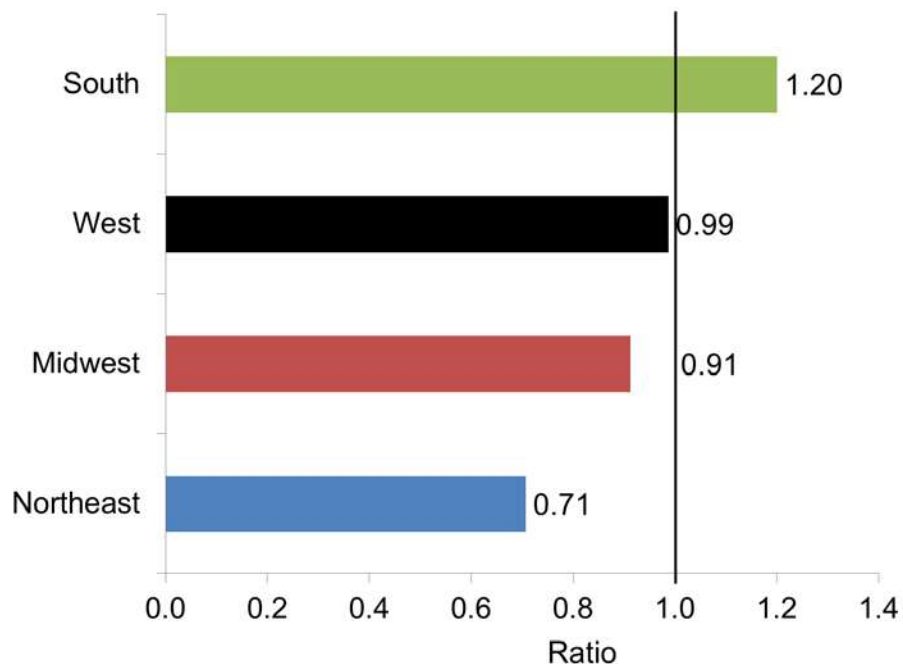
When reading the chart, these points should be kept in mind:

- A ratio of 1 implies that the state's share of DOD accessions was equal to its share of 18- to 24-year-olds.
- A ratio greater than 1 implies that the state's share of DOD accessions was larger than its share of the 18- to 24-year-old population,
- A ratio of less than 1 implies that the state's share of DOD accessions was smaller than its share of the 18- to 24-year-old population.

The FY15 ratios ranged from 0.26 to 1.52. Kansas, Indiana, Maryland, Oregon, and New Mexico all had ratios close to 1 – meaning their share of AC NPS enlisted accessions almost matched their share of the 18- to 24-year-old population. About half of the states can be considered overrepresented in accessions (ratios greater than 1), and about half of the states and the District of Columbia could be considered underrepresented (ratios less than 1). Georgia and Florida had the highest ratios, and the District of Columbia contributed the fewest accessions relative to its 18- to 24-year-old population. These ratios reflect differences in qualification rates, propensities, and recruiting resources.

Given that regional population percentages discussed earlier are not equal (with the South at 36.9 percent and the Northeast at 18.1 percent of the 18- to 24-year-old population), we need know how a region’s accession share compares with its share of the U.S. 18- to 24-year-old population. As is clear from figure 15, relative to its population of 18- to 24-year-olds, the South is still overrepresented in NPS accessions and the Northeast is underrepresented. Given the desire for geographic diversity in our military forces, the services need to be encouraged to try to increase, or at least maintain, representation from the Northeast.

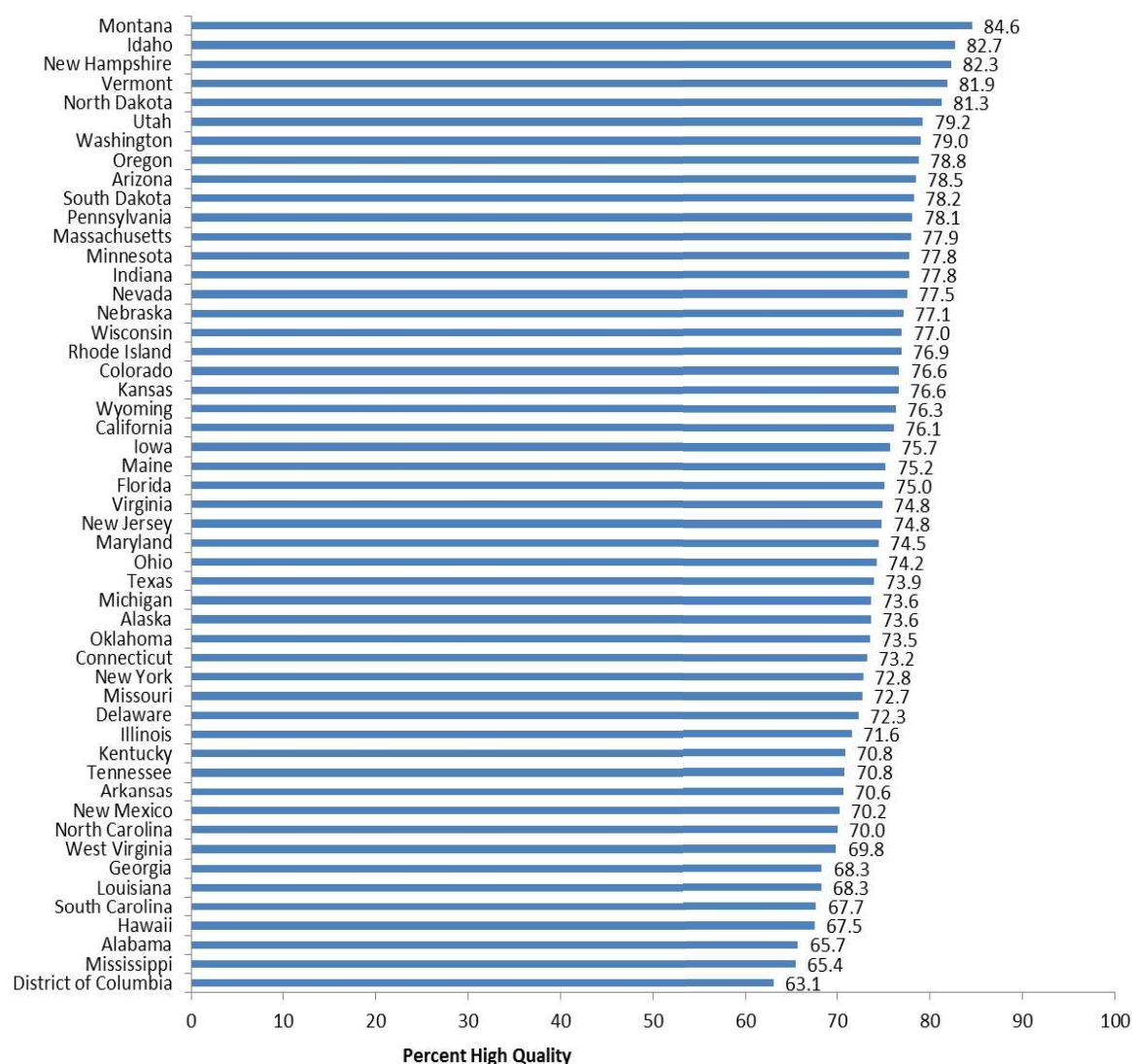
Figure 15: AC NPS enlisted accession-share to civilian-share ratios, by region, FY15



Note: The representation ratio is calculated by dividing each region’s FY15 NPS accession share by the region’s 18- to 24-year-old population share. Data are from appendix table B-46.

High-quality accessions are those with a Tier 1 education credential who score in the 50th percentile or above on the AFQT. In FY15, 73.7 percent of AC NPS accessions were high quality. The state percentiles for high-quality accessions are shown in figure 16.

Figure 16. Percentage of FY15 high-quality AC NPS enlisted accessions by state



Note: Data are from appendix table B-46.

AC NPS recruitable population concentrations and representation ratios: Overall, Black, Hispanic, and Asian 18- to 24-year-olds

It is interesting to examine the geographic diversity of the U.S. 18- to 24-year-old civilian population. Overall, 67 percent lives in 15 states (see table 3). A surprisingly large percentage (22 percent), however, lives in just 2 states, California and Texas. Hispanic and Asian populations are even more geographically concentrated, with 47 percent of Asian and 46 percent of Hispanic young people living in just 2 states.³⁵

³⁵ California and New York are home to 46 percent of the Asian 18- to 24-year-old population, while California and Texas are home to 47 percent of the Hispanic 18- to 24-year-old population.

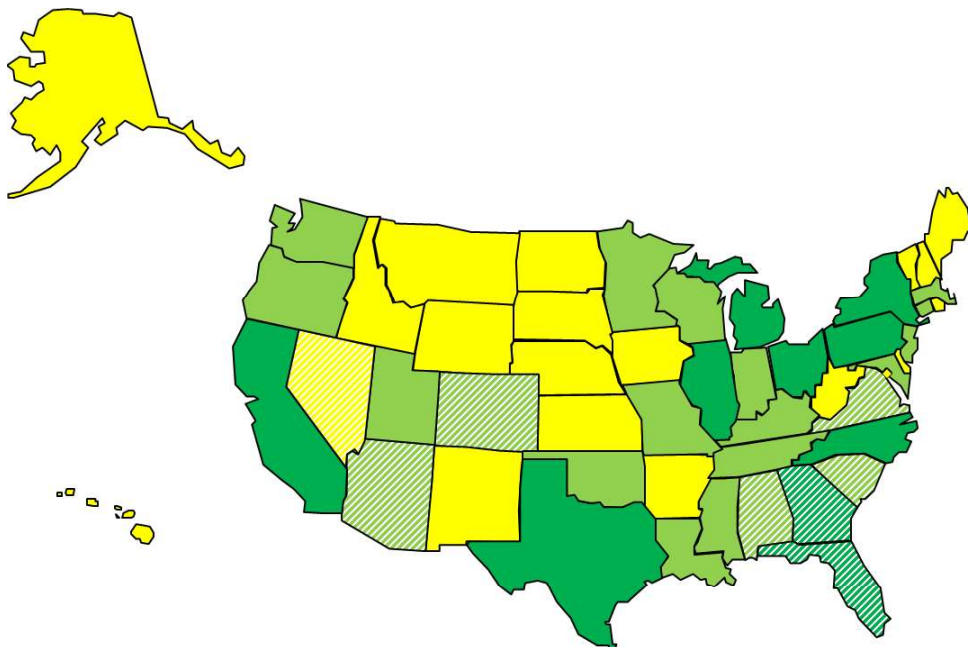
Table 3. Geographic diversity of the 18- to 24-year-old population

Population	Percentage of the 18- to 24-year-old population				
	In 2 states	In 3 states	In 5 states	In 10 states	In 15 states
All	22%	29%	38%	55%	67%
Black	16%	24%	37%	58%	76%
Hispanic	47%	54%	66%	76%	86%
Asian	46%	51%	56%	71%	82%

Figure 17 maps youth population density and NPS enlisted accessions. Dark-green states have the highest percentages of 18- to 24-year-olds (3 percent or more of the U.S. 18- to 24-year-old population, yellow states have less than 1 percent, and light-green states have 1 to 3 percent.) The eight states with the largest DOD representation ratios are shown by hatch marks; these states have accession shares that significantly exceed what might be expected by their civilian youth populations. They are:

- Georgia and Florida, with at least 3 percent of the 18- to 24-year-old population
- South Carolina, Virginia, Arizona, Colorado, and Alabama, with 1 to 3 percent of the 18- to 24-year-old population
- Nevada, with less than 1 percent of the 18- to 24-year-old population

Figure 17: AC NPS enlisted accession-share to civilian-share ratios, by state, FY15



Source: Table B-46.

Next, we will turn to a more detailed examination of these populations.

Overall concentration

Table 4 shows representation ratios and population percentages for the 10 states with 3 or more percent of the 18- to 24-year-old civilian population. States with representation ratios less than 1, indicating their underrepresentation in NPS accessions relative to their populations, are shown in red. Note that 5 of these 10 states are underrepresented in NPS accessions. However, even though they are underrepresented relative to their recruitable populations, these large states still represent substantial accession percentages. For example, accessions from California are underrepresented relative to their population share, but still over 9 percent of NPS accessions in each service come from California.³⁶

Table 4. The relationships between states' 18- to 24-year-old civilian populations and NPS accessions, FY15

State	Percentage of 18- to 24-year-old civilian population	Representation ratio				
		DOD	Army	Navy	Marine Corps	Air Force
States with largest proportions of 18- to 24-year-olds						
California	13.5%	0.87	0.89	0.90	0.88	0.74
Texas	9.0%	1.13	1.16	1.22	1.02	1.09
New York	6.6%	0.66	0.64	0.67	0.80	0.53
Florida	5.4%	1.47	1.59	1.50	1.19	1.46
Illinois	4.3%	0.81	0.67	0.90	0.99	0.82
Pennsylvania	4.1%	0.77	0.68	0.76	0.80	0.93
Ohio	3.4%	1.08	1.00	0.99	1.16	1.28
North Carolina	3.3%	1.16	1.38	1.04	1.04	1.00
Michigan	3.1%	0.86	0.75	0.82	1.04	0.97
Georgia	3.0%	1.52	1.75	1.56	1.28	1.21
States with large representation ratios and small populations						
Nevada	0.8%	1.26	1.28	1.28	1.16	1.33
Idaho	0.5%	1.12	0.87	1.46	0.91	1.47
Hawaii	0.5%	1.16	1.37	0.98	0.89	1.26
Alaska	0.3%	1.26	1.31	1.08	1.02	1.66
Maine	0.3%	1.23	1.09	1.34	1.25	1.37

Note: The representation ratio is the (percentage of accessions from state)/(percentage of U.S. 18- to 24-year-old civilians in state).

³⁶ The NPS accession percentage is the population percentage times the representation ratio. Thus, the NPS accession percentages from California are 12.0 percent for the Army, 12.2 percent for the Navy, 11.9 percent for the Marine Corps, and 10.0 percent for the Air Force.

