# Population Representation in the Military Services: Fiscal Year 2012 Summary Report



#### Introduction

This is the 40<sup>th</sup> annual Department of Defense (DOD) report describing characteristics of U.S. military personnel. The goal of the *Population Representation in the Military Services* (Pop Rep) report is to provide the most comprehensive, reliable, and consistent data tabulations on military personnel for policymakers, the media, and the general public.<sup>1</sup>

Today's recruiting environment is very good. For the last four years, the services have experienced extraordinary recruiting success. Probably the most notable contributing factor has been the persistently high unemployment rate, particularly among youth. The unemployment rate for 16- to 19-year-olds has been at least 24 percent for the last four years, while the rate for young adults (20- to 24-year-olds) averaged over 13 percent in 2012. Given the scarcity of civilian job opportunities and a somewhat reduced requirement for enlisted accessions, the quality of accessions (in terms of educational backgrounds and ability test scores) increased in each of the past four years. In fact, accessions in FY11 and FY12 reflect the highest quality attained since the inception of the All-Volunteer Force in 1973.

As the economy improves, however, it will be difficult to sustain this high quality. Youth influencers have not been as likely to recommend military service as they were in the 1980s and 1990s. Increasing numbers of bright young Americans are going to college immediately after completing high school. Some commentators expect Federal budgetary problems to create pressures to stop increasing or even to reduce military pay. Even though the last troops are expected to leave Afghanistan in 2014, numerous international "hot spots" may well keep operational tempo high. Finally, the proportion of youth that is ineligible to serve—primarily because of weight—is both large and growing.

Although the military requires only a small proportion of the youth population, over one-third of youth (35 percent) have medical disqualifications; obesity is a significant contributor. Drug or alcohol abuse removes 18 percent, and another 23 percent do not meet enlistment standards for such reasons as criminal misbehavior, low aptitude scores, or having a large number of dependents. This leaves only 25 percent who are eligible to serve.<sup>2</sup> If we subtract the estimated 10 percent who are qualified but attending college, we are left with only 15 percent of the youth population who are eligible and available to serve in the military. A critical question is "are they willing to serve?" Will they continue to view the military as a viable option after high school—not

<sup>1</sup> Summaries and appendixes (for FY97 through FY12) of the Pop Rep report are available online at http://prhome.defense.gov/RFM/MPP/ACCESSION%20POLICY/poprep.aspx.

<sup>&</sup>lt;sup>2</sup> These percentages are based on calculations found in the following two reports from The Lewin Group: (1) Carol Moore et al., *Qualified Military Available: New Estimates of the Eligible Youth Population*, Apr. 2005; and (2) Rita Furst Seifert et al., *Estimating Qualified Military Available – Final Report*, Nov. 2007.

only as a short-term alternative to college or the job market, but as a possible career?

Although today's recruiting environment is strong, more challenging recruiting periods likely will return. If the military enters these difficult periods with insufficient resources, it risks returning to the "boom and bust" recruiting cycles that characterized some of the past. 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. And, newly trained recruiters are not immediately productive. Some estimate their learning curves to be almost a year long. Thus, considerable care must be taken to ensure that recruiting resource cuts are not severe enough to cause recruiting failure and reduced military readiness when the economy recovers. Because there is no lateral entry in the military, new accessions today are both tomorrow's career force and tomorrow's leaders. If the military accesses low-quality recruits today, it jeopardizes future readiness.

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 active component (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 appendixes, as well as from previous *Population Representation in the Military Services* reports. Finally, it includes information on the socioeconomic characteristics of the neighborhoods of those accessed into the military in FY12.

The remainder of this report is organized as follows: In section I, we present an overall summary of the armed services. Sections II and III cover the DOD's AC and RC, respectively. In section IV, we discuss the U.S. Coast Guard.

The FY12 technical appendixes (A through E), located on this website, provide current 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). All data in this summary report are derived from these technical appendixes.

#### **Section I: Summary statistics**

Each year, Congress sets authorized endstrength—the number of servicemembers—for each service. Actual endstrength may differ from authorized endstrength, however, in that the former refers to the number of servicemembers as of the 30<sup>th</sup> of September in a given fiscal year. To meet authorized endstrength, each service balances retention (those remaining in the service) with accessions (those entering the service). In this report, "endstrength" refers to *actual* endstrength. We show individual service total endstrength—the sum of enlisted members, commissioned officers, and warrant officers—for the last three fiscal years in table 1. Then, the table shows FY12 endstrength by personnel type.

Table 1. Actual endstrength by service and personnel type, FY10-FY12

		Endstrength		FY12 endstrength, by personnel type			
					Commissioned	Warrant	
	FY10	FY11	FY12	Enlisted	Officers	Officers	
Component							
Active (AC)							
Army	561,979	561,437	546,059	447,308	82,856	15,895	
Navy	323,139	320,141	314,339	261,130	51,604	1,605	
Marine Corps	202,612	201,026	198,820	176,929	19,789	2,102	
Air Force	329,640	328,821	328,812	263,800	65,012	0	
DOD Total	1,417,370	1,411,425	1,388,030	1,149,167	219,261	19,602	
Reserve (RC)							
ARNG	362,015	361,561	358,078	313,674	36,092	8,312	
USAR	205,281	204,803	201,166	165,991	31,935	3,240	
USNR	65,006	64,792	64,715	50,483	14,137	95	
USMCR	39,222	39,772	39,544	35,634	3,613	297	
ANG	107,676	105,685	105,389	90,791	14,598	0	
USAFR	70,119	71,321	71,817	57,125	14,303	0	
DOD Total	849,319	847,934	840,320	713,698	114,678	11,944	
U.S. Coast Guard							
AC	41,327	42,011	41,849	33,340	6,787	1,722	
RC	7,942	7,933	7,982	6,638	1,184	160	
Total	49,269	49,944	49,8	39,978	7,971	1,882	

Notes:

FY12 DOD AC endstrength totaled 1.388 million servicemembers, 23,000 fewer than in FY11 and 29,000 fewer than in FY10. Given the size of the AC, these are very small

<sup>1.</sup> The RC consists of the Army National Guard (ARNG), the Army Reserve (USAR), the Navy Reserve (USNR), the Marine Corps Reserve (USMCR), the Air National Guard (ANG), and the Air Force Reserve (USAFR).

<sup>2.</sup> Data come from appendix tables B-17, B-22, B-34, C-11, C-17, C-28, D-39, E-12, E-15, E-19, E-25, E-26, and E-29.

<sup>3.</sup> The Air Force does not have warrant officers.

changes. The Army's endstrength is about 75 percent larger than that of the Air Force or the Navy. Relative to the military services, the Coast Guard is very small—about one-fifth the size of the Marine Corps, the smallest AC service. The small overall reduction in AC endstrength since FY10, however, masks somewhat larger changes both among the services' active components and between the commissioned officer and enlisted communities. Between FY10 and FY12:

- AC commissioned officer endstrength increased by 5 percent in the Army and 1 to 2 percent in the Navy and Marine Corps.
- AC enlisted endstrength decreased by 4 percent in the Army, 3 percent in the Navy, and 2 percent in the Marine Corps.
  - o Since the enlisted force is over 5 times as large as the officer corps, the size of the Army, Marine Corps, and Navy decreased.
- AC enlisted endstrength in the Air Force stayed constant, while commissioned officer endstrength fell by 2 percent.

What is surprising is that the Air Force is the only service that cut officer endstrength over the period. The Army, Navy, and Marine Corps increased their AC officer endstrength (even as their overall AC endstrength was falling).

At almost 840,320 members, the RC is about 60 percent of the size of the AC. There were only relatively small changes in the distribution of endstrength among the services' reserve components over the FY10–FY12 period. The RC has two National Guard components, the Army National Guard (ARNG) and the Air National Guard (ANG), and four reserve components, the Army Reserve (USAR), the Marine Corps Reserve (USMCR), the Navy Reserve (USNR), and the Air Force Reserve (USAFR). The Army dominates the RC; its guard and reserve forces make up over 62 percent of reserve endstrength.

Table 2 shows the number of accessions and gains for the past three years by service and component.<sup>3</sup> For enlisted personnel, we include non-prior-service (NPS) and prior-service (PS) accessions, and for officers we include commissioned and warrant officer gains. The accession percentages for PS and warrant officers are shown in parentheses below the numerical gains.

<sup>&</sup>lt;sup>3</sup> We use the term "accessions" for AC enlisted personnel and the term "gains" for officers and reservists. Both officers and RC members can exit one component and enter another. Our data come from DMDC and follow the Office of the Secretary of Defense's definitions 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).

<sup>•</sup> *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.