Focusing on DOD's overall representation ratio, however, glosses over some interesting differences across the services. For example, the Air Force recruits proportionally more than the other services from Pennsylvania and Michigan, but less from New York.

Table 4 also illustrates states with small 18- to 24-year-old populations that are overrepresented in accessions. Interestingly, virtually all services recruit heavily from this same group of states: Nevada, Idaho, Hawaii, Alaska, and Maine.

Black concentration

We now take a closer look at the geographic location of the nation's 18- to 24-year-old black civilian population. There are 15 states with at least 3 percent of the black 18- to 24-year-old population; in the top portion of table 5, we focus on the 8 states with the largest percentages of this population. The bottom portion of the table shows states that have relatively small black populations but relatively large numbers of black accessions, given the states' sizes.³⁷

While New York has the largest share of the 18- to 24-year-old civilian black population, the Marine Corps is the only service with an accession share that fully reflects New York's black population; the Army, Navy, and Air Force have black accession shares that are substantially lower than New York's black youth population share. Florida, Texas, Georgia, and North Carolina are states with large black youth populations and, with the exception of the Marine Corps in Texas, states that are overrepresented in accessions.³⁸ In contrast, Illinois and Louisiana are states with relatively small numbers of black NPS accessions, given the states' large black populations.

Table 5: The relationships between states' black 18- to 24-year-old populations and NPS accessions, FY15

State	Percentage of 18- to 24-year-old civilian population	Representation ratio				
		DOD	Army	Navy	Marine Corps	Air Force
States with largest proportions of 18- to 24-year-old blacks						
New York	8.4%	0.67	0.59	0.79	1.06	0.43
Florida	7.9%	1.32	1.38	1.23	1.38	1.20
Texas	7.8%	1.18	1.10	1.45	0.87	1.24
Georgia	7.3%	1.70	1.87	1.56	1.54	1.51
California	5.8%	0.89	0.91	0.97	0.77	0.77
North Carolina	5.3%	1.26	1.43	1.14	1.07	1.03
Illinois	5.0%	0.66	0.46	1.01	0.66	0.72
Louisiana	4.2%	0.59	0.58	0.62	0.59	0.61

³⁷ We omit states with virtually no black population but large representation ratios (e.g., Maine & Alaska).

³⁸ For example, the Army's representation ratio in Florida is 1.38 and Florida has 7.87 percent of the black 18- to 24-year-old civilian population. That means that 10.9 percent of the Army's black accessions come from Florida ($1.38 * 7.87 = 10.9$).

State	Percentage of 18- to 24-year-old civilian population	Representation ratio				
		DOD	Army	Navy	Marine Corps	Air Force
States with large representation ratios and relatively small black populations						
Colorado	0.4%	1.84	1.24	1.89	2.80	3.04
Arizona	0.7%	1.36	1.48	1.04	1.03	1.76
Arkansas	0.8%	1.35	1.43	0.96	0.97	2.06
Washington	0.5%	1.34	1.35	1.38	0.91	1.57
Oklahoma	0.6%	1.23	1.39	0.70	0.58	2.09

Note: The representation ratio is the (percentage of black accessions from state)/(percentage of black U.S. 18- to 24-year-olds in state).

Asian concentrations

Table 6 shows the eight states with the largest populations of 18- to 24-year-old Asians. We find it surprising that, with the exception of all services in Hawaii, the Navy in California, and the Marine Corps in Georgia,, the services are recruiting proportionally fewer Asians from the states with the largest Asian populations. Instead, as the bottom panel of the table indicates, the services are disproportionately recruiting Asian NPS accessions from states with relatively few 18- to 24-year-old Asians.

Table 6: The relationships between states' Asian 18- to 24-year-old populations and NPS accessions, FY15

State	Percentage of 18- to 24-year-old civilian population	Representation ratio				
		DOD	Army	Navy	Marine Corps	Air Force
States with largest proportions of 18- to 24-year-old Asians						
California	34.0%	1.03	0.90	1.37	0.86	0.98
New York	11.7%	0.54	0.62	0.46	0.76	0.24
Texas	5.5%	1.21	1.29	0.87	1.07	1.61
New Jersey	4.4%	0.45	0.42	0.43	0.74	0.38
Illinois	4.2%	0.58	0.48	0.71	0.62	0.60
Massachusetts	3.0%	0.43	0.45	0.27	0.63	0.49
Hawaii	2.9%	2.09	2.7	1.17	2.35	1.53
Georgia	2.8%	0.60	0.58	0.43	1.06	0.59
States with large representation ratios and small Asian populations						
Utah	0.2%	3.21	3.79	1.82	1.60	4.98
South Carolina	0.2%	3.00	2.86	2.31	4.06	3.70
Missouri	0.2%	2.62	3.65	1.56	1.59	2.07
Alaska	0.3%	2.22	1.78	2.56	3.71	0.34
Arizona	0.7%	2.37	1.71	1.17	1.69	0.75

Note: The representation ratio is the (percentage of Asian accessions from state)/(percentage of Asian U.S. 18- to 24-year-olds in state).

Hispanic concentrations

Four of the eight states with the largest 18- to 24-year-old Hispanic populations were also states with the largest recruitable Asian populations: California, Texas, New York, and Illinois (see table 7). Although not as pronounced as for Asian accessions, Hispanic accessions also are underrepresented relative to their populations in states with the largest 18- to 24-year-old Hispanic populations. The exceptions are Texas and Florida. And, again similar to Asian accessions, Hispanic accessions from states with smaller proportions of Hispanic youth are overrepresented in NPS accessions.

Again, there are interesting differences by service, with the Marine Corps enlisting relatively more Hispanic recruits from Illinois and New Jersey, and the Army recruiting more Hispanic recruits from Arizona.

Table 7: The relationships between states' Hispanic 18- to 24-year-old populations and NPS Hispanic accessions, FY15

State	Percentage of 18- to 24-year-old civilian population	Representation ratio				
		DOD	Army	Navy	Marine Corps	Air Force
States with largest proportions of 18- to 24-year-old Hispanics						
California	28.9%	0.89	0.98	0.6	0.97	0.79
Texas	18.5%	1.15	1.17	1.34	1.04	1.13
Florida	7.1%	1.56	1.63	1.94	1.16	1.77
New York	6.6%	0.77	0.82	0.58	0.93	0.54
Arizona	4.9%	0.96	1.15	1.05	0.73	0.83
Illinois	3.8%	0.77	0.53	0.74	1.13	0.70
New Jersey	2.5%	1.05	0.98	0.94	1.29	0.85
Pennsylvania	1.9%	0.73	0.72	0.42	0.82	0.93
States with large representation ratios and small Hispanic populations						
Missouri	0.3%	1.38	1.17	1.74	1.47	1.34
Maryland	0.6%	1.36	1.16	1.93	1.33	1.3
Connecticut	0.8%	1.24	1.19	1.29	1.37	1.05
South Carolina	0.4%	1.24	1.36	1.00	1.02	1.65
Ohio	0.7%	1.22	0.91	1.64	1.20	1.56

Note: The representation ratio is the (percentage of Hispanic accessions from state)/(percentage of Hispanic U.S. 18- to 24-year-olds in state).

Summary: Geographic characteristics of AC NPS enlisted accessions

Southern states are overrepresented in AC NPS enlisted accessions, while states in the North are underrepresented. Still, AC NPS accessions are geographically diverse relative to the country's geographic diversity. At the state level, neither the recruitable

population of 18- to 24-year-olds nor the AC NPS enlisted accessions are evenly distributed. Relative to the size of its recruitable population, Georgia has the largest overall share of AC NPS enlisted recruits.

While 22 percent of the U.S. overall 18- to 24-year-old population lives in 2 of the 50 states (California and Texas), Asian and Hispanic young people are even more geographically concentrated with 46 percent of the 18- to 24-year-old Asian population living in California and New York and 47 percent of the 18- to 24-year-old Hispanic population living in California and Texas. Yet, as the tables in this section showed, the services have recruited NPS enlisted Asians and Hispanics from a wide variety of states, including those states with very small populations of these groups.

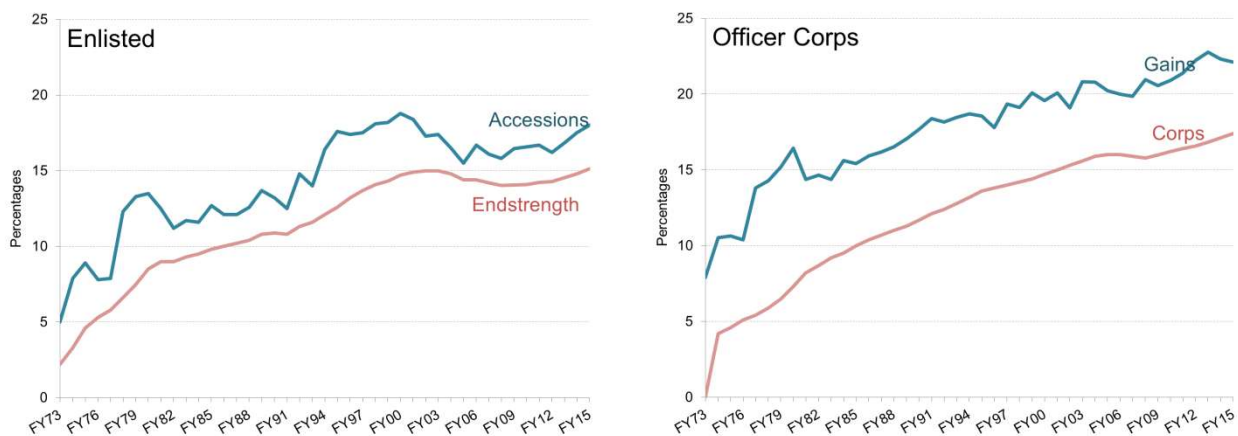
Section III: Diversity and Other Characteristics of the AC

In this section, we focus on gender, racial, and ethnic diversity in the AC. In addition, we analyze married rates, as well as paygrade and occupational distributions. Where possible, we compare the AC military with civilian benchmarks.

Female shares of AC personnel³⁹

Figure 18 shows the changes in the percentage of female enlisted NPS accessions and commissioned officer gains across DOD, as well as their respective strength percentages over the last 40+ years. At the onset of the AVF, women represented less than 10 percent of NPS enlisted accessions and less than 5 percent of enlisted strength. Female enlisted strength grew steadily through FY03, peaking at 15.0 percent of the enlisted force. However, even though the percentage of female NPS accessions has consistently been greater than strength, it is interesting to note that the percentage of women in the enlisted force was either flat or decreasing slightly until FY14; in FY15, it rose to an all-time high of 15.1 percent.

Figure 18. Female share, enlisted and officer, FY73–FY15



Note: Data are from appendix tables D-5, D-13, and D-19; enlisted accession data include only AC NPS accessions.

In FY15, female representation among enlisted accessions/commissioned officer gains were as follows:

³⁹ Secretary of Defense Ashton Carter announced in December 2015 that the DOD would lift all gender-based restrictions on military service starting in January 2016. This historic change cleared the way for women to serve alongside men in combat arms and special forces units.

- Army – 17.0 percent enlisted and 21.6 percent officer
- Navy – 25.1 percent enlisted and 23.0 percent officer
- Marine Corps – 9.5 percent enlisted and 9.2 percent officer
- Air Force – 20.6 percent enlisted and 26.7 percent officer

Female representation in the commissioned officer corps has increased steadily since FY74, reaching 17.7 percent in FY15. The Air Force leads the other services in both female officer and enlisted representation, but the Army and Navy are not far behind.

In FY15, female representation in the AC force was as follows:

- Army – 13.6 percent enlisted and 18.2 percent commissioned officer
- Navy – 18.5 percent enlisted and 17.7 percent commissioned officer
- Marine Corps – 7.8 percent enlisted and 7.2 percent commissioned officer
- Air Force – 18.8 percent enlisted and 20.3 percent commissioned officer

The Marine Corps has the smallest percentages of women in both the enlisted force and the commissioned officer corps. In the Navy, Marine Corps, and Air Force, the percentage of female commissioned officers is similar to the percentage of enlisted women. In the Army, however, the percentage of female commissioned officers (18.2 percent) is considerably higher than the percentage of female enlisted (13.6 percent).⁴⁰

Racial and ethnic diversity in NPS enlisted accessions

Before FY03, self-identified race and ethnicity were reported in combined categories (e.g., non-Hispanic white or non-Hispanic black). Since FY03, race and ethnicity have been officially reported separately. Although Hispanic accessions can be of any race, the vast majority self-identify as white.

Black accessions over time

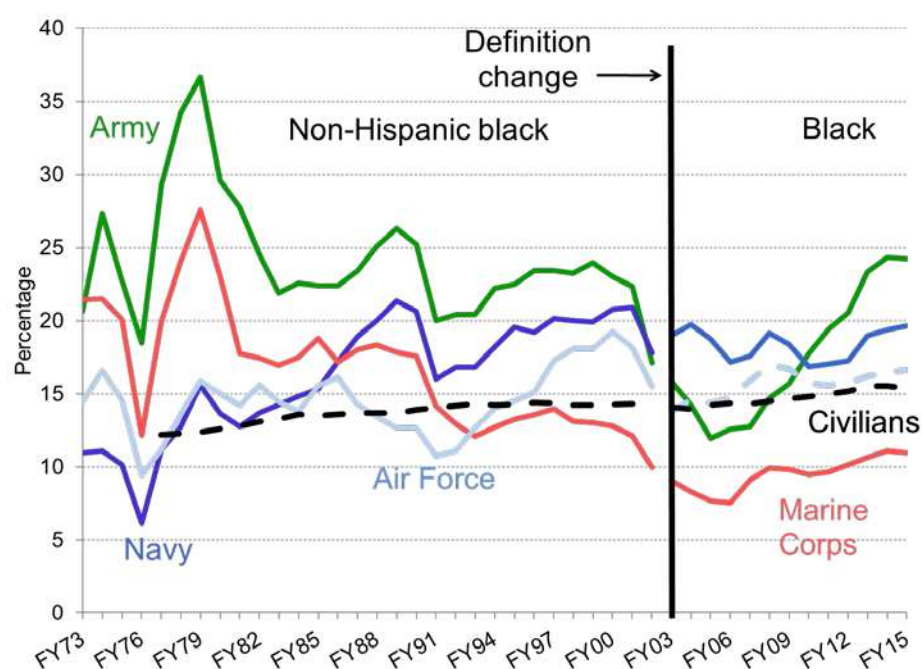
In the early years of the AVF and until the first Gulf War, the percentage of non-Hispanic blacks was considerably larger among DOD accessions than in the comparably aged civilian population. There was a decline in non-Hispanic black accessions after the first Gulf War in 1990 and again in the mid-2000s, but the percentage of black accessions has since increased. Blacks now account for 19.2 percent

⁴⁰ This difference has widened in the last decade. In FY02, women made up 15.5 percent of the Army's enlisted force and 16.0 percent of the officer corps. While female representation in the Army's commissioned officer corps has increased slowly, female representation in the Army's enlisted force has fallen.

of AC NPS enlisted accessions – a greater percentage than in the 18- to 24-year-old civilian population (15.4 percent).

There are substantial differences *by service* in the percentage of non-Hispanic black enlisted accessions; this was particularly true in the early years of the AVF (see figure 19). At the start of the AVF, percentages in the Army and the Marine Corps considerably exceeded civilian percentages. In the mid-1980s, however, percentages in the Navy began to rise, while they began to fall in the Marine Corps and the Air Force. In FY15, in all services except the Marine Corps, the percentage of black enlisted accessions significantly exceeded comparable civilian percentages, with the Army having the highest percentage and the Marine Corps having the lowest percentage. In the Army, the black accessions represent nearly 25 percent of accessions.

Figure 19. Percentages of black AC NPS enlisted accessions, by service, FY73–FY15



Note: Data for FY74-FY02 for NPS non-Hispanic black accessions and 18- to 24-year-old non-Hispanic black civilians are from appendix table D-23. Data for FY03-FY14 NPS black accessions and 18- to 24-year-old black civilians are from appendix table D-26.

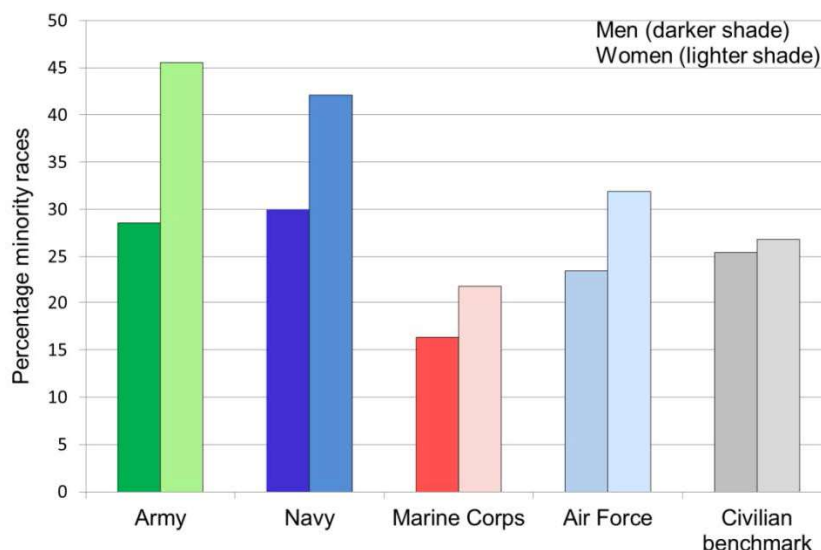
Racial diversity in FY15

Since 1997, the Office of Management and Budget (OMB) has required that federal agencies use a minimum of five racial categories (white, black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) when categorizing a person's race. DOD uses these five self-identified racial categories – separately and in combination – as codes to characterize recruits' racial

backgrounds. Those in the last four racial categories (or those choosing more than one racial category) can be termed racially diverse. We focus on racial diversity, rather than each of the separate racial groups. Asians are the fastest growing racial group in the United States, but they are still too small a percentage in the military to analyze separately.

Recruits from racially diverse backgrounds constituted 27.6 percent of DOD AC NPS accessions in FY15.⁴¹ In comparison, racially diverse people represented 26.1 percent of the civilian benchmark population—the 18- to 24-year-old civilian non-institutional population. Thus, AC NPS accessions were only slightly more racially diverse than the benchmark population. DOD’s overall statistic, however, hides interesting differences by service and gender. The Army and the Navy are the most racially diverse, while the Marine Corps is the least racially diverse. As shown in figure 20, however, in every service, male accessions (represented by the darkly shaded left bar for each service) are less racially diverse than female accessions (represented by the lightly shaded right bar for each service).

Figure 20. FY 15 AC NPS racially diverse accessions: Percentages of minority races, by gender, service, and civilian benchmark



Source: Table B-10. The civilian benchmark is the 18- to 24-year-old population. Those of unknown race are distributed as knowns.

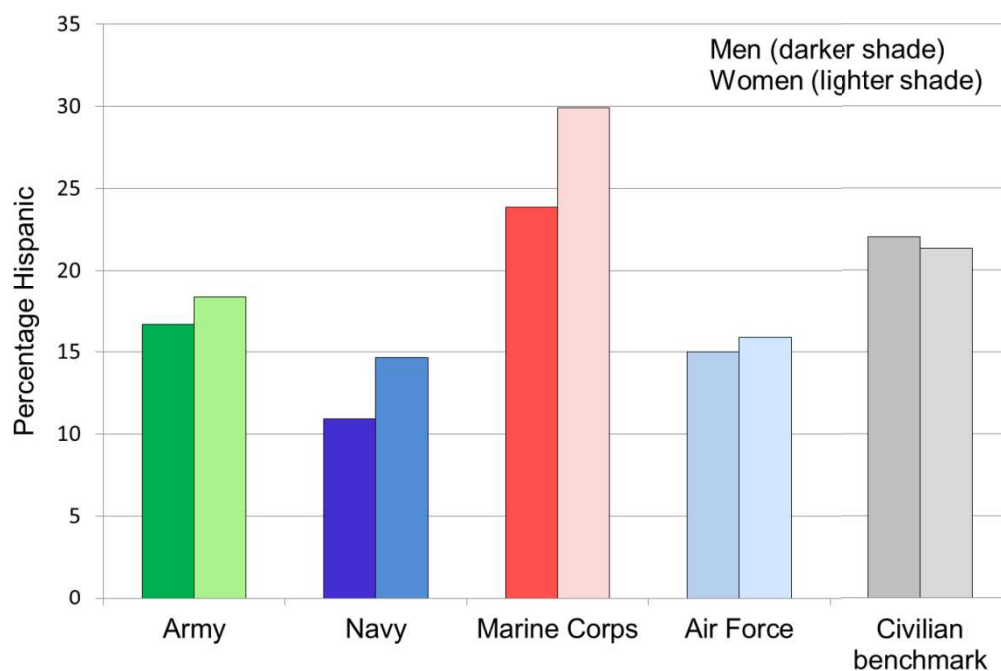
⁴¹ To explore diversity in the enlisted force, we needed to adjust for the small number of those of unknown race. We assume that the distribution of recruits with unknown race followed their service’s racial distribution. In the Army, Marine Corps, and Air Force, less than 1 percent of AC NPS accessions have an unknown racial background (2.7 percent in the Navy). The percentage of enlisted recruits selecting two or more races is highest in the Navy (5.3 percent).

For example, racially diverse women represented 45.6 percent of female Army accessions in FY15, while racially diverse men represented 28.5 percent of male Army accessions. These service findings are in contrast to the civilian benchmark, which shows only small gender differences (26.8 percent female and 25.4 percent male).

Ethnic diversity in FY15

OMB requires federal agencies to use two ethnic categories: (1) Hispanic or Latino and (2) Not Hispanic or Latino. Since ethnicity and race are separate Census fields, a single person can be defined as a minority in both fields. Realizing that there is some overlap, it is still interesting to examine gender differences in the ethnic identifications for AC NPS accessions in each service. Although we observe that the percentage of Hispanics represents a larger proportion of female accessions than male accessions in each service, the differences – except in the Marine Corps – are not large (see figure 21).

Figure 21. FY15 AC NPS accessions: Percentages of Hispanics by gender, service, and civilian benchmark

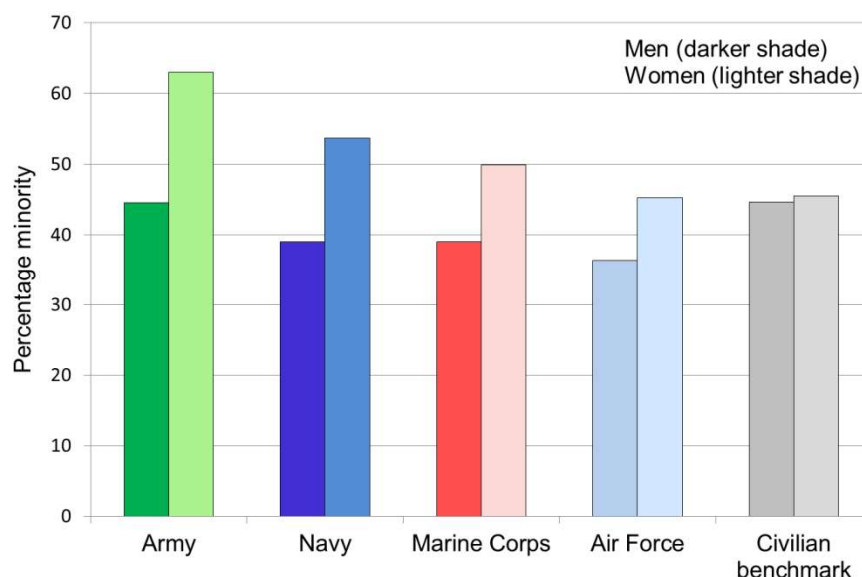


Source: Table B-10. The civilian benchmark is the 18- to 24-year-old population. Those of unknown ethnicity are distributed as knowns.

Racial and ethnic minorities in FY15

As suggested earlier, a Hispanic black male is both a racial and an ethnic minority. In FY15, the overlap between the racial and ethnic minority categories for NPS AC accessions was 8 percent, with about half of the overlap being black recruits who also identify as being Hispanic. However, we can calculate what percentage of FY15 AC NPS military accessions were minority (whether a Hispanic minority, a racial minority, or a Hispanic and racial minority) without double-counting. This is the context in which the term is often used in the popular press. We show this in figure 22.⁴²

Figure 22. FY15 AC NPS accessions: Percentages of Hispanics or racial minorities by gender, service, and civilian benchmark



Source: Table B-10. The civilian benchmark is the 18- to 24-year-old population. Those of unknown race or ethnicity are distributed as knowns.

It is interesting to examine gender representation in the 18- to 24-year-old population (the civilian benchmark) for these different definitions of diversity. While the civilian benchmark for racial diversity in figure 20 showed a slightly higher percentage of minority women than men, the same benchmark for ethnic diversity in figure 21 showed a slightly higher percentage of minority men than women. However, the civilian benchmark for our definition of minority representation for AC NPS accessions that includes both racial and ethnic diversity is about 45 percent for both men and women (see figure 22).

⁴² See table B-10. We summed the number of racial minorities and added the number of white Hispanics to that total. As explained earlier, we assumed that missing data are distributed similarly to known data.

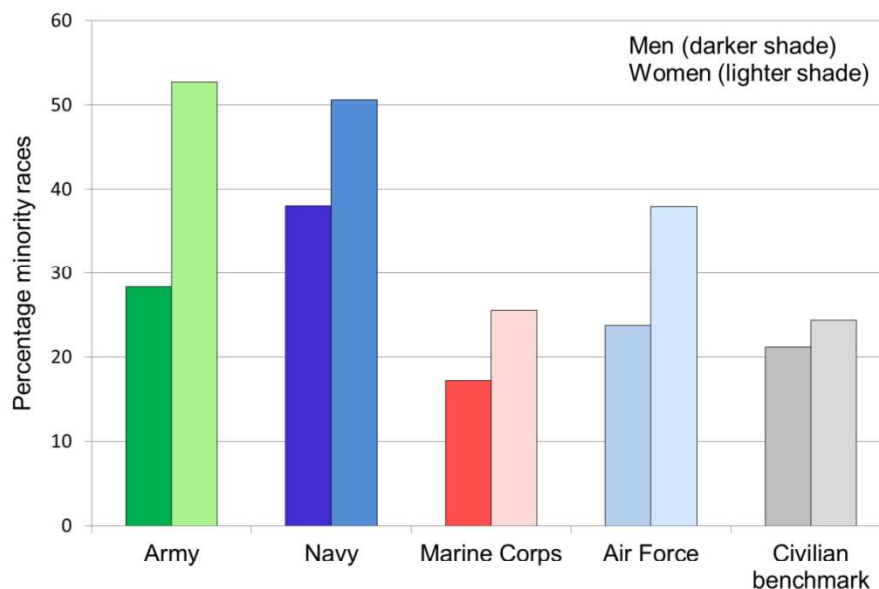
The percentage of minority AC NPS accessions is higher for women than men in all services. For DOD as a whole, 41 percent of male NPS AC accessions and 55 percent of female AC NPS accessions are either Hispanic or from racial minorities. Thus, for racial and ethnic diversity, male NPS accessions are less diverse than the civilian population and female NPS accessions are more diverse. This finding is due entirely to the racial diversity of female military accessions. Both male and female AC NPS accessions are less likely to be Hispanic than those in the civilian benchmark population.