Table 2. Number of accessions and gains by service and personnel type, FY10-FY12

		Enlisted (% PS)		(	Officers (% Warrants)				
	FY10	FY11	FY12	FY10	FY11	FY12			
Active									
Army	74,573	64,019	60,253	9,035	8,394	7,178			
	(6.0)	(3.2)	(2.3)	(14.6)	(14.0)	(14.8)			
Navy	34,180	33,444	36,329	4,383	4,084	4,242			
	(0.4)	(0.3)	(0.1)	(4.0)	(4.3)	(4.2)			
Marine	28,039	29,771	30,504	2,006	1,956	1,691			
Corps	(0.1)	(0.1)	(0.0)	(12.3)	(13.8)	(12.1)			
Air Force	28,493	28,526	29,035	4,569	4,491	4,603			
	(0.5)	(0.9)	(1.0)	(0.0)	(0.0)	(0.0)			
DOD Total	165,285	155,760	156,121	19,993	18,925	17,714			
	(2.9)	(1.6)	(1.1)	(8.7)	(8.6)	(8.2)			
Reserve									
ARNG	56,599	49,253	51,128	4,898	4,831	4,420			
	(35.4)	(33.3)	(28.4)	(19.8)	(15.8)	(13.7)			
USAR	27,559	30,162	26,077	5,094	4,565	4,879			
	(53.8)	(48.0)	(53.8)	(7.8)	(8.0)	(6.9)			
USNR	10,257	14,382	13,260	2,262	2,150	2,049			
	(74.5)	(74.4)	( 75.8)	(0.1)	(0.8)	(0.9)			
USMCR	9,602	9,269	8,996	993	872	986			
	(38.9)	(38.2)	(37.7)	(5.1)	(4.2)	(4.6)			
ANG	6,952	7,072	8,417	1,055	1,122	1,325			
	(38.3)	(34.4)	(36.5)	(0.0)	(0.0)	(0.0)			
USAFR	9,753	9,134	8,463	1,568	1,612	1,553			
	(59.3)	(55.7)	(55.9)	(0.0)	(0.0)	(0.0)			
DOD Total	120,722	119,272	116,341	15,870	15,152	15,212			
	(46.7)	(44.1)	(42.8)	(9.0)	(7.8)	(6.6)			

#### Notes:

Since FY10, overall enlisted AC accessions have fallen by over 9,000, with Army accessions falling about 20 percent, Air Force accessions holding relatively constant, and, surprisingly, Navy and Marine Corps accessions increasing about 6 percent. PS accessions represent a small and decreasing proportion of accessions in all active components, in part reflecting the strong market for NPS accessions.

<sup>1.</sup> Enlisted accessions for all components include both non-prior-service (NPS) and prior-service (PS) accessions.

<sup>2.</sup> The RC consists of the Army National Guard (ARNG), the Army Reserve (USAR), the Navy Reserve (USNR), the Marine Corps Reserve (USMCR), the Air National Guard (ANG), and the Air Force Reserve (USAFR).

<sup>3.</sup> Data come from appendix tables B-1, B-12, B-22, B-34, C-1, C-8, C-16, C-28, E-5, E-10, E-15, E-19, E-20, E-22, E-26, and E-29.

<sup>4.</sup> The Air Force has no warrant officers.

AC officer gains also fell since FY10, with gains in the Army and Marine Corps falling sharply while Navy and Air Force gains remained relatively constant. Warrant officers make up about 14 percent of Army and Marine Corps officer gains and about 4 percent of Navy officer gains. Across DOD, warrants accounted for about 8 percent of the gains. There are no Air Force warrant officers.

Since FY10, overall RC enlisted gains fell about 3 percent, but the USNR and the ANG forces showed positive gains. In sharp contrast to enlisted AC gains, PS personnel represent over 40 percent of yearly reserve force enlisted gains. These percentages vary – from 28 percent in the ARNG to 76 percent in the USNR. Overall reserve officer gains have been relatively constant over the last 3 years, with the ARNG decreasing and the ANG increasing. In the last 3 years, RC warrant officers have fallen as a proportion of officer gains.

Enlisted personnel make up the bulk of total endstrength and accessions/gains for all DOD services (AC and RC). In FY12, enlisted personnel made up between 80 percent (Air Force) and 89 percent (Marine Corps) of AC endstrength, and between 80 percent (USAFR) and 90 percent (USMCR) of reserve endstrength. This follows the historical pattern of the Air Force having the richest mix of officers and the Marine Corps the leanest. Most officers are commissioned officers; warrant officers make up a small proportion of all officers.<sup>4</sup>

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<sup>&</sup>lt;sup>4</sup> For the remainder of this report, we will focus almost exclusively on enlisted personnel and commissioned officers.

#### Section II: DOD active component (AC)

This section describes the applicant pool, accessions, and endstrength for both enlisted personnel and commissioned officers in the AC. After discussing trends for these groups, we provide descriptive statistics on age, recruit quality, marital status, race/ethnicity, gender, and geographic representation.

#### Enlisted endstrength and accessions

The AC's enlisted endstrength was 1,149,167 in FY12, accounting for 83 percent of total AC endstrength for the year. Figure 1 shows AC enlisted endstrength by service.

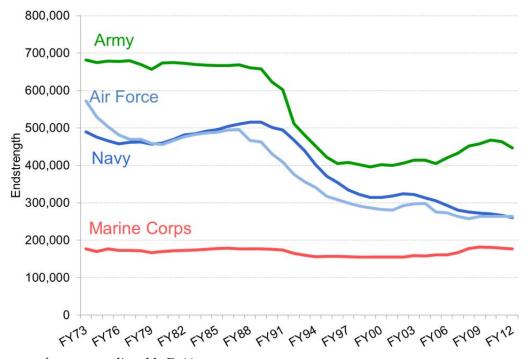


Figure 1. AC enlisted endstrength by service, FY73-FY12

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 the force and, from FY97 to FY12, the enlisted force fluctuated between 1.1 million and 1.2 million servicemembers. The wars in Iraq and Afghanistan necessitated an increase in the size of the Army and the Marine Corps in the last decade, an increase that was at least partly compensated for by decreases in the size of the Air Force and the Navy. Reflecting reduced operational commitments, the Army and Marine Corps are now 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 reduced in size during the

1990s, the Marine Corps decreased the least, and by FY12 its enlisted force was back to the size it had been at the beginning of the AVF in FY73. In contrast, the Air Force, Navy, and Army were 46, 53, and 66 percent of their respective FY73 totals in FY12.

Figure 2 shows the number of non-prior-service (NPS) enlisted accessions from FY73 to FY12. Similar to enlisted endstrength, overall accessions declined between FY73 and FY12; however, unlike enlisted endstrength, which declined sharply during the 1990s, accessions fell more steadily between the late 1970s and early 1990s.

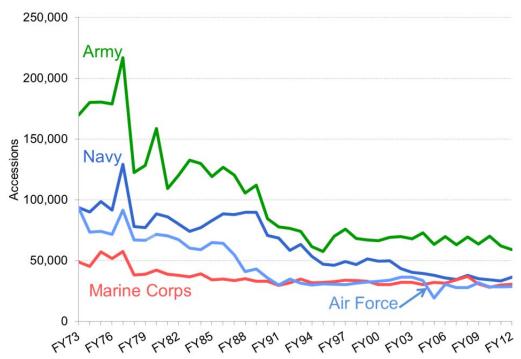


Figure 2. NPS AC enlisted accessions, FY73-FY12

Note: Data are from appendix table D-4. Enlisted accessions include only NPS accessions. The data point for FY77 is unusually high because of an extra "transition quarter" when the end of the fiscal year was changed from Jun. 30 to Sep. 30.

In FY12, Army, Air Force, and Navy NPS accessions were less than half their FY73 levels, while enlisted endstrengths for these three services were generally a larger proportion of their FY73 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.

#### Commissioned officers and the enlisted-to-commissionedofficer ratio

In this subsection, we describe the historical trends in DOD AC commissioned officer gains and the commissioned officer corps, as well as the enlisted-to-commissioned-officer ratio for each of the services.<sup>5</sup>

Starting from a high of 300,000 at the start of the AVF in FY73, 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 219,000 in FY12 (see appendix table D-17). Commissioned officer gains followed somewhat similar patterns (see appendix table D-15). In percentage terms, officer gains have fallen more than officer corps endstrength since FY73, leading to a more experienced commissioned officer corps.

Although Congress sets authorized endstrength, each service determines its own enlisted and officer mix. As figure 3 illustrates, the Marine Corps has the highest ratio of enlisted personnel to commissioned officers, ranging from 9.1 to 10.4 over nearly 40 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, by FY12, that ratio had fallen to 4.0. The Army and Navy have similar historical trends; both had highs of 8.0 enlisted personnel per commissioned officer in the late FY70s, but their ratios fell to 5.4 and 5.1, respectively, in FY12. Over the 40 years of the AVF, the enlisted forces of all the services have been reduced more than the commissioned officer corps.

If we included warrant officers, the enlisted-to-officer ratio in FY12 changes as follows:

- Marine Corps' ratio of 8.9 goes to 8.1
- Army's ratio of 5.4 goes to 4.5
- Navy's ratio of 5.1 goes to 4.9
- Air Forces' ratio of 4.0 stays at 4.0

Including warrant officers still leaves the Marine Corps with the most (and the Air Force with the fewest) enlisted per officer.

<sup>&</sup>lt;sup>5</sup> Officer gains are officers new to DMDC's officer database. See footnote 3 in section I for a precise definition.