Racial and ethnic diversity in the enlisted force

Racial diversity in FY15

Racial minorities make up 21.2 percent of the civilian benchmark population but 30.5 percent of DOD's FY15 enlisted forces.⁴³ There are gender differences in the racial representation in the civilian labor force, with 21.2 percent of men and 24.3 percent of women categorized as racial minorities. Figure 23 shows these percentages by service.

Figure 23. FY15 AC enlisted: Percentages of minority races, by gender and civilian benchmark



Source: Table B-17. The civilian benchmark is the 18- to 44-year-old civilian labor force. Those of unknown race are distributed as knowns.

⁴³ As before, we assume that the distribution of servicemembers with unknown race follows their service's racial distribution, and we assign those selecting two or more racial groups to the minority category. Such servicemembers represent merely 3 to 4 percent of enlisted endstrength in each service. Only the Navy has substantial percentages (10 percent) of enlisted who select two or more races.

Gender differences in the civilian labor market are small, however, relative to racial differences in representation in the AC enlisted force. In each service, the percentage of female racial minorities is larger than the percentage of male racial minorities. This is especially true in the Army, where the percentage of enlisted racial minority women is almost double the percentage of enlisted racial minority men. The overrepresentation of racial minority women in the enlisted force is related to their higher representation in AC NPS accessions discussed earlier, as well as higher minority female retention rates. In any case, these high minority female representation rates illustrate that minority women have found jobs in the military that they like and in which they can succeed. In summary, women in the AC enlisted force are considerably more racially diverse than their male counterparts.

Ethnic diversity in FY15

Servicewomen were considerably more likely to be racial minorities than servicemen, and the same pattern holds for Hispanic representation, though gender differences are smaller than those for racial minorities. However, the civilian benchmark for the enlisted force – the 18- to 44-year-old labor force – shows the opposite pattern: Hispanic men are a larger proportion of the male civilian benchmark population than Hispanic women are of the female civilian benchmark population. Assuming that any missing ethnic observations follow each service’s overall distribution, we find that Hispanics make up the following percentages of the DOD enlisted and civilian labor forces:

- 13.7 percent of male enlisted force versus 20.2 percent of civilian labor force
- 15.2 percent of female enlisted force versus 16.7 percent of civilian labor force

The Marine Corps has the highest Hispanic representation; Hispanics constitute 19.1 percent of the male enlisted force and 27.1 percent of the female enlisted force. Thus, relative to the civilian benchmark, Hispanic women are overrepresented in the Marine Corps’ enlisted force. Overall, however, Hispanics are underrepresented in the AC enlisted force, just as they were in FY15 NPS enlisted accessions.

Racial and ethnic diversity in commissioned officer gains

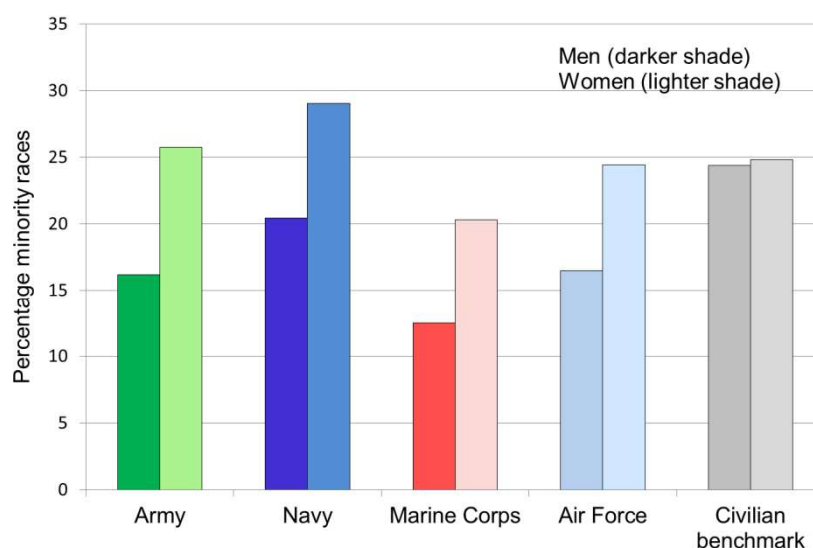
Racial diversity in FY15

The civilian benchmark for AC commissioned officer gains is the 18- to 39-year-old college graduate population, in which 24.4 percent of men and 24.8 percent of women are racial minorities.⁴⁴ Although women in the civilian population are slightly more likely than men to be racial minorities, female commissioned officer gains in each of the

⁴⁴ Women in these age groups are slightly more likely than men to be college graduates.

services are much more likely to be racial minorities (see figure 24).⁴⁵ And, although racial minorities are somewhat underrepresented in commissioned officer gains, this underrepresentation is entirely due to the minority underrepresentation of men. In fact, female commissioned officer gains in the Navy are overrepresented in terms of their minority racial distribution relative to the civilian benchmark.

Figure 24. FY15 AC commissioned officer gains: Percentages of minority races, by gender, service, and civilian benchmark



Source: Table B-25. The civilian benchmark is the 21- to 39-year-old college graduate population. Those of unknown race are distributed as knowns.

Ethnic diversity in FY15

Following the patterns that we found in the enlisted force, female commissioned officer gains are more likely to be Hispanic than are male commissioned officer gains, though the gender differences are generally smaller than those for racial minorities. The Hispanic percentages for FY15 AC commissioned officer gains follow:

- 6.1 percent of DOD's male commissioned officer gains versus 9.5 percent of the civilian labor force
- 6.7 percent of DOD's female commissioned officer gains versus 9.6 percent of the civilian labor force

⁴⁵ We use the same methodology for commissioned officers that we used for enlisted personnel. We assume any missing information for a service is distributed in the same way as the non-missing information, and we treat those who selected two or more racial categories as racial minorities. For both men and women, the largest racial minority in the college-educated benchmark population is Asians.

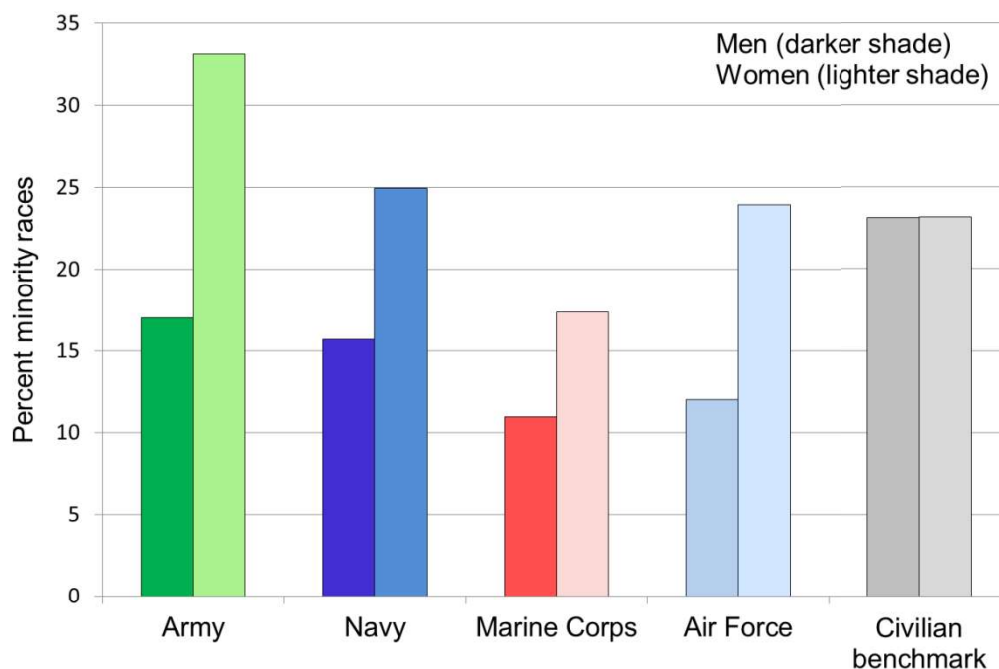
Racial and ethnic diversity in commissioned officer corps

Racial diversity in FY15

Figure 25 shows the racial minority percentages for AC commissioned officers in each of the services. The civilian benchmark, the 21- to 49-year-old college graduate civilian labor force, has a slightly larger proportion of racially diverse women than men. These differences in the civilian labor force, however, are tiny relative to the racial minority gender differences for commissioned officers in each of the four services. In the Army, male racially diverse commissioned officers represent 17.0 percent of the men in the officer corps, whereas female racially diverse commissioned officers represent 33.1 percent of the women in the officer corps.

Minority male college graduates are underrepresented in all four services relative to their representation in the civilian labor market. In contrast, female minority college graduates are overrepresented in the Army and well represented in the Navy and Air Force relative to their representation in the civilian labor force.

Figure 25. FY15 AC commissioned officer corps: Percentages of minority races, by gender, service, and civilian benchmark

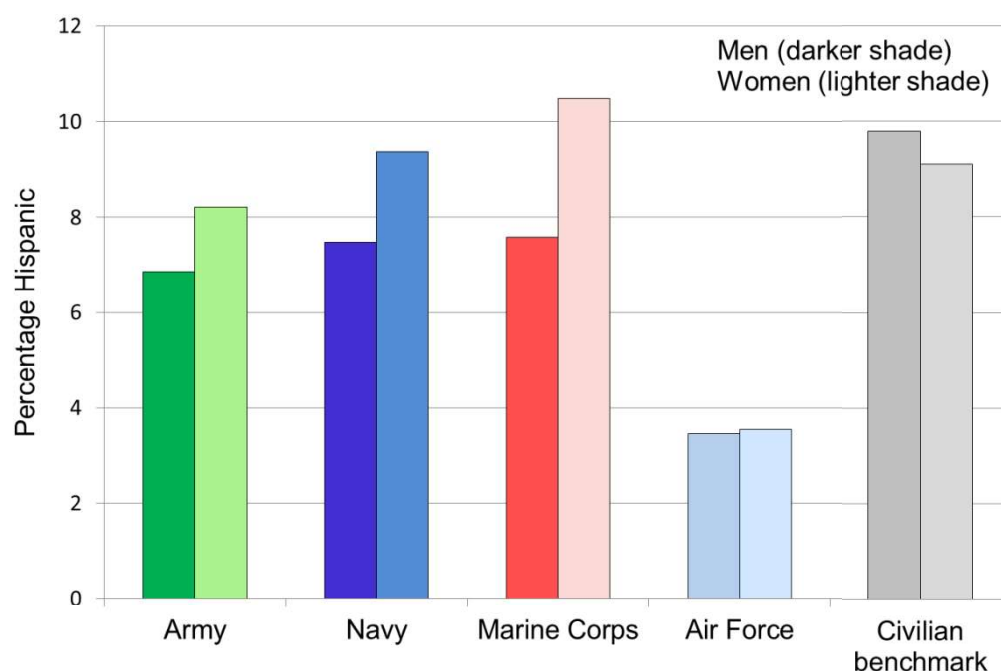


Source: Table B-25. The civilian benchmark is the 21- to 49-year-old college graduate labor force. Those of unknown race are distributed as knowns.

Ethnic diversity in FY15

Figure 26 shows Hispanic representation in the commissioned officer corps for each service. The patterns are somewhat different from those found for commissioned officers who are racial minorities. That is, Hispanic women in the Marine Corps are overrepresented relative to the civilian benchmark, the 21- to 49-year-old college graduate labor force. In contrast, Hispanic men in all services are underrepresented relative to the civilian benchmark.

Figure 26. FY15 AC commissioned officer corps: Percentages of Hispanics, by gender, service, and civilian benchmark



Source: Table B-25. The civilian benchmark is the 21- to 49-year-old college graduate labor force. Those of unknown race are distributed as knowns.

Marital patterns

Servicemembers by age and gender

There are some interesting differences in married rates by age for enlisted personnel versus commissioned officers. Reasons for these differences stem from the following:

- Both officers and enlisted personnel are predominately single when they enter military service.

- Officers are generally older when they enter the military because a college degree is required.
- Married percentages increase sharply with age.

Thus, comparing married rates by age for 25-, 30-, and 35-year-old servicemen, we find:

- 52, 75, and 84 percent of enlisted men are married.
- 33, 70, and 87 percent of male commissioned officers are married.

In short, until their mid-thirties, AC male enlisted personnel are more likely to be married than AC male commissioned officers. The percentages for AC women follow similar patterns, particularly regarding the larger percentages of enlisted women than commissioned officers married by age 25.

Gender comparisons with civilian married rates

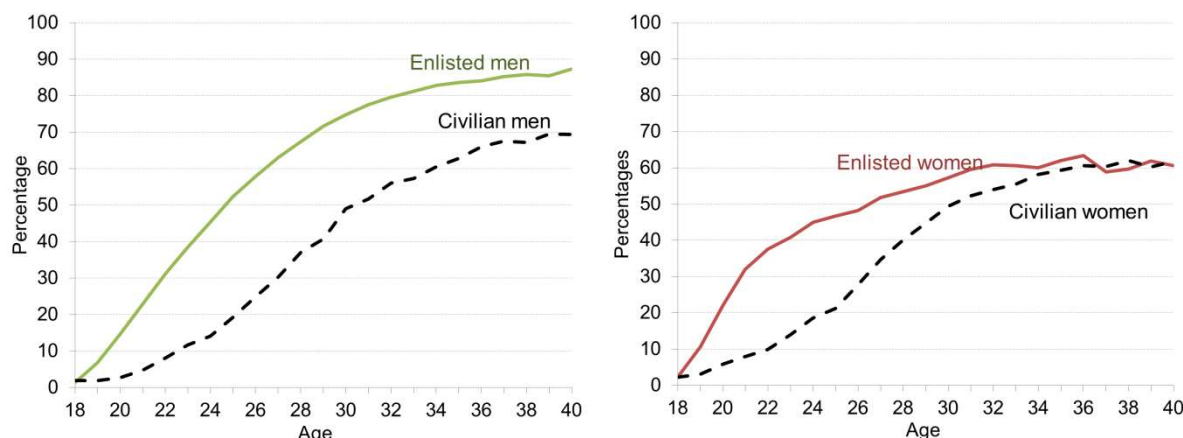
In FY15, 7.0 percent of male AC NPS accessions and 9.8 percent of female AC NPS accessions were married when they entered service. Given the age distribution of NPS accessions and married rates in the benchmark civilian labor force, NPS accessions are only slightly more likely to be married than their civilian counterparts.⁴⁶

During the course of their military careers, however, enlisted servicemembers marry and very quickly are more likely to be married than are their civilian counterparts.⁴⁷ Figure 27 shows male and female married rates for enlisted servicemembers, and figure 28 shows the same information for commissioned officers. Men in the AC force are more likely to be married than their civilian counterparts. These differences often exceed 20 percentage points, particularly in the enlisted force. The patterns for AC women are more complicated but, until about age 30, AC enlisted women are more likely to be married than women in the civilian labor force. For commissioned officers and for enlisted women over the age of 30, married rates for AC women and their civilian counterparts are similar.

⁴⁶ Using table B-2, we calculate what the married rate of accessions would have been if they had entered the military with the marital patterns of the civilian labor force. In short, we take the distribution of AC NPS accessions by age and, using that age distribution, calculate what the civilian married rate would be. (We ignore PS accessions since they are such a small proportion of accessions.)

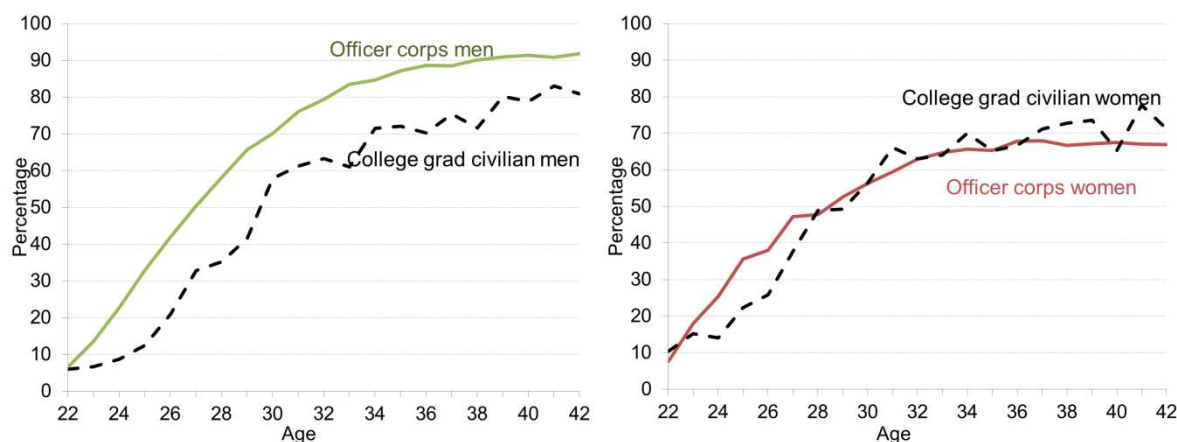
⁴⁷ One theory is that military benefits incentivize marriage; another is that those who value marriage are more likely to join the military.

Figure 27. FY15 married rates of AC enlisted personnel and civilian comparison groups, by gender and age



Source: Table B-16. Civilian comparison group is the civilian labor force.

Figure 28. FY15 married rates of AC commissioned officers and civilian comparison groups, by gender and age



Source: Table B-24. Civilian comparison group is the civilian college-educated labor force.

Gender and race/ethnicity comparisons with civilian married rates

As shown earlier, AC enlisted men are much more likely to be married than their civilian counterparts. Indeed, by age 25, the married rate for AC enlisted men is 52.4 percent, while the married rate for men in the civilian labor force is 21.2 percent. Next, we examine married rates by gender and race/ethnicity for those in the military and those in the civilian labor market. Probably the easiest way to look at this is by single years of age at two points — age 25 and age 35.

The married rates for 25-year-old men follow:

- In the AC enlisted force – 56.8 percent for Hispanics, 54.2 percent for whites, and 50.0 percent for blacks
- In the civilian labor force – 22.4 percent for Hispanics, 21.0 percent for whites, and 11.1 percent for blacks

The married rates for 35-year-old men follow:

- In the AC enlisted force – 86.2 percent for Hispanics, 85.1 percent for whites, and 78.3 percent for blacks
- In the civilian labor force – 63.2 percent for Hispanics, 65.0 percent for whites, and 47.9 percent for blacks

The married rates for AC enlisted women follow the same basic patterns; black enlisted women are less likely to marry than white or Hispanic enlisted women. And, while the married rates for white and Hispanic women in the civilian labor market are similar, married rates for black women in the civilian labor market are much lower.

The married rates for 25-year-old women follow:

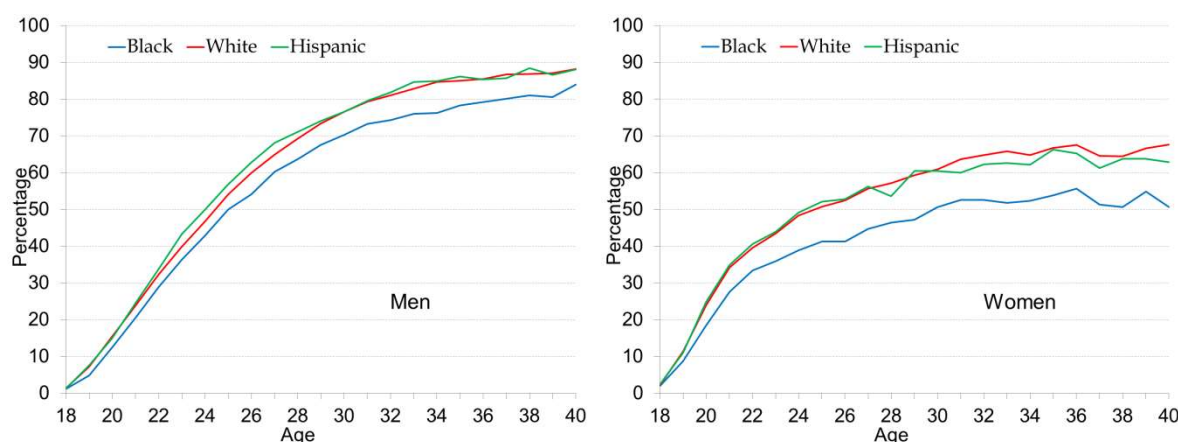
- In the AC enlisted force – 52.1 percent for Hispanics, 50.8 percent for whites, and 41.3 percent for blacks
- In the civilian labor force – 22.5 percent for Hispanics, 23.9 percent for whites, and 10.7 percent for blacks

The married rates for 35-year-old women follow:

- In the AC enlisted force – 66.3 percent for Hispanics, 66.8 percent for whites, and 53.9 percent for blacks
- In the civilian labor force – 54.7 percent for Hispanics, 63.9 percent for whites, and 34.3 percent for blacks

In summary, compared to AC enlisted men, civilian men marry later, are less likely to be married, and exhibit larger racial differences in marriage rates. The results for women show similar married rate differences. Black men and women in the civilian labor market are much less likely to be married than their civilian peers; in the military, the married rates among blacks are closer to the rates for other personnel of the same gender and age. Figure 29 shows married rates by age for AC enlisted men and women.

Figure 29. FY15 AC enlisted married rates, by gender and racial/ ethnic background



Source: Table B-16. Married rates were not calculated for non-black races.

Paygrade distributions of women and racial/ethnic minorities

We use two methods to evaluate representation: by comparison with the civilian workforce and by grade representation relative to overall representation in the military. Table 8 illustrates the FY15 paygrade distribution for women, racial minorities, and Hispanics. Since there is no lateral entry into military service, these paygrade distributions reflect both current and past accession and retention patterns. Relative to the civilian workforce benchmark of 46.7 percent female, women in the military are very underrepresented in all military grades. Relative to the 15.1 overall percentage for women in the enlisted force, however, women are underrepresented in senior grades (E7+), slightly underrepresented in the mid-level grades (E5-E6), and slightly overrepresented in the junior grades (E1-E4).

For racial minorities, the picture is reversed. Relative to their civilian labor market benchmark of 22.7 percent, racial minorities are overrepresented in all military grades. However, relative to their overall participation in the military at 30.5 percent, racial minorities are underrepresented in the junior grades and overrepresented in the mid-level and senior grades. These minority paygrade distributions reflect the fact that recent racial minority accession percentages, particularly for black accessions, have been lower than those historically.

For Hispanics, junior and mid-level grades are overrepresented and senior grades are underrepresented relative to their overall military representation of just under 14 percent in the military. At all grades, however, enlisted Hispanics are underrepresented in the military relative to their civilian labor market percentage of 18.5 percent.

Table 8. Percentage of AC enlisted personnel by paygrade, gender, race, and ethnicity

	E1-E4	E5-E6	E7+	Overall (E1-E9)	Civilian benchmark
Women	16.1	14.6	12.4	15.1	46.7
Racial minorities	29.5	31.7	31.9	30.5	22.7
Hispanics	14.1	14.1	12.7	13.9	18.5

Note: The civilian benchmark is the 18- to 44-year-old civilian labor force. Source: Tables B-17 and B-37.

To calculate minority percentages, we assume that those of unknown race and Hispanic background are distributed the same way as those of known backgrounds.

For commissioned officers' representation within the force, the patterns are more regular, as the percentage of women, the percentage of racial minorities, and the percentage of Hispanics fall as paygrade increases. All three groups shown in table 9 are overrepresented in the junior grades (O1-O3) and underrepresented in the mid-level (O4-O6) and senior (O7+) grades relative to their overall percentage of commissioned officers (6.3 percent). However, relative to their civilian benchmark of labor force percentages for college graduates ages 21 to 49, all three groups are underrepresented in the commissioned officer corps.

It is not clear which is the "correct" metric for comparison. Is it their percentage in particular grades rather than their overall representation in the force? Or, is it their representation in the force relative to their representation in the civilian labor market? Both metrics, however, are needed if one is to understand both how representation varies by grade and how it varies across the military and civilian sectors of the economy.

Table 9. Percentage of AC commissioned officers by paygrade, gender, race, and ethnicity

	O1-O3	O4-O6	O7+	O1-O10	Civilian benchmark
Women	19.8	14.6	6.5	17.7	51.8
Racial minorities	17.8	15.6	10.5	16.9	23.1
Hispanics	6.8	5.7	1.5	6.3	9.4

Note: The civilian benchmark is the 21- to 49-year-old college graduate labor force. Source: Tables B-25 and B-39. To calculate minority percentages, we assume that those of unknown race and ethnicity are distributed the same way as those of known backgrounds.

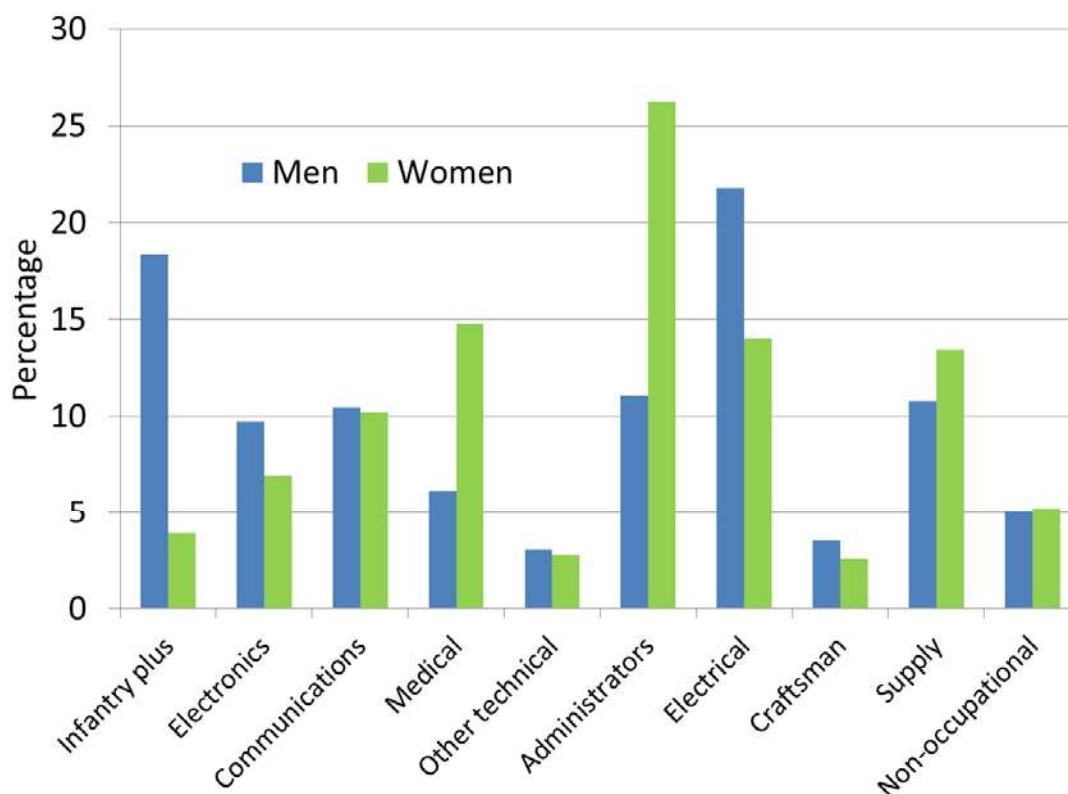
Occupational differences in the enlisted force

By gender

Gender differences in the occupational distribution of the enlisted force are well known. Women are overrepresented in administrative and medical occupations, whereas men are overrepresented in warfighting and engineering occupations, which include infantry, gun crews, seamanship, and electrical occupations. The lack of women in warfighting occupations is due both to people's preferences and restrictions on women

in service in some of these occupations. Since all occupational restrictions for women were lifted as of January 2016, it will be interesting to see how these occupational distributions change in future years. Figure 30 shows the enlisted force occupational distribution by gender in FY15.