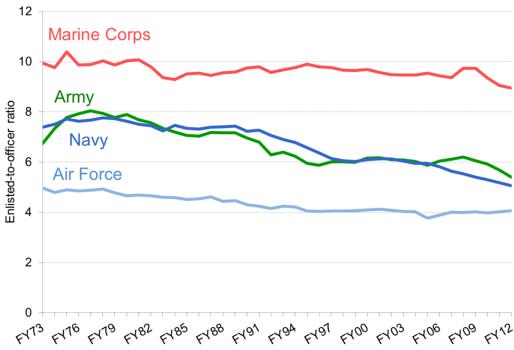


Figure 3. AC enlisted-to-commissioned-officer ratio, by service, FY73-FY12

Note: Data are from appendix tables D-11 and D-17.

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 are still considerably more expensive than enlisted personnel.

## Enlisted applicants, NPS enlisted accessions, and enlisted endstrength

We now turn to enlisted applicants and NPS accessions across all DOD services for the FY81–FY12 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 accession-to-applicant ratio has grown, albeit with much fluctuation, from 38 percent of applicants accessed in FY81 to 60 percent of applicants accessed in FY12 (see figure 4).6 For most years, however, it has been between 50 and 60 percent. In FY12, the

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<sup>&</sup>lt;sup>6</sup> Applicants cannot go directly to the MEPS; they must be sent by recruiters. Given the paperwork associated with sending an applicant to the MEPS, not all those who want to enlist will be sent to the MEPS and counted as applicants. If the recruiter believes the applicant is unqualified, especially when recruiting is relatively easy, the recruiter will probably decide not to put together an applicant package. In tough recruiting environments, however, the recruiter may be willing to put in the time, on the chance that the applicant will qualify for service.

MEPS processed 255,999 applicants, 154,427 of whom were accessed into the four services.

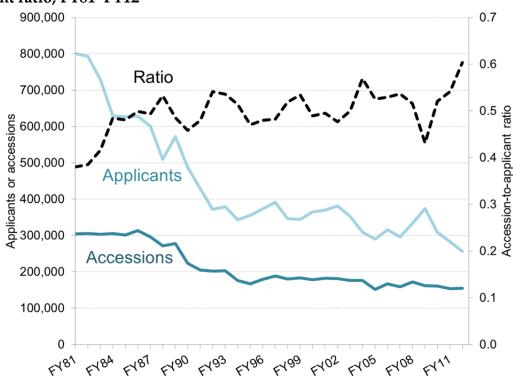


Figure 4. AC enlisted applicants, NPS enlisted accessions, and the accession-to-applicant ratio, FY81-FY12

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 permitted to serve or may not end up serving in the U.S. military. An applicant will not be accessed if his or her Armed Services Vocational Aptitude Battery (ASVAB) score is too low or if he or she fails the physical examination. In addition, an applicant will not be accessed if he or she has disqualifying prior drug use or criminal activity, unless he or she is eligible for and is granted an enlistment waiver. Furthermore, many applicants simply change their minds and decide not to enter military service.

Figure 5 presents the age distribution of NPS enlisted accessions for the four services.<sup>7</sup> Marine Corps accessions, in particular, are much younger than those in the other services, with 83 percent under age 21. Other differences are smaller, although only the Army and Navy bring in NPS accessions in the oldest age group. In FY12, 3 percent of

<sup>&</sup>lt;sup>7</sup> Accessions cannot be younger than 17. Even then, a 17-year-old accession requires parental consent to enter military service. In appendix table B-1, we see that 2.1 percent of accessions were 17 year olds. The maximum age is 42.

NPS Army accessions were in the oldest age group (in FY11, 5 percent of Army accessions were in that group).

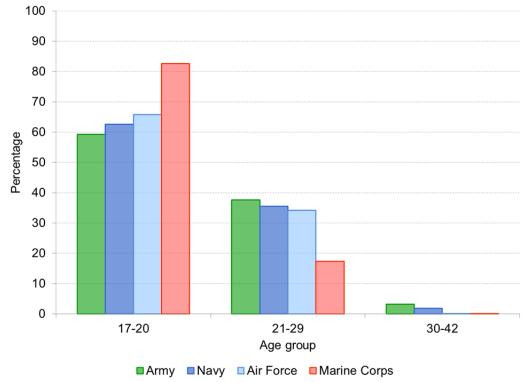


Figure 5. AC NPS enlisted accessions by age group, FY12

Note: Data are from appendix table B-1.

#### Quality of enlisted applicants and NPS accessions

DOD sets quality standards for the aptitude and educational backgrounds of recruits. The Armed Forces Qualification Test (AFQT), part of the ASVAB and a nationally normed aptitude test of math and verbal skills, is used to predict training and job performance. DOD requires that 60 percent of accessions score at the 50<sup>th</sup> percentile or higher. In FY12, 79 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 adult education diplomas, those with one semester of college, and other credentials. Other educational backgrounds include Tier 2 recruits (those with alternative high school degrees, primarily the General Education Development (GED) certificate) and Tier 3 recruits (high school dropouts). Tier 1 recruits are sought after by the services because they have been shown to be more likely to complete their first terms of service than recruits with other credentials.

In figure 6, we show the percentage of FY12 applicants and enlisted accessions who scored at or above the 50<sup>th</sup> percentile on the AFQT. In every service, a higher proportion of accessions than applicants scored above the 50<sup>th</sup> percentile. And, both applicants and accessions scored considerably higher on the AFQT than did the 18- to 23-year-old civilian population (represented by the horizontal line in figure 6).

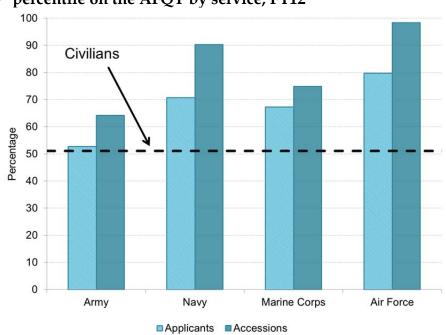


Figure 6. Percentage of AC NPS enlisted applicants and accessions scoring at or above the 50th percentile on the AFQT by service, FY12

Note: Data are from appendix tables A-4 and B-4; 51.1 percent of civilians test above the 50th percentile.

The Air Force had the highest percentage of applicants/accessions scoring at the 50<sup>th</sup> percentile or above (80/98 percent), followed by the Navy (71/90 percent), the Marine Corps (67/75 percent), and the Army (53/64 percent). Overall, 79 percent of FY12 accessions have AFQT scores at or above the 50<sup>th</sup> percentile; this is the highest percentage ever recorded for the AVF and considerably above the 60 percent benchmark and the 50 percent observed within the comparable civilian population. Across the DOD services, a higher proportion of male than female accessions scored in the AFQT's 50<sup>th</sup> percentile or above; overall, 76 percent of female and 79 percent of male accessions scored in the top half of the distribution (see appendix table B-4).8

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 50<sup>th</sup> percentile or above on the AFQT. Since 98 percent of DOD accessions had Tier 1 educational credentials, the main delineation for becoming a high-quality applicant or

14

 $<sup>^{8}</sup>$  In the civilian population, 52 percent of men and 50 percent of women scored at or above the  $50^{th}$  percentile.

accession is the AFQT score. When comparing the percentage of high-quality accessions over time, an interesting pattern emerges since the beginning of the AVF (figure 7).

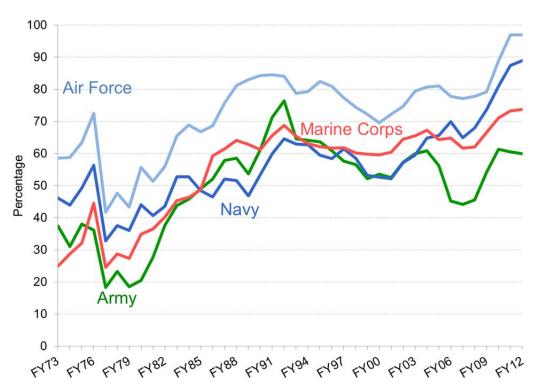


Figure 7. Percentage of high-quality AC NPS enlisted accessions by service, FY73-FY12

Note: Data are from appendix table D-9. Enlisted accessions include only NPS enlisted accessions.

First, there was a significant drop between FY77 and FY81 due primarily to a misnorming (scoring) of the ASVAB, which led to erroneous enlistment of many low-scoring recruits. Second, correcting the misnorming and increasing recruiting budgets significantly increased the proportion of high-quality recruits (between 20 and 30 percentage points for all services).

The decade of the 1990s showed general stability and, despite unfortunate fluctuations in recruiting budgets resulting in short-term setbacks in recruit quality (particularly in the Army), all services have increased the quality of their accessions since the mid-2000s. Since the advent of the AVF, the Air Force has had the highest percentage of high-quality recruits.

In FY12, the AVF had extraordinary success accessing high-quality personnel. The percentages of high-quality recruits were 97 percent in the Air Force, 89 percent in the Navy, 74 percent in the Marine Corps, and 60 percent in the Army.