Figure 30. FY15 occupational distribution of the AC enlisted force, by gender



Source: Table B-20. Infantry plus includes infantry, gun crews, and seamanship occupations. Although women are not currently in the infantry, they do serve in gun, air crew, and seamanship occupations.

By race

Although most occupational analyses of the enlisted force have focused on gender differences, there also are large racial differences. To further explore these differences, we divided the enlisted force into two categories (white and racial minorities), both because some racial groups are very small and because we wanted to illustrate broad differences.⁴⁸ In table 10, we highlight the largest differences in gray. For men, the largest differences are in two occupational areas:

⁴⁸ The racially diverse category is dominated by blacks.

- Administrative occupations (8.4 percent of white men and 17.2 percent of racially diverse men)
- Infantry, gun crew, and seamanship occupations (21.3 percent of white men and only 12.6 percent of racially diverse men)

Table 10. Occupational distribution of the enlisted force, by gender and race, FY15

Occupational group	White men	Racially diverse men	White women	Racially diverse women
Electronics	9.7%	9.7%	7.3%	6.7%
Medical	5.1%	7.7%	16.5%	13.5%
Electrical	22.1%	21.3%	14.1%	13.9%
Craftsmen	3.5%	3.6%	2.4%	2.6%
Supply	9.8%	12.2%	13.2%	13.6%
Communications	11.7%	8.8%	13.8%	7.8%
Other technical	3.6%	2.3%	3.7%	2.1%
Administrative	8.1%	15.4%	18.4%	31.6%
Infantry, Gun Crews, and Seamanship*	21.1%	14.6%	4.1%	3.7%
Nonoccupational**	5.3%	4.5%	6.4%	4.4%
Total	100%	100%	100%	100%

Source: Table B-20. Notes: *The largest differences are highlighted in the table. Although women do not currently serve in infantry positions, they do serve on gun crews, air crews, and in seamanship specialties, which are part of this occupational group. **Nonoccupational includes students, patients, those with unassigned duties, and unknowns.

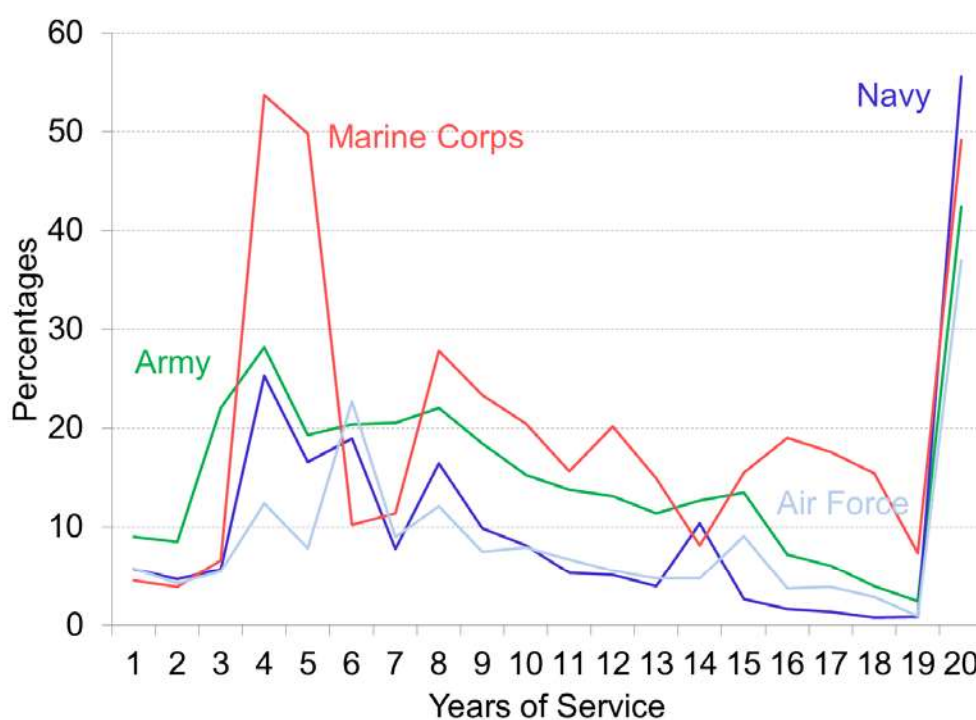
There are smaller differences between white men and racially diverse men in medical (5.1 percent versus 7.7 percent), supply (9.8 percent versus 12.2 percent), and communications (11.7 percent versus 8.8 percent). Over a third of racially diverse women in the enlisted force are in administrative occupations compared with less than 20 percent of white women. In general, white women are more evenly spread across occupations than are racially diverse women; the only occupational field for which the difference is at least 5 percentage points is communications (13.8 percent of white women and 7.8 percent of racially diverse women).

AC enlisted separation and continuation rate patterns, by service

Next, we turn to a discussion of enlisted separation and continuation rate patterns for the AC enlisted force. Monitoring separation and continuation rate patterns is critical if the services are to meet their force management objectives — force profiles by years of service, promotion timing targets, and first-term/career force mix. Recent changes to the military retirement system can be expected to change both separation and continuation behavior.

Enlisted separation and continuation rates in the first 10 years of service vary by service for at least two reasons. First, the distribution of first-term obligation length varies by service and separation rates are highest when first-term contractual obligations end. Second the services differ in their desired length of service force profiles. For example, the Air Force uses only 4- or 6-year enlistment contracts, so we see a spike in separations at 4 and 6 years of service, but a reduction in separations at 5 years. In contrast, the Navy, Marine Corps, and Army use 4-, 5-, and 6-year contracts and, thus, do not show a reduction in separations at 5 years of service.⁴⁹ Overall the Marine Corps desires a smaller career force and thus separates proportionally more members at the end of the first enlistment (see figure 31).

Figure 31. Average AC enlisted separation rates by service, FY15



Note: Data are from appendix table B-40. Yearly separation rates are defined as (1 - continuation rate), where continuation rates are those found in table B-40. Note that separation rates can be affected by various force-shaping actions, including selected early retirement boards.

After the first contract ends, continuing servicemembers are either on an extension or another contract.⁵⁰ Military retirement eligibility starts at 20 years of service; those who leave before 20 years of service have no retirement provisions.⁵¹ The phenomenon of

⁴⁹ The Army also offers a small number of 2- and 3-year contracts.

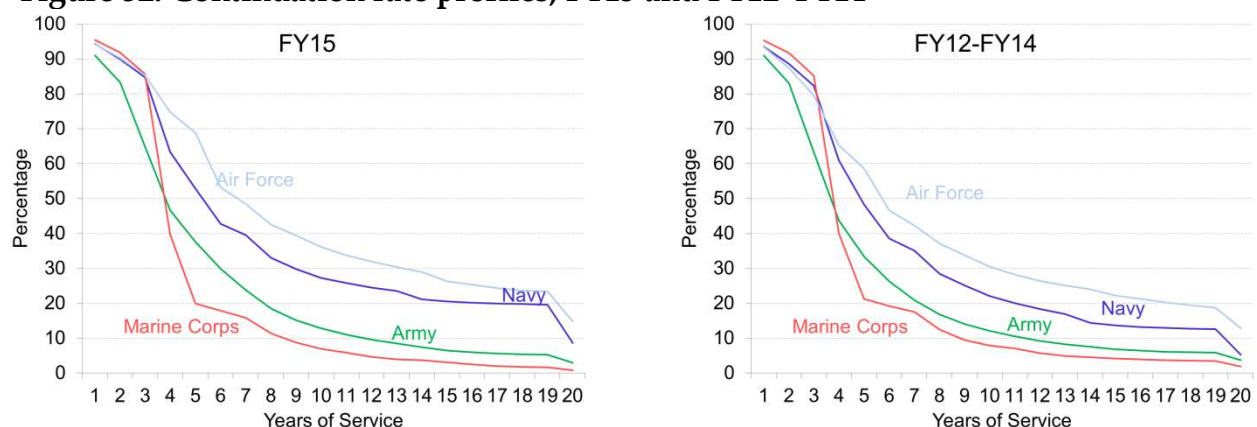
⁵⁰ Notice the spike in separation for the Marine Corps as first-enlistment contracts end. By design, the Marine Corps has chosen to have a small enlisted career force.

⁵¹ This is not true if they separate under periodic early-retirement provisions or with a disability retirement.

“cliff vesting” at 20 years of service is shown clearly in figure 31: as soon as members are vested and gain retirement eligibility, separation rates rise sharply.

The obverse to separation rates appears in figure 32, which shows AC enlisted continuation-rate profiles by service. We show the FY15 profile, as well as the average for FY12 through FY14. Continuation rate profiles differ significantly by service. The profiles are influenced by long-term service practices, as well as more current force-shaping activities.

Figure 32. Continuation rate profiles, FY15 and FY12-FY14



Note: FY15 data are from table B-40. FY12-FY14 data are from the FY12, FY13, and FY14 Pop Rep reports.

From these continuation profiles for AC enlisted personnel, we can infer current retirement probabilities for FY15 and the average for FY12 to FY14. The percentages remaining until their 20th year of service (with FY12-FY14 averages shown in parentheses) follow:

- 5 percent (6 percent) for the Army
- 20 percent (13 percent) for the Navy
- 2 percent (4 percent) for the Marine Corps
- 23 percent (19 percent) for the Air Force

Among enlisted personnel, Airmen and Sailors have the highest retirement probabilities. Marines and Soldiers have the lowest retirement probabilities. For enlisted Marines, 1 in 50 (1 in 25) will continue to 20 years of service, given current continuation rates.⁵²

⁵² These retirement probabilities use current continuation rates. Thus, they do not represent actual retirement probabilities for any cohort of servicemembers.

Section IV: DOD Reserve Component (RC)

The DOD RC consists of six elements: the Army National Guard (ARNG), the U.S. Army Reserve (USAR), the U.S. Navy Reserve (USNR), the U.S. Marine Corps Reserve (USMCR), the Air National Guard (ANG), and the U.S. Air Force Reserve (USAFR). In FY15, the RC was 64 percent the size of the AC. Total endstrength was 819,062, which can be divided as follows:

- 689,102 enlisted (84.1 percent of RC endstrength)
- 117,744 commissioned officers (14.4 percent of RC endstrength)
- 12,216 warrant officers (1.5 percent of RC endstrength)

Virtually all RC warrant officers are in the Army's guard and reserve components. There are none in the Air Force's guard or reserve components and a few in either the Navy or Marine Corps reserve.

RC data from DMDC are available only as gains. A gain is a transaction in the reserve database and reflects the addition of a record that was not in the previous file. For example, reserve gains include broken-service reenlistments. Although the AC has few prior-service (PS) enlisted accessions, many RC enlisted gains are PS personnel. In FY15, over 41 percent of the gains in the enlisted RC were PS personnel (refer back to table 2).

Overview and comparisons of the RC and the AC

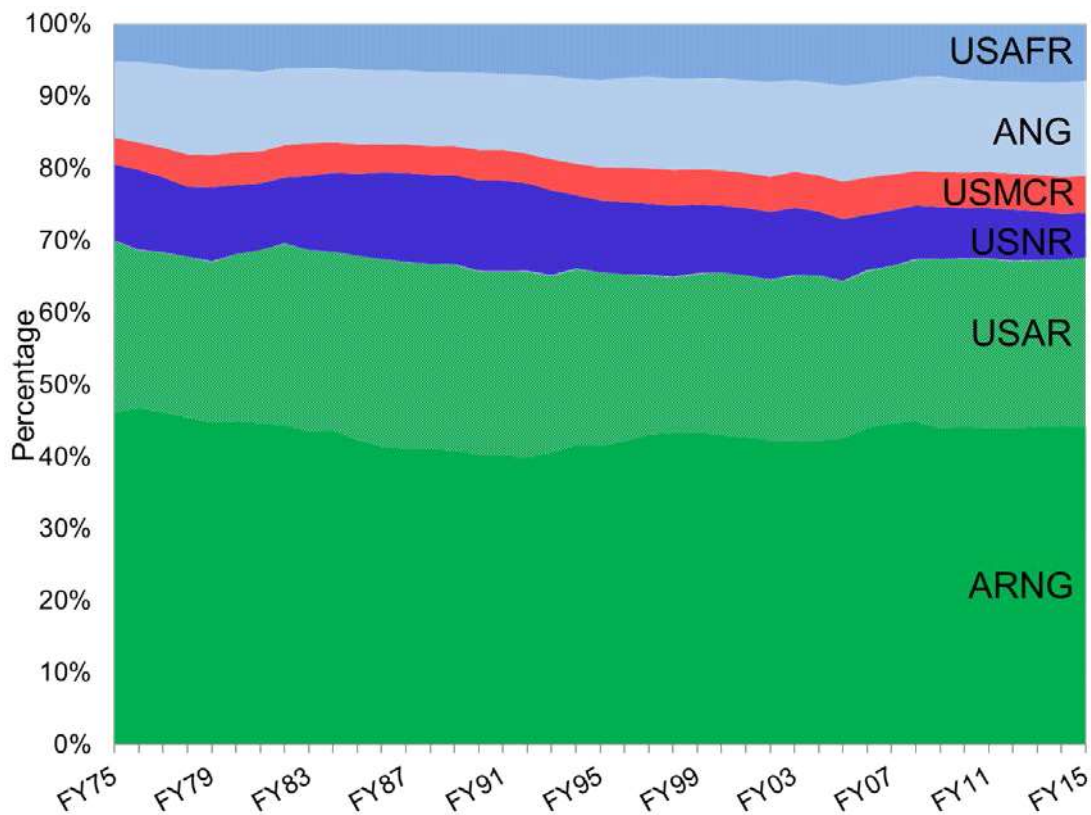
The RC can be described in at least three ways:

- By relative size
- By service
- By guard or selected RC

In terms of size, about two-thirds of RC endstrength resides in the Army reserve components (ARNG and USAR). The Air Force, Navy, and Marine Corps make up the remaining one-third. More than half – about 56 percent – of RC endstrength is in guard units. The ARNG is by far the largest component, with 43 percent of RC personnel. The smallest component is the USMCR, with less than 5 percent of all RC personnel.⁵³ Figure 33 shows the historical distribution of RC endstrength (enlisted personnel plus commissioned officers) across the six service elements.

⁵³ If one broadens the definition of RC to include the Coast Guard, the Coast Guard's RC of 7,044 is the smallest component.

Figure 33. RC percentages, by service element, FY75–FY15



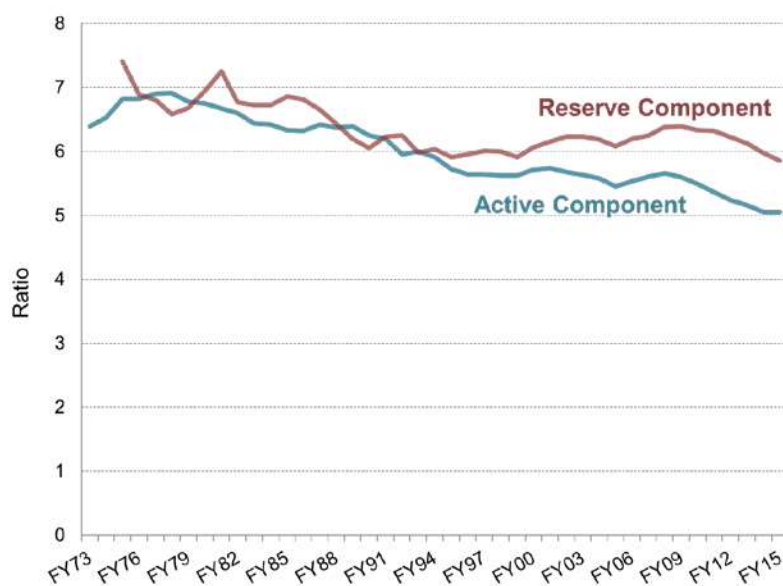
Note: Data are from appendix tables D-20 and D-21. These data omit warrant officers.

For most of the years since FY75, and consistently since FY93, the RC has had a higher ratio of enlisted to commissioned officers than the AC (see figure 34).

In the AC, the ratio of enlisted to commissioned officers varied by service, with the Marine Corps having the highest ratio and the Air Force the lowest. In FY15, the RC had 5.9 enlisted personnel for every commissioned officer (the comparable ratio in the AC was 5.0), but, as in the AC, these overall ratios mask large differences by service (see table 11).

In the RC, the ratio of enlisted to commissioned officers varies from 3.0 in the USNR to 8.8 in the USMCR. Adding warrant officers does not appreciably narrow the range of these ratios. Both the Air Force and the Army have a higher enlisted-to-officer ratio in their guards than in their reserves, effectively making the enlisted-to-officer ratios in their reserves closer to those in their active forces.

Figure 34. DOD AC and RC ratios of enlisted to commissioned officers, FY73–FY15



Note: Data are from appendix tables D-11, D-18, D-20, and D-21. These ratios omit warrant officers.

Table 11. Enlisted-to-officer ratios, by RC service element, FY15

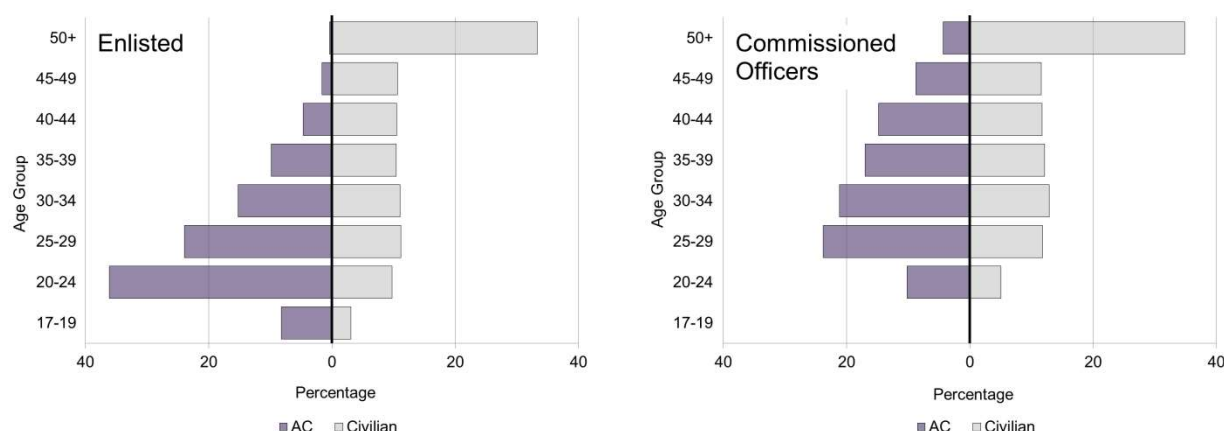
Ratios	ARNG	USAR	USNR	USMCR	ANG	USAFR
Enlisted to commissioned officers	8.2	4.9	3.0	8.8	6.0	3.9
Enlisted to commissioned officers plus warrant officers	6.7	4.4	3.0	8.3	6.0	3.9

Note: See appendix tables D-20, D-21, and D-41.

Age distributions

One stark difference between the civilian workforce and the military is the age distribution of personnel. Figure 35 shows these distributions for the AC. Over one-third of the AC enlisted force is age 20 to 24; the percentage in that age group is much smaller in the civilian labor force. In contrast to the civilian labor force where one-third are age 50 or older, fewer than 1 percent of AC enlisted personnel and 4 percent of AC officers are age 50 and older.

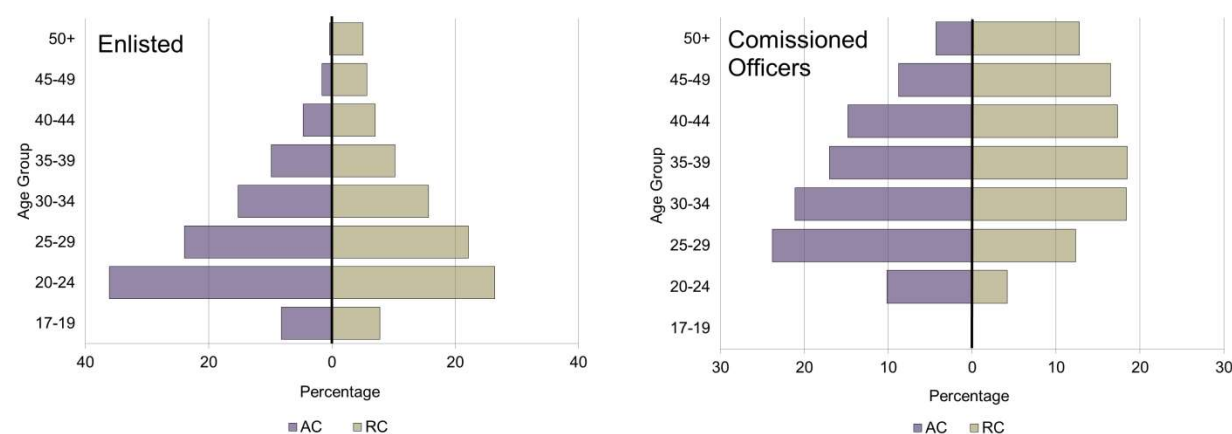
Figure 35. DOD AC and civilian age distributions, enlisted and officers, FY15



Note: Data are from appendix tables B15 and B22. The civilian benchmark for enlisted personnel is the civilian labor force. The civilian benchmark for commissioned officers is the civilian college graduate labor force, age 21 and older.

There also are some fairly large differences in the age distribution of the AC and RC (see figure 36). The first panel is for enlisted personnel, and the second is for commissioned officers. The left side of each panel illustrates the AC age distribution, while the right side shows the RC distribution. Looking first at enlisted personnel, it is clear that the AC enlisted force is younger than the RC enlisted: Almost 11 percent of enlisted reservists are 45 or older, while the percentage for the AC enlisted force is strikingly smaller – 2 percent. The differences for officers are equally dramatic; while 29 percent of RC officers are 45 or older, the comparable percentage in the AC is only 13 percent. Thus, although the civilian labor force is considerably older than either the RC or the AC, both officers and enlisted personnel in the RC are older than those in the AC.

Figure 36. DOD AC and RC age distributions, enlisted and officers, FY15



Data are from appendix tables B15, C11, B22, and C17.

Quality of RC NPS enlisted gains

As in the AC, RC recruits are mostly those with Tier 1 education credentials and AFQT scores at or above the 50th percentile. In FY15, the RC had a smaller proportion of Tier 1 enlisted gains than the AC; 94.8 percent of RC enlisted gains were Tier 1 (see appendix table C-6), compared with 98.9 percent of NPS AC enlisted accessions (see appendix table B-7). The USMCR and the USAFR had the highest percentages of Tier 1 enlisted gains, and there were some fairly large differences by service (see table 12).

Table 12. Quality of RC NPS gains, FY15

	ARNG	USAR	USNR	USMCR	ANG	USAFR	DOD
Tier 1	94.9	91.0	93.1	98.4	98.4	99.8	94.8
AFQT 50+	60.6	63.6	82.8	77.4	76.2	76.0	64.9

Note: See appendix tables C-4 and C-6.

Gains for each reserve/guard component show that over 60 percent of NPS recruits scored at or above the 50th percentile on the AFQT. Overall, 65 percent of all NPS RC enlisted gains had AFQT scores at or above the 50th percentile in FY15, compared with 75 percent of NPS AC accessions (see appendix tables B-4 and C-4). Furthermore, as in the AC, the educational credentials and aptitude test scores of NPS reservists significantly exceed those of the civilian population.

RC married rates, gender, and racial/ethnic representation

There are some notable differences in married rates between AC personnel and reservists. Overall, even though RC personnel are generally older than their AC counterparts, RC personnel are less likely to be married than AC personnel, and their age-specific married rates are closer to those of civilians than to AC personnel (within age and gender groups in table 13, we bold categories with the highest married rates).

Table 13. Percentage of married AC and RC enlisted personnel, with civilian comparisons by single years of age, FY15

Age	Enlisted men			Enlisted women		
	AC	RC	Civilian	AC	RC	Civilian
20	14.6	2.1	2.7	22.1	5.0	5.9
25	52.4	25.6	19.3	46.7	27.1	21.2
30	74.8	54.4	49.0	57.2	44.4	49.3
35	83.6	69.0	62.8	62.0	51.7	59.4
40	87.3	75.3	69.4	60.6	54.1	61.7

Note: See appendix tables B-16 and C-12. The civilian data are for the civilian labor force age 17 to 55 and are from the Bureau of Labor Statistics' Current Population Survey, September 2015.

The most striking differences are at younger ages: for example, at age 20, both AC men and AC women are about 4 times more likely than reservists or civilians to be married. Even at older ages, AC men are more likely than RC men to be married, and RC men are more likely than comparable civilians to be married.

Although the ordering of male age-specific married rates from highest to lowest is always AC, RC, and civilians, the same is not true for women. At age 20, AC women are much more likely than RC or civilian women to be married. However, that pattern changes for older women. At age 40, civilian women are more likely than either AC or RC women to be married.

Thus, even though RC enlisted personnel are older than AC enlisted personnel, AC enlisted personnel are more likely than RC enlisted personnel to be married (51 percent vice 40.1 percent). In contrast, the married rates of AC and RC commissioned officers (not shown) are similar (69 and 68 percent, respectively).

Like the AC, the RC strives for a diverse force. In fact, both for enlisted personnel and officers, the RC has a higher percentage of female personnel than the AC. In FY15, the RC enlisted force was 19.0 percent female, while the AC enlisted force was 15.1 percent female. Within the RC's enlisted forces, the percentage of women varied from 26.4 percent for the USAFR to 3.7 percent for the USMCR. For commissioned officers, the AC was 17.7 percent female, whereas the RC was 19.9 percent female. The percentages varied from 27.2 percent in the USAFR to 7.3 percent in the USMCR.⁵⁴

The RC has more gender diversity than the AC, but the comparisons are less straightforward for racial and ethnic diversity. The AC enlisted force is more racially diverse than the RC enlisted force, but AC and RC commissioned officer comparisons show fairly equal racial and ethnic diversity if the unknown racial and ethnic backgrounds are distributed like the known racial and ethnic backgrounds. Table 14 shows these data.

The civilian comparison group for commissioned officers includes only college graduates. Both RC and AC commissioned officer percentages for blacks are close to the civilian benchmark, but Asians and Hispanics are underrepresented in the RC. Thus, in both the RC and the AC, Asians and Hispanics are underrepresented in the officer and enlisted ranks.

⁵⁴ See appendix tables B-16 and C-11 for enlisted personnel and B-23 and C-18 for commissioned officers.

Table 14. AC and RC race and ethnicity percentage distributions for enlisted personnel and commissioned officers, FY15

	Enlisted personnel			Commissioned officers		
	AC	RC	Civilians	AC	RC	Civilians
Race						
White	69.5	75.0	77.4	83.1	83.0	78.3
Black	19.8	18.3	13.1	8.9	10.4	9.4
Asian	4.2	3.7	6.0	5.2	4.3	9.8
Other	6.5	3.0	3.5	2.8	2.3	2.5
Ethnicity						
Hispanic	13.9	12.0	18.4	6.3	6.3	8.7

Notes: The racial category “other” includes American Indian/ Alaska Native (AIAN), Native Hawaiian/ Pacific Islander, and two or more races. The civilian data are from (1) appendix table C-13 for enlisted personnel and include the 18- to 55-year-old civilian labor force and (2) appendix table C-20 for commissioned officers and include 21- to 59-year-old civilian college graduates. Note that the civilian age comparison groups for AC personnel are for younger age groups than the RC component comparison groups we use. Data are from appendix tables C-13, C-20, B-17, and B-25. We used the portion of these tables that distributed unknown race and ethnicities as known race and ethnicities.