#### Relationship between high-quality accessions and the civilian unemployment rate

The importance of the state of the civilian economy, although beyond the services' control, cannot be overemphasized. Recruiting is more difficult when the economy is robust and civilian unemployment low; it is less challenging today when jobs are more difficult to find and the unemployment rate is relatively high. This is shown in figure 8, which illustrates the positive relationship between the unemployment rate and recruit quality.

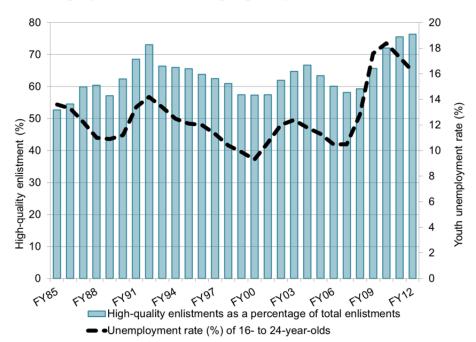


Figure 8. The unemployment rate and high-quality NPS recruits

As the economy recovers and reverts back to more typical and lower unemployment rates, recruiting will become more difficult, and we should expect NPS recruit quality to fall. The challenge for the services will be to ensure that recruiting budgets are sufficient to implement the various policy levers available to them—enlistment bonuses, educational benefits, numbers of recruiters, funds for recruiting operations, and advertising—so that recruit quality does not fall too close to the minimum DOD benchmarks.

As we have noted, the overwhelming majority of AC accessions are NPS. For the past few years, however, with civilian unemployment rates very high and recruiting less challenging, the number of PS AC enlisted accessions has been unusually small. In fact, there is a noticeable negative relationship between the unemployment rate and the percentage of PS accessions (see figure 9). Because PS recruits enlist with more years of experience and higher grades than NPS recruits, they are more expensive. This is why

the number of PS recruits falls when the civilian unemployment rate is high and the services find it relatively easy and less expensive to obtain high-quality NPS recruits. In contrast, in periods of relatively low unemployment (such as FY00–FY02 and FY06–FY08) when recruiting was more difficult, the percentage of PS accessions was highest.<sup>9</sup>

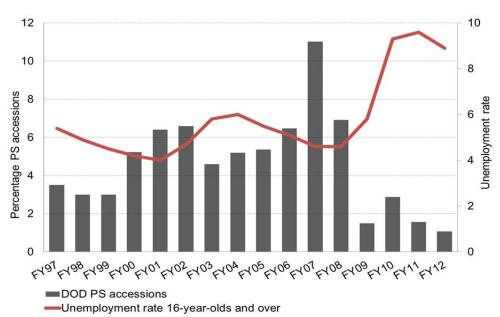


Figure 9. Unemployment rate and percentage of AC PS enlisted accessions, FY97-FY12

#### Marital status of AC personnel

Men in the enlisted force are considerably more likely than their civilian counterparts to be married. Although figure 10 shows data for FY12 only, these differences are long-standing. The differences in marriage rates occur while people are in the military, as male enlisted accessions closely approximate the age-specific marriage rates of their civilian counterparts (see appendix tables A-2 and B-2).

Enlisted women are more likely to be married than civilian women until about their mid-thirties. As with men, age-specific marriage rates for female applicants and accessions are similar to those of civilian women, so the differences in marriage rates occur after accession.

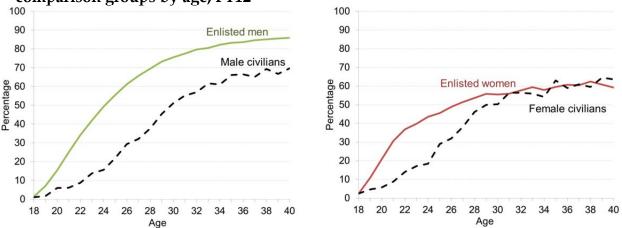
The civilian comparisons for men and women are with the civilian labor force. <sup>10</sup> Except at very young ages, men in the civilian labor force are more likely to be married than

<sup>&</sup>lt;sup>9</sup> In FY07, the Army enlisted 17,119 PS AC accessions and the Marine Corps enlisted 1,566. In contrast, the numbers were 1,362 for the Army and zero for the Marine Corps in FY12.

<sup>&</sup>lt;sup>10</sup> Women in the civilian labor force are less likely to be married (particularly in the child-bearing years) than are women in the civilian population.

are women. Figure 10 shows the male civilian benchmark marriage rate for enlisted personnel leveling off at about 70 percent, while the female rate levels off at about 60 percent.

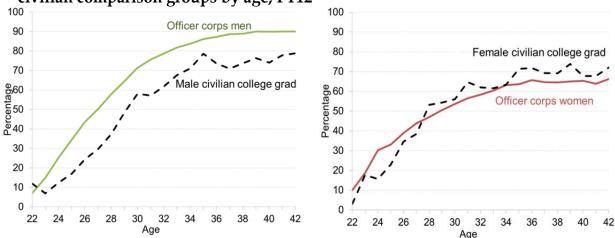
Figure 10. Male and female marriage rates of AC enlisted personnel and civilian comparison groups by age, FY12



Note: Data are from appendix table B-16. The civilian comparison group is made up of members of the civilian workforce age 17 and older, Sep. 2012.

Figure 11 shows marriage rates for the AC commissioned officer corps. While male officers are considerably more likely to be married than their college-educated civilian counterparts, the same is not true for female officers. Female officer marriage rates are roughly similar to those for female civilians. It is worth noting that male marriage rates for college-educated civilians in the labor force are higher than female marriage rates. A similar pattern occurs in the military, where male commissioned officers, by age, are more likely to be married than female commissioned officers.

Figure 11. Male and female marriage rates of AC commissioned officer corps and civilian comparison groups by age, FY12



Note: Data are from appendix table B-24. The civilian comparison group is college graduates in the civilian labor force (21- to 49-year-olds), Sep. 2012.

There are also some interesting differences in marriage rates by age for enlisted personnel versus commissioned officers, particularly for men, that 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, since a college degree is required.
- Married percentages increase sharply with age.

Thus, if we compare marriage rates by age for 25-, 30-, and 35-year-old men, we find:

- 56, 76, and 83 percent of enlisted men are married.
- 34, 71, and 86 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. For women, enlisted personnel are more likely to be married than commissioned officers until their early thirties when the rates converge.

## Race and ethnicity of AC NPS accessions, commissioned officer gains, enlisted force, and commissioned officer corps

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, and the ethnic category is either Hispanic or non-Hispanic. Although Hispanic accessions can be of any race, the vast majority identify themselves as white. In addition, DOD added a category for two or more races in FY03; about 5 percent of FY12 NPS AC accessions reported two or more races (see appendix table B-10).

The Hispanic population has been growing rapidly. In FY78, Hispanics made up 6.1 percent of both NPS enlisted accessions and civilians of comparable ages; in FY12, they made up 16.9 percent of accessions and 20.7 percent of civilians.

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 percentages of black accessions have increased to where they now account for 16.8 percent of NPS accessions—a greater proportion than they are of the 18- to 24-year-old civilian population (15.8 percent).

There are fairly substantial differences *by service* in the percentages of non-Hispanic black accessions, particularly in the early years of the AVF (see figure 12). At the start of the AVF, percentages in the Army and the Marine Corps considerably exceeded civilian percentages; however, in the mid-1980s, percentages in the Navy began to rise, while percentages in the Marine Corps began to fall. In FY12, all services except the Marine Corps exceeded the comparable civilian percentages, with the Army having the highest percentage of black accessions and the Marine Corps the lowest.

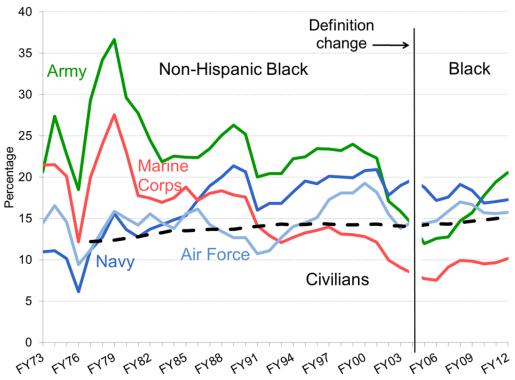
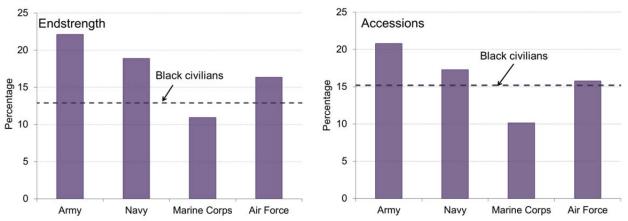


Figure 12. Percentage of black AC NPS enlisted accessions by service, FY73-FY12

Note: Data for FY73 to 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–FY12 NPS black accessions and 18- to 24-year-old black civilians are from appendix table D-26. With the definition change, a distinction is no longer made between Hispanic and non-Hispanic blacks.

We now turn to a series of four figures that compare racial and ethnic representation in the FY12 AC force with representation in the FY12 gains to that force. We begin in figure 13 with a comparison of black enlisted endstrength with black NPS enlisted accessions. Both panels in the figure have horizontal lines that illustrate civilian benchmark representation (12.9 percent for the endstrength benchmark of the 18- to 44-year-old civilian workforce and 15.2 percent for the accession benchmark of the 18- to 24-year-old population). Except for the Marine Corps, black servicemembers are more heavily represented in the enlisted force than in the civilian population. Since NPS black Marine Corps accessions are considerably below population percentages, the underrepresentation of blacks in the enlisted Marine Corps can be expected to continue.

Figure 13. Black representation in AC enlisted force and AC NPS enlisted accessions by service, FY12

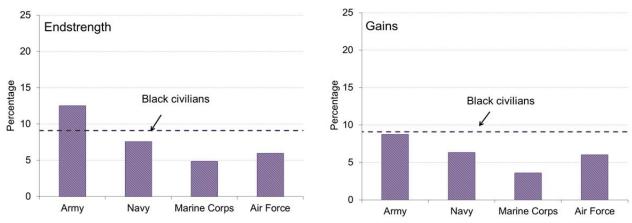


Note: Data are from appendix tables B-3 and B-17. The civilian comparison for enlisted endstrength is the 18- to 44-year-old civilian labor force; the civilian comparison for NPS enlisted accessions is the 18- to 24-year-old civilian population. About 5 percent of the observations for endstrength are missing race identifiers; only 1 percent of the observations for accessions are missing race identifiers.

Figure 14 shows black representation in the AC commissioned officer corps. Since a college degree is required for commissioned officers, the civilian comparisons are restricted to those with college degrees. The civilian college graduate population is less diverse in terms of race than the broader civilian labor force (compare figures 13 and 14).

Even with the commissioned officer civilian benchmark of the college graduate workforce, blacks are underrepresented in the Navy, Marine Corps, and Air Force commissioned officer corps, and they are slightly overrepresented in the Army (12.5 percent of commissioned officer vice 9.1 percent of the benchmark population). Blacks are underrepresented in FY12 commissioned officer gains in all services but the Army. Also, the percentages for black gains in each service are generally a little smaller than the percentages for the force. With similar retention patterns, force diversity decreases when the percentage of minority accessions (gains for the officer corps) is smaller than the group's percentage of endstrength. Thus, the underrepresentation of blacks in the AC commissioned officer corps will continue unless black commissioned officer retention greatly exceeds overall commissioned officer retention.

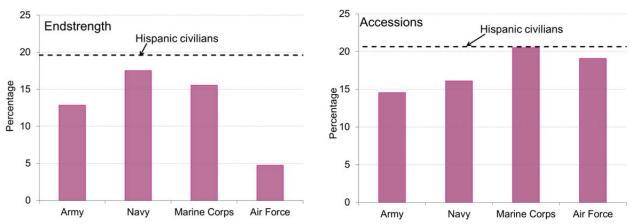
Figure 14. Black representation in AC commissioned officer corps and gains by service, FY12



Note: Data are from appendix table B-25. The civilian comparison for the commissioned officer corps is the 21- to 49-year-old college graduate workforce; the civilian comparison for AC commissioned officer gains is the 21- to 35-year-old civilian college graduate population.

Figure 15 examines Hispanic representation for the AC enlisted force. Again, the enlisted civilian benchmark for endstrength is the 18- to 44-year-old labor force, while the benchmark for NPS accessions is the 18- to 24-year-old population.

Figure 15. Hispanic representation in AC enlisted force and NPS accessions by service, FY12



Note: Data are from appendix tables B-3 and B-17. The civilian comparison for enlisted endstrength is the 18- to 44-year-old civilian labor force; the civilian comparison for AC NPS enlisted accessions is the 18- to 24-year-old civilian population.

The Hispanic population has grown rapidly, and representation in the enlisted force has not kept pace with that growth. Hispanics are underrepresented in all services in the AC enlisted force, and Hispanic FY12 NPS enlisted accessions (while at higher proportions than endstrength) are also underrepresented for all services except the

Marine Corps.<sup>11</sup> At less than 5 percent of the Air Force's AC enlisted strength, Hispanic representation is lowest in the Air Force.

Relative to the civilian college graduate populations, AC Hispanic commissioned officers are underrepresented in all services (see figure 16). Moreover, Hispanic representation in FY12 gains does not suggest increasing representation. This is a particular problem in the Air Force, where only 1.5 percent of FY12 commissioned officer gains were Hispanic.

25 Gains Endstrength 20 20 Percentage 10 Percentage Hispanic civilians Hispanic civilians 10 5 5 0 Army Navy Marine Corps Navy

Figure 16. Hispanic representation in AC commissioned officer corps and gains by service, FY12

Note: Data are from appendix table B-25. The civilian comparison for the commissioned officer corps is the 21- to 49-year-old college graduate workforce; the civilian comparison for AC commissioned officer gains is the 21- to 35-year-old civilian college graduate population.

## AC women: NPS enlisted accessions, commissioned officer gains, enlisted endstrength, and the commissioned officer corps

Figures 17 and 18 display the increases in the percentage of female DOD enlisted NPS accessions and commissioned officer gains, as well as their respective strengths over the last 40 years. At the onset of the AVF in FY73, women represented 5 percent of NPS enlisted accessions and just over 2 percent of enlisted endstrength. 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 has been decreasing slightly over the past decade, falling to 14.3 percent in FY12. Clearly, female retention rates are lower than male retention rates.

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<sup>&</sup>lt;sup>11</sup> There are few missing ethnic identifiers for the enlisted force or NPS accessions.



Figure 17. Female share of NPS enlisted accessions and enlisted endstrength, FY73-FY12

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

In FY12, female representation among enlisted accessions/commissioned officer gains were as follows:

- Army 14.7 percent enlisted and 21.0 percent officer
- Navy 23.2 percent enlisted and 23.0 percent officer
- Marine Corps 8.5 percent enlisted and 8.6 percent officer
- Air Force 18.5 percent enlisted and 27.6 percent officer<sup>12</sup>

Female representation in the commissioned officer corps has increased steadily since FY73, reaching 16.8 percent in FY12. The Air Force leads the other services in both female officer and enlisted representation, but the Army and Navy are not far behind. In FY12, female representation in the force was as follows:

- Army 12.8 percent enlisted and 17.6 percent commissioned officer
- Navy 17.0 percent enlisted and 16.7 percent commissioned officer
- Marine Corps 7.1 percent enlisted and 6.3 percent commissioned officer
- Air Force 18.9 percent enlisted and 19.2 percent commissioned officer

<sup>&</sup>lt;sup>12</sup> Air Force NPS female enlisted accessions have been about this level since FY10. See tables D-5 and D-16.

The Marine Corps has the smallest percentages of women in both the enlisted force and the commissioned officer corps. While the female percentage of commissioned officers and enlisted personnel are similar to each other in the Navy, Air Force, and Marine Corps, the Army's female percentage of its enlisted force is considerably smaller than the female percentage of its commissioned officer corps.<sup>13</sup>

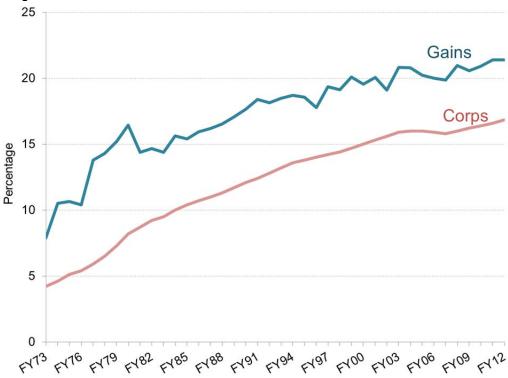


Figure 18. Female share of NPS commissioned officer gains and the commissioned officer corps, FY73-FY12

Note: Data are from appendix tables D-16 and D-19.

As in the civilian sector, male and female military personnel are not distributed equally across occupational groups. For enlisted personnel, combat occupations are the largest occupational grouping in the Army and Marine Corps. In the past, women have not been permitted to serve in most of these occupations, but now most are being opened. This will provide more opportunities for women, but it remains to be seen whether this will appreciably increase women's representation in the military. Except in the Navy, the dominant female occupational area is "Administrators" (27.5 percent of enlisted women). Enlisted women are also overrepresented in the "Medical" area, particularly in the Air Force. In the Navy, the dominant occupational area, "Electrical," is the same for

 $<sup>^{13}</sup>$  This difference has widened considerably in the last decade. In FY02, women made up 15.5 percent of the enlisted force and 16.0 percent of the officer corps.

enlisted men and women. This occupational group encompasses 28.9 percent of the men and 22.7 percent of the women (see appendix table B-20).<sup>14</sup>

Over 40 percent of female commissioned officers in the Army and Navy and 39 percent in the Air Force are in "Health Care" occupations. The dominant commissioned officer occupational area is "Tactical Operations." Although these occupations are still predominately male, Navy, Marine Corps, and Air Force female officers have made some headway in the last decade.

Table 3. Percentage of male and female commissioned officers in tactical occupations by service, FY02 and FY12

	Percentage in tactical occupations						
	Me	en		Women			
Service	FY02 FY12			FY02	FY12		
Army	40.0	37.0		7.1	5.0		
Navy	42.6	43.3		13.3	19.8		
Marine Corps	53.6	51.1		16.5	19.0		
Air Force	36.2	42.8		10.0	14.5		

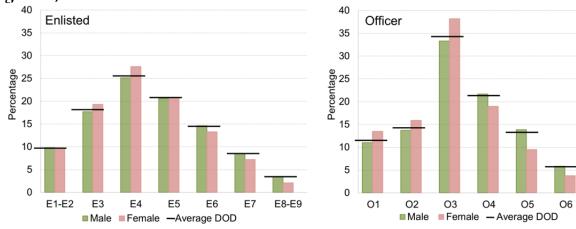
Source: Appendix table B-28.

#### Paygrade distribution of women and minorities

Figure 19 illustrates the FY12 paygrade distribution of AC enlisted members and commissioned officers. The horizontal line in each figure indicates the overall DOD percentage in the paygrade. If the horizontal line and the male and the female bars are all exactly the same height, then men and women are equally distributed in the paygrade. In general, women are overrepresented in the junior grades and men are overrepresented in the more senior grades. The differences are largest in the most senior grades. In addition, the differences are usually larger for commissioned officers than for enlisted personnel.

 $^{\rm 14}$  The Marine Corps has no medical personnel because the Navy supplies it with medical personnel.

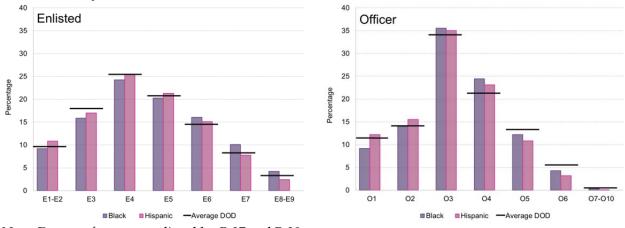
Figure 19. AC enlisted and commissioned officer endstrength by paygrade and gender, FY12



Note: Data are from appendix tables B-36 and B-38.

Figure 20 displays the same information for AC black and Hispanic members. If the horizontal lines and the bars representing black and Hispanic servicemembers were all exactly the same height, it would mean that the overall percentage of servicemembers in that paygrade was identical to the percentages of black and Hispanic servicemembers in that paygrade.

Figure 20. AC enlisted and commissioned officer endstrength by paygrade and race/ethnicity, FY12



Note: Data are from appendix tables B-37 and B-39.

Contrary to what one might expect, black servicemembers are underrepresented in the junior enlisted and officer paygrades but overrepresented in the senior paygrades. This is particularly true for the top enlisted leadership positions (E8 and E9), and it reflects both strong black accession percentages in the 1990s and black servicemembers' very high continuation rates and competitiveness in the promotion process. AC Hispanic enlisted personnel are overrepresented in the E1-E2 grades and underrepresented in grade E7 and above. For officers, blacks and Hispanics tend to be well represented

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relative to the average distribution through paygrade O4, but they are underrepresented in the more senior grades.

#### Geographic distribution of AC enlisted accessions

There are some differences in the regional distribution of accessions before and after FY85 (see figure 21). The Census Bureau divides the country into four regions:

- Northeast includes states in the New England and Middle Atlantic divisions
- North Central includes states in the East North Central and West North Central divisions
- South—includes states in the South Atlantic, East South Central, and West South Central divisions
- West—includes states in the Mountain and Pacific divisions. 15

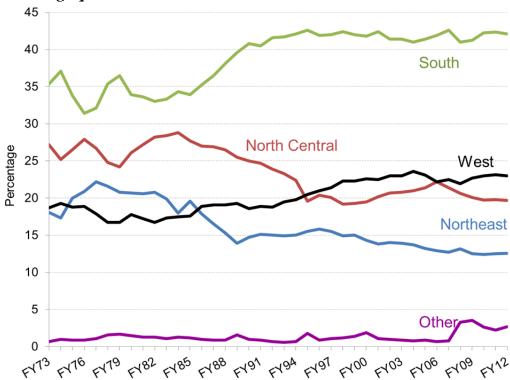


Figure 21. Geographic distribution of NPS enlisted accessions, FY73-FY12

Note: Data are from appendix table D-10.

From FY73 to FY85, roughly 35 percent of enlisted accessions came from the South and 25 percent came from the North Central region, while the remaining 40 percent of

 $<sup>^{15}</sup>$  For completeness, accessions from U.S. territories, possessions, or "unknown" regions are grouped together in the "other" category.

accessions came from the West and the Northeast. After FY85, accessions were drawn more heavily from the South and the West and less so from the Northeast and North Central regions. This reflects general population trends because the "Sunbelt" states in the South and West regions made up an increasingly larger share of the U.S. population in the 1980s and 1990s. As recruiting commands place recruiters across the country, they account for geographic shifts in the population, as well as the propensity to serve in each region.

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 where the officers grew up.

Figure 22 offers a more interesting way of examining the geographic distribution of recruits. In it, we show the ratio of a state's accession share to the state's share of the U.S. 18- to 24-year-old population.

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

The FY12 ratios ranged from 0.26 to 1.44. Indiana had a ratio of 1—meaning its share of accessions exactly matched its share of the 18- to 24-year-old population. Twenty-seven states could be considered overrepresented in accessions (ratios greater than 1), and 22 states and the District of Columbia could be considered underrepresented (ratios less than 1). Idaho and Florida had the highest ratios, and D.C. contributed the fewest accessions relative to its population. These different ratios reflect differences in qualification rates, propensities, and geographic differences in recruiting resources.

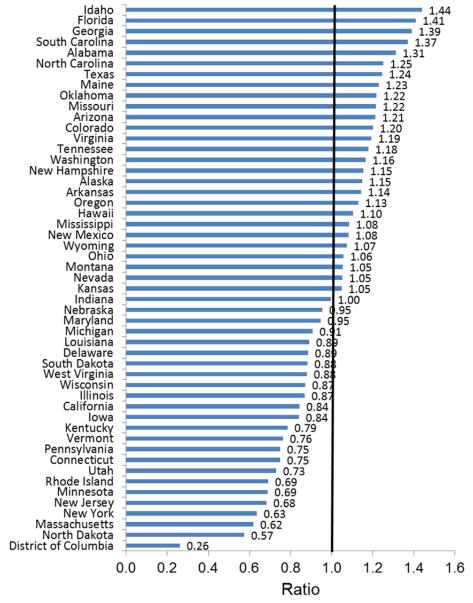


Figure 22: Enlisted accession-share-to-civilian-share ratios, by state, FY12

Note: Data are from appendix table B-46. Enlisted accessions include only NPS enlisted accessions.

### Neighborhood median income of AC NPS enlisted accessions

There was considerable concern at the advent of the AVF about the representation of the force, particularly in terms of socioeconomic characteristics. But researchers found that AVF accessions in the early years were, for the most part, representative of the U.S.

population in terms of their socioeconomic backgrounds. <sup>16</sup> More recent studies report similar findings on socioeconomic characteristics, such as neighborhood income, for the 1990s and early years of this century. <sup>17</sup> For AC NPS enlisted accessions, Lien et al. updated that research, using the median income of AC NPS enlisted accessions' census tracts as a proxy for neighborhood income. <sup>18</sup>

Figure 23 shows FY12 AC NPS enlisted accessions by the income quintile of their home-of-record census tracts at accession. The 20-percent line defines each income quintile. Relative to all households, FY12 NPS accessions are underrepresented in census tracts with the lowest and the highest median incomes, and those in the middle three quintiles are overrepresented. Lower representation in the lowest neighborhood income quintile may be explained by the military's educational standards. In FY12, virtually all NPS accessions were high school diploma graduates, and high school dropout rates are higher in low-income neighborhoods. For the highest neighborhood income quintile, the slightly lower representation is probably due to higher college attendance rates in those neighborhoods.

The findings depicted in figure 23 are important because they dispel the myth that the military gets the majority of its recruits from the lower socioeconomic classes—those families with the lowest income levels. Quite the opposite is true. The military actually gets a larger proportion of its recruits from the highest compared with the lowest quintile, and a successively larger proportion from the three middle quintiles.

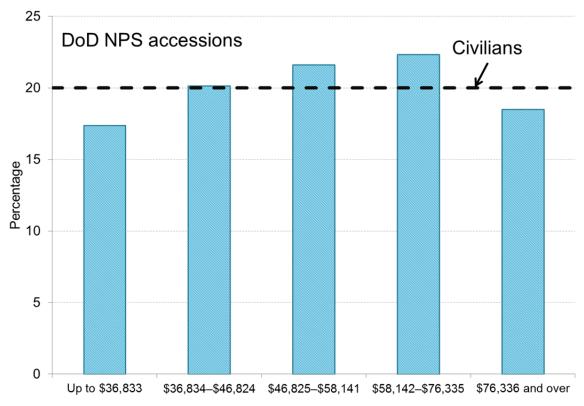
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<sup>&</sup>lt;sup>16</sup> See, for example, Richard N. Cooper, *Military Manpower and the All-Volunteer Force*, RAND Publication, R-1450-ARPA, 1977.

<sup>&</sup>lt;sup>17</sup> 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.

 <sup>&</sup>lt;sup>18</sup> 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.
<sup>19</sup> The income quintile ranges are based on all U.S. households in census tracts with non-missing median household incomes. FY12 AC NPS enlisted accession data were provided by DMDC and linked by census tract to median household income data from the Census' 2007-2011 American Community Survey.
<sup>20</sup> See <a href="http://www.huffingtonpost.com/2011/10/04/children-low-income-neighborhoods-high-school\_n\_994580.html">http://nces.ed.gov/fastfacts/display.asp?id=51</a>.

Figure 23. Quintiles for neighborhood median household income of FY12 AC NPS enlisted accessions



Houshold income quintile

Note: Data are found in the first panel of table B-41.

#### Section III: DOD reserve component (RC)

The DOD RC consists of six elements: the Army National Guard (ARNG), the Army Reserve (USAR), the Navy Reserve (USNR), the Marine Corps Reserve (USMCR), the Air National Guard (ANG), and the Air Force Reserve (USAFR). In FY12, the RC was approximately 60 percent the size of the AC with a total endstrength of 840,320:

- 713,698 enlisted (84.9 percent of endstrength)
- 114,678 commissioned officers (13.6 percent of endstrength)
- 11,944 warrant officers (1.4 percent of endstrength).

Note that 16.1 percent of Army, 9.6 percent of Marine Corps, and 3.0 percent of Navy officers are warrants. The Air Force has no warrant officers.

In FY12, the RC gained 116,337 enlisted personnel, 14,210 commissioned officers, and 1,002 warrant officers.<sup>21</sup> Although the AC has few prior-service (PS) accessions, many RC enlisted gains are PS personnel. In FY12, gains in the enlisted RC varied from 75.8 percent PS personnel in the USNR to 28.4 percent PS personnel in the ARNG (see table 2).

#### Overview and comparisons of the RC and the AC

The reserves can be described in at least three ways:

- By relative size
- By service
- By guard or selected reserve component

In terms of size, about two-thirds of reserve endstrength is made up of Army units (ARNG and USAR), with the other service elements making up much smaller shares. About 55 percent of reserve endstrength is in Army Guard or Air Force Guard units. The ARNG is by far the largest component, with over 40 percent of reserve personnel. The smallest reserve component is the USMCR, with less than 5 percent of all reserve personnel. Figure 24 shows the historical distribution of RC endstrength (enlisted personnel plus commissioned officers) across the six service elements.

For most of the years since FY75 and consistently since FY93, the RC has had a higher enlisted-to-commissioned-officer ratio than the AC (see figure 25).

<sup>&</sup>lt;sup>21</sup> RC data from DMDC are only available as gains. A gain is a transaction in the reserve database and reflects the addition of an SSN that was not in the previous file.

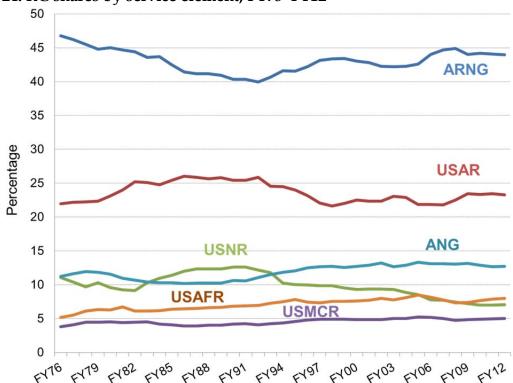


Figure 24. RC shares by service element, FY75-FY12

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

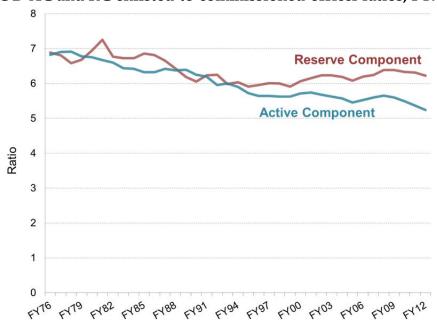


Figure 25. DOD AC and RC enlisted-to-commissioned-officer ratios, FY75-FY12

Note: Data are from appendix tables D-11, D-17, D-20, and D-21. These ratios omit warrant officers.

In the AC, the enlisted-to-commissioned-officer ratio varied by service with the Marine Corps having the highest ratio and the Air Force the lowest. In FY12, the RC had 6.3 enlisted personnel for every commissioned officer (the comparable ratio in the AC was 5.4), but, as in the AC, these overall ratios mask large differences (see table 4).

Table 4. Enlisted-to-officer ratios by RC, FY12

Ratios	ARNG	USAR	USNR	USMCR	ANG	USAFR
Enlisted-to-						
commissioned officers	8.7	5.2	3.6	9.9	4.0	6.2
Enlisted-to-						
commissioned and	7.1	4.7	3.5	9.1	4.0	6.2
warrant officers		_,_			_,_	

In the RC, the enlisted-to-commissioned-officer ratio varies from 3.6 in the USNR to 9.9 in the USMCR. Adding warrant officers does not appreciably narrow the range of these ratios. While the Air Force has a higher enlisted-to-officer ratio in its Reserve than in its Guard (6.2 vice 4.0), the Army has a higher ratio in its Guard than in its Reserve (8.7 vice 5.2 or 7.1 vice 4.7 if we include warrant officers).

#### Age distributions

One stark difference between the AC and the RC is the age distribution of personnel. Figure 26 shows these distributions; the first panel for enlisted personnel and the second for commissioned officers. The right-had side of each panel illustrates the RC age distribution while the left hand side shows the AC distribution. Looking first at enlisted personnel, it is clear that the AC enlisted force is younger and the RC enlisted force is older. Almost 12 percent of enlisted reservists are 45 and older while the percentage for the AC enlisted force is strikingly smaller – 2 percent. The differences for officers are equally stark; while 30 percent of RC officers are 45 and older, the comparable percentage in the AC is only 12 percent.

50+ Officer **Enlisted** 45-49 45-49 40-44 40-44 35-39 35-39 30-34 30-34 25-29 25-29 20-24 20-24 17-19 17-19 40 20 20 40 30 20 20 30 Percentage Percentage ■AC ■RC ■AC ■RC

Figure 26. DOD AC and RC age distributions, FY12

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

#### Quality of RC NPS enlisted gains

Like the AC, the RC recruits mostly those with Tier 1 education credentials and AFQT scores at or above the 50<sup>th</sup> percentile.<sup>22</sup> In FY12, the RC had a smaller proportion of Tier 1 enlisted gains than the AC; 88.6 percent of RC enlisted gains were Tier 1 (see appendix table C-6), compared with 97.5 percent of NPS AC accessions (see appendix table B-7). The USMCR and the USAFR had the highest percentages, with 99 percent Tier 1 enlisted recruits.

Almost 70 percent of all NPS RC enlisted gains had AFQT scores in the top half of the distribution in FY12, compared with slightly over 75 percent of NPS AC accessions (see appendix tables B-4 and C-4). For each service's guard and reserve elements, well over 60 percent of recruits scored at or above the 50<sup>th</sup> percentile on the AFQT.

#### RC marriage rates, gender, and racial/ethnic representation

There are some notable differences in marriage 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 marriage rates are closer to those of civilians than to AC personnel (see table 5 where, within age and gender groups, we have bolded the category with the highest marriage rates).

 $^{22}$  Virtually all Tier 1 recruits are high school diploma graduates. However, Tier 1 also includes adult education diplomas, those with one semester of college, and those with educational credentials beyond a high school diploma.

Table 5. Percentages of married for enlisted AC and RC personnel, with civilian comparisons

	Enlisted men			Enlisted women			
Age	AC	RC	Civilian	AC	RC	Civilian	
20	15.5	3.4	6.1	20.8	5.8	5.7	
25	55.6	30.3	22.0	45.6	30.8	29.0	
30	75.6	56.2	51.2	55.5	44.7	50.2	
35	83.3	70.5	66.2	59.5	52.1	63.0	
40	85.9	76.0	69.7	59.2	49.9	63.6	
45	87.4	78.1	72.3	54.4	50.5	64.1	

Note: See appendix tables B-16 and C-12. The civilian data are the civilian labor force age 17 and older and are from the Bureau of Labor Statistics' Current Population Survey, Sep. 2012.

The starkest differences are at younger ages: for example, at age 20, both AC men and AC women are between 3 and 4 times more likely to be married than reservists or civilians. Even at older ages, AC men are more likely to be married than RC men, and RC men are more likely to be married than comparable civilians.

While the ordering of male age-specific marriage rates from highest to lowest are always AC, RC, and civilians, the same is not true for women. At age 20, AC women are much more likely to be married than RC or civilian women. However, that pattern changes by age 35, when civilian women are more likely to married than either AC or RC women. It is interesting that, from age 30 on, RC women are the least likely to be married.

Abstracting from patterns by age, AC enlisted personnel in FY12 overall were more likely to be married than RC enlisted component personnel (53 percent vice 43 percent). The marriage rates of AC and RC commissioned officers are similar (68 percent vice 69 percent).

Like the AC, the RC strives for a diverse force. In fact, both on the enlisted and officer sides, the RC has a higher percentage of female personnel. In FY12, while the RC enlisted force was 18.2 percent female, the AC enlisted force was 14.3 percent female. Within the RC's enlisted forces, the percentage of women varied from 25.7 percent for the USAFR to 4.2 percent for the USMCR. For commissioned officers, the AC was 16.8 percent female, whereas the RC was 19.3 percent female. The percentages varied from 26.4 percent in the USAFR to 7.3 percent in the USMCR.<sup>23</sup>

While the RC is more diverse than the AC in terms of gender, it is somewhat less diverse in terms of racial or ethnic background. This statement, however, requires a

<sup>&</sup>lt;sup>23</sup> See appendix tables B-16 and C-11 for enlisted personnel and B-23 and C-18 for officers.

caveat because both AC and RC personnel data contain significant numbers of unknown racial or ethnic classifications. Table 6 shows these data.

Table 6. RC and AC race and ethnicity percentage distributions for enlisted personnel and commissioned officers. FY12

	Enlisted personnel				Commissioned officers			
	AC	RC	Civilians		AC	RC	Civilians	
Race								
White	68.0	74.6	77.7		78.9	80.1	78.8	
Black	18.3	16.3	12.9		8.7	9.8	9.1	
Asian	3.6	3.2	5.7		4.5	3.6	10.0	
Other	6.1	2.4	3.7		2.1	1.5	2.1	
Unknown	4.0	3.5	0.0		5.8	5.0	0.0	
Ethnicity								
Hispanic	12.5	10.9	19.6		5.5	5.7	8.3	
Unknown	1.7	0.9	0.0		4.5	1.6	0.0	

Note: The racial category "other" includes American Indian/Alaska Native (AIAN), Native Hawaiian/Pacific Islander, and two or more races.

The civilian data are from appendix tables B-17 for enlisted personnel and include the 18- to 44-year-old civilian labor force and are from appendix table B-25 for officers and include 21- to 49-year-old civilian college graduates. Note that the civilian age comparison group for RC enlisted personnel in table C-13 is for an older age group than the AC component comparison group. Civilian data do not include unknowns.

Data are from appendix tables C-13, C-20, B-17, and B-25.

For the enlisted force, black servicemembers are overrepresented in the RC and AC relative to comparable civilians, but Asians and Hispanics are underrepresented in both components. Since Hispanics are the fastest growing ethnic group, the services are all working to increase their Hispanic representation.

The civilian comparison group for commissioned officers includes only college graduates in which minority percentages, except for Asians, are smaller. Both RC and AC commissioned officer percentages for blacks are close to the civilian benchmark, but Asians are quite underrepresented. Both components lag in Hispanic officer representation.

#### Section IV: 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.<sup>24</sup>

In FY12, the Coast Guard's AC endstrength was 40,127:

- 33,340 enlisted personnel
- 6,787 commissioned officers and 1,722 warrant officers

The RC endstrength was 7,822:

- 6,638 enlisted members
- 1,184 commissioned officers and 160 warrant officers

The Coast Guard's AC has grown about 10 percent in the last decade, while the RC has stayed approximately the same size.

#### Quality of AC enlisted accessions

There was a sharp decrease in NPS enlisted accessions (from 3,332 in FY11 to 2,368 in FY12). Like the DOD services, the Coast Guard seeks high-quality recruits – those with AFQT scores at or above the 50<sup>th</sup> percentile and Tier 1 educational credentials.<sup>25</sup> And like the other services, the Coast Guard had a very successful recruiting year. Figure 27 illustrates this, comparing Coast Guard recruiting achievement with the other services. Slightly over 95 percent of U.S. Coast Guard recruits scored in the top half of the AFQT distribution, and almost 98 percent had Tier 1 educational credentials. The Coast Guard was second only to the Air Force in the quality of its recruits (see figure 27).

<sup>&</sup>lt;sup>24</sup> Title 14 of the United States Code governs the process by which authority over the Coast Guard may be transferred to DOD in wartime.

<sup>&</sup>lt;sup>25</sup> Virtually all Tier 1 recruits are high school diploma graduates. Tier 1 also includes adult education diplomas, those with one semester of college, and those with educational credentials beyond a high school diploma.

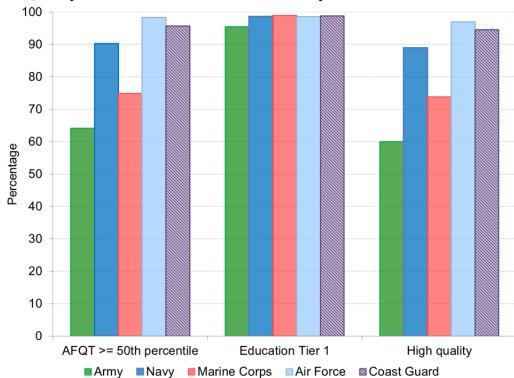


Figure 27. Quality of AC NPS enlisted accessions by service, FY12

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

In FY12, women accounted for 25.7 percent of AC enlisted accessions into the Coast Guard and 27.1 percent of AC commissioned officer gains.<sup>26</sup> If the Coast Guard maintains this level of female gains, there should be a fairly rapid growth in Coast Guard AC female endstrength.

As figure 28 shows, female accession or gain percentages exceed endstrength percentages for both officer and enlisted populations and in both the AC and RC. The Coast Guard has historically had a much higher percentage of female officers than enlisted personnel.

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<sup>&</sup>lt;sup>26</sup> Enlisted accessions include both PS and NPS accessions.

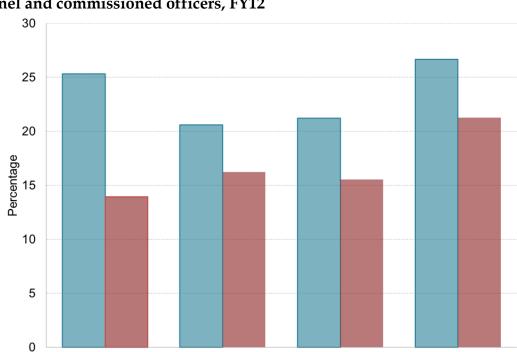


Figure 28. Female share of U.S. Coast Guard NPS gains and endstrength for enlisted personnel and commissioned officers, FY12

Note: This figure includes PS and NPS for enlisted gains and both warrant and commissioned officers. Data are from appendix tables E-5, E-10,E-12, E-16, E-19, E-20, E-22, E-24, E-27, and E-29.

Enlisted, RC

■ Endstrength

Officer, RC

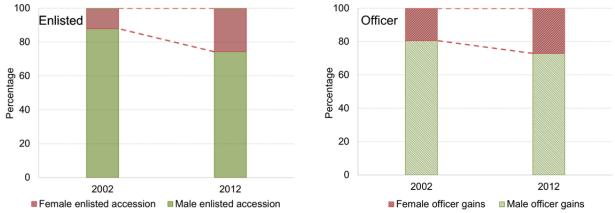
Officer, AC

■ Gains

Enlisted, AC

It is interesting to examine changes in the Coast Guard's demographics over the last decade. In particular, figure 29 shows that female shares of both enlisted accessions and commissioned officer gains have increased significantly since FY02. Indeed, the share of female accessions has increased by more than 50 percent.

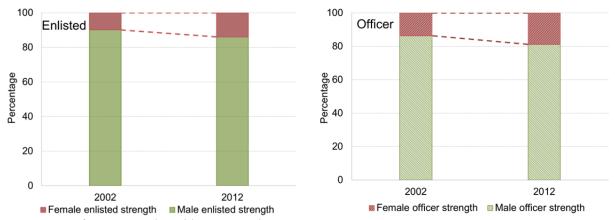
Figure 29. Male and female AC NPS enlisted accessions and commissioned officer gains in the U.S. Coast Guard, FY02 and FY12



Note: Data are from appendix tables E-6 and E-16. Enlisted accessions include only NPS enlisted personnel.

These increases in female accession shares in the last decade helped to increase female representation in the Coast Guard (see figure 30). Between FY02 and FY12, the female increase is somewhat larger in the commissioned officer corps than in the enlisted force.

Figure 30. Male and female AC enlisted and officer endstrength in the U.S. Coast Guard, FY02 and FY12



Note: Data are from appendix tables E-13 and E-16.

In terms of race and ethnicity, the Coast Guard has increased minority representation in recent years. However, it still lags behind the DOD military services.<sup>27</sup>

The next section recaps the highlights of the FY12 report of *Population Representation in the Military Services*.

<sup>&</sup>lt;sup>27</sup> Comparisons are difficult because Coast Guard data have a large number of unknowns for racial backgrounds, particularly for commissioned officer gains (see tables E-6, E-13, and E-16).

#### **Concluding highlights**

Since 1974, DOD has provided an annual report on the demographic and service-related characteristics of U.S. military personnel. Since 1997, these reports have been available electronically, making them easily accessible to policymakers, the media, and the public.

The U.S. military has a high-quality enlisted force compared with the civilian population. Nearly 100 percent of AC enlisted servicemembers in the AVF have high school diplomas; compare this with only about 75 percent in the civilian population. About 79 percent of them test in the top half of the ability distribution; compare this with only 50 percent of the civilian population. The socioeconomic