Section V: U.S. Coast Guard

The U.S. Coast Guard is the smallest of the five armed services. Part of the Department of Homeland Security (DHS) in peacetime, the Coast Guard may be called in wartime to join the Navy and, therefore, would fall under DOD jurisdiction.⁵⁵

Table 14 shows the breakdown of the Coast Guard's AC and RC endstrength in FY15.

Table 14. Coast Guard endstrength in FY15

Personnel category	AC	RC
Enlisted personnel	30,791	5,875
Commissioned officers	6,565	1,031
Warrant officers	1,734	138
Total	39,090	7,044

Note: See appendix tables E-12, E-15, E19, E-24, E26, and E-29.

Thus, the Coast Guard is between one-fifth and one-fourth the size of the Marine Corps, making it the smallest of the DOD services.

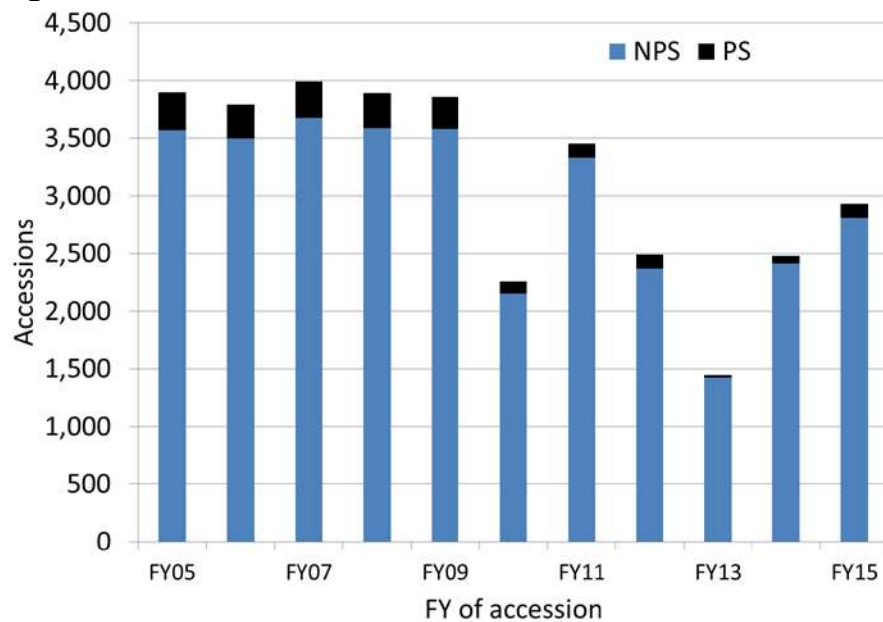
Number and quality of AC NPS enlisted accessions

More than the other services, the Coast Guard has let accessions fluctuate as budgetary concerns and retention dictate in recent years. Figure 37 shows Coast Guard NPS and PS accessions since FY05. PS accessions have always been small, but NPS accessions were around 3,500 yearly from FY05 to FY09. In FY10, they dropped to 2,155, then rose in FY11 to 3,332, then dropped again in FY12 to 2,368, and again in FY13 to 1,424, before rising to 2,414 in FY14, and rising again in FY15 to 2,809.

Like the DOD services, the Coast Guard seeks high-quality recruits—those with AFQT scores at or above the 50th percentile and Tier 1 educational credentials (see figure 38). And, like the other services, the Coast Guard had another successful recruiting year in FY15. Figure 38 illustrates this, comparing Coast Guard recruiting achievement with the DOD AC services. Slightly over 93 percent of Coast Guard recruits scored in the top half of the AFQT distribution, and almost 99 percent had Tier 1 educational credentials. The Coast Guard and the Air Force had the highest percentages of high-quality recruits in FY15.

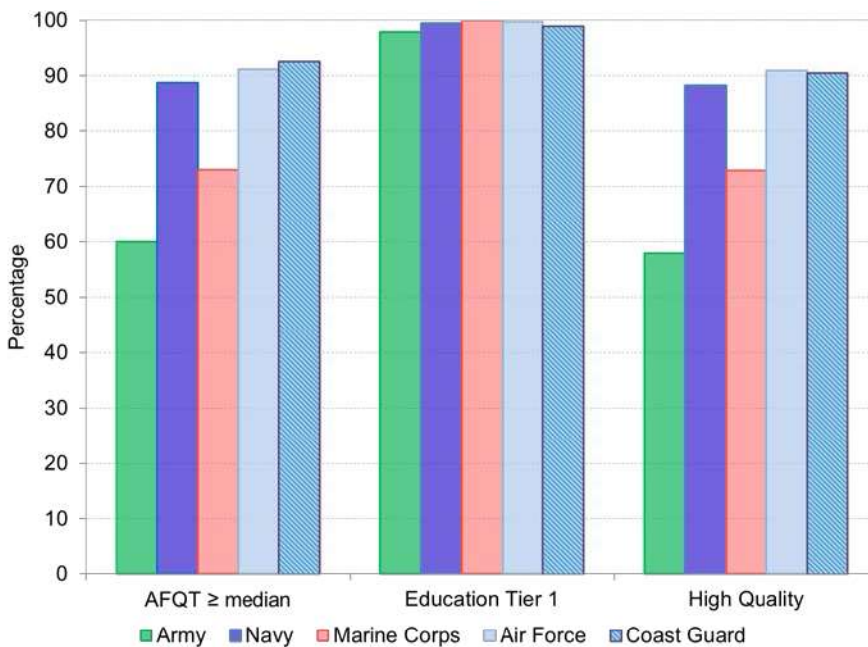
⁵⁵ Title 14 of the United States Code governs the process by which authority over the Coast Guard may be transferred to DOD in wartime.

Figure 37. AC Coast Guard NPS and PS accessions, FY05-FY15



Source: Table E-7 and E-11.

Figure 38. Quality of AC NPS enlisted accessions, by service, FY15



Note: DOD NPS accession data are from appendix tables B-4, B-6, and B-8. U.S. Coast Guard NPS accession data are from appendix tables E-7, E-8, and E-9.

Gender, race, and ethnicity in the U.S. Coast Guard

Last year the Coast Guard led DOD's AC military services in the percentage of female enlisted and commissioned officer accessions. In FY15, however, while the Coast Guard's percentage of female officer gains still led DOD's (25 percent vs. 22.1 percent), the Coast Guard's percentage of NPS enlisted female accessions fell sharply to 13.8 percent (well below DOD's 15.1 percent).

In the Coast Guard, there is a larger percentage of women in the officer corps (20.7 percent) than in the enlisted force (14.5 percent). These differences are similar to those found in the AC Army; they differ from the Navy, Marine Corps, and Air Force in which the percentages of women in the AC enlisted force and the AC officer corps are similar.

The DOD RC has a higher percentage of women in both the enlisted force and the officer corps than does the DOD AC. That pattern continues in the Coast Guard, with women constituting 15.9 percent of the Coast Guard's enlisted reserve component (14.5 percent in the AC) and 23.0 percent of the Coast Guard's officer component (20.7 percent in the AC).

White non-Hispanics are overrepresented in the Coast Guard's AC NPS enlisted accessions and commissioned officer gains and in the enlisted and commissioned officer corps in our tables that distribute unknown racial and ethnic background like known racial and ethnic backgrounds are distributed.

In the next section, we recap the highlights of the FY15 *Population Representation in the Military Services*.

Section VI: Concluding Highlights

The All-Volunteer Force has been an amazing success. Combat operations were sustained in Iraq and Afghanistan for over a decade, while the military continued to meet other contingency operations throughout the world. Even with unemployment rates near record lows in the early years of the war, the military had tens of thousands of young men and women on waiting lists to join. The military has expanded and contracted in response to the country's needs, and it has done all this with a volunteer force that consistently met numerical recruiting goals.

Currently, the military is drawing down and, from FY13 to FY15, it reduced its AC forces by almost 88,000, with drawdowns of about 44,000 each year. Drawdowns were sharpest in the Army and Marine Corps where the growth had been strongest during the war. The only AC service that increased in strength from FY13 to FY15 was the Navy, and those gains were modest. AC enlisted accessions declined over the period, but AC officer gains were relatively constant. One net effect of these strength and accession changes is that AC enlisted-to-commissioned-officer ratios declined or held constant from FY13 to FY15.

Changes in the RC were more modest, with strength dropping 10,000 from FY13 to FY14 and another 5,000 from FY14 to FY15. Enlisted gains in FY15 were over 13,000 fewer than those in FY13, with the ARNG and USNR sustaining most of the reductions in both gains and strength. As with the AC, the enlisted-to-commissioned-officer ratios declined or held constant between FY13 and FY15.

Given these changes, what can we say about population representation in today's military? And, do we really want the force to be representative of society across all dimensions? With respect to recruit quality, for example, we want the force to represent an above-average slice of the youth population. In FY15, the U.S. military continued to markedly exceed the DOD recruit quality benchmarks of 90 percent Tier 1 educational credentials and of 60 percent AFQT scores at or above the 50th percentile. The AC overall attained 99 percent Tier 1 and 75 percent AFQT scores at or above the 50th percentile. Overall RC accessions were 95 percent Tier 1 and 65 percent top half AFQT scores. These AFQT scores at or above the 50th percentile exceed the civilian population by substantial amounts; only 51 percent of the civilian population scores in the top half of the ability distribution.⁵⁶

Similarly, in health and fitness, we require military enlistees and officer gains to meet certain standards—standards that represent better fitness and overall health than what is found in the overall population. Except for those who qualify for waivers, those who

⁵⁶ When the AFQT was normed to the civilian population in 1997, 52 percent of men and 50 percent of women scored in the top half of the ability distribution.

use illegal drugs are barred from military service, as are those with criminal backgrounds. The military generally screens on character. Finally, the military does not reflect the age distribution of the population. Comparisons with the civilian labor force indicate that the military is considerably younger than the civilian labor force because it must emphasize youth and vigor.

Dimensions where it is generally agreed that is it good for the military to reflect society include socioeconomic background, geographic origin, and race and ethnicity. The socioeconomic backgrounds (as measured by neighborhood affluence) of FY15 AC accessions generally reflect the U.S. population's distribution, although enlisted recruits are somewhat underrepresented in neighborhoods in the lowest and highest household income quintiles.

Geographically, in FY15, NPS AC accessions from the South are overrepresented relative to the 18- to 24-year-old population, providing 20 percent more accessions than their population share would indicate. Accessions from the Midwest are slightly underrepresented, and those from the Northeast are more underrepresented, providing only 71 percent of the numbers that their population share would indicate. Moreover, race and ethnicity are geographically concentrated, with two states containing over 45 percent of the 18- to 24-year-old Asian and Hispanic populations. Fortunately, however, the services have been quite successful in obtaining minority accessions from states with smaller minority populations. Still, military accessions come from all states and are reasonably representative of the U.S. population.

In the AC enlisted force, racial minorities are overrepresented, with the civilian labor market benchmark at 23 percent and DOD representation at 31 percent. This is primarily due to black overrepresentation as Asian are underrepresented. Hispanics also are underrepresented in the enlisted force, at fewer than 14 percent, while the civilian benchmark is over 18 percent.

Because commissioned officers must be college graduates, we compare the percentage of military officers with the minority percentage of the 21- to 49-year-old college graduate labor force. In terms of minority representation in the AC officer ranks, both racial minorities and Hispanics are underrepresented. While black officers are underrepresented (7.4 percent versus 9.5 percent), underrepresentation is more severe for Asians, who make up 6 percent of commissioned officers but 12.6 percent of the civilian benchmark population. Hispanics are underrepresented – 6.2 percent versus 9.5 percent for 21- to 49-year-old college graduates in the civilian labor force.⁵⁷

Finally, there is the question of gender representation. Although the percentage of women in the AC enlisted force reached an all-time high of 15.1 percent in FY15, the

⁵⁷ As in the text, we assume their missing race or ethnic information is distributed the same way as known race/ethnic distributions.

percentage has moved little in the past two decades, fluctuating between 14 and 15 percent. By contrast, female AC commissioned officer corps representation has steadily climbed throughout, hitting 17.7 percent in FY15. Secretary of Defense Ashton Carter announced in December 2005 that DOD would lift all gender-based restrictions on military service starting in January 2016. This historic change cleared the way for women to serve alongside men in combat arms and Special Forces units. Most observers expect that these changes will lead to increased numbers of women in the military forces.

One notable diversity factor in the military that differs from the civilian workforce is the intersection of gender and race/ethnicity.⁵⁸ For both AC enlisted and officer forces, women are considerably more racially and ethnically diverse than men. The dominance of women in racial and ethnic minority servicemembers also is found in FY15 female enlisted accessions and officer gains. These gender differences are large and are found in every service. Such differences are not found in the civilian workforce.

Rhe RC has a larger percentage of women than the AC. RC personnel are older than AC personnel, but servicemembers in both components are considerably younger than the civilian labor force. By age, military personnel are more likely than civilians to be married and, in general, AC male personnel are more likely than female personnel to be married.

DOD has provided this congressionally mandated annual report on the demographic and service-related characteristics of U.S. military personnel every year since 1974. Available electronically since 1997, it is easily accessible to policymakers, the media, and the public at www.cna.org/research/pop-rep.

⁵⁸ See figures 23 and 25 for these differences in the civilian benchmark and the enlisted and officer forces, respectively.



CNA

This report was written by CNA's Resource Analysis Division (RAD).

RAD provides analytical services—through empirical research, modeling, and simulation—to help develop, evaluate, and implement policies, practices, and programs that make people, budgets, and assets more effective and efficient. Major areas of research include health research and policy; energy and environment; manpower management; acquisition and cost; infrastructure; and military readiness.





CNA is a not-for-profit research organization
that serves the public interest by providing
in-depth analysis and result-oriented solutions
to help government leaders choose
the best course of action
in setting policy and managing operations.

*Nobody gets closer—
to the people, to the data, to the problem.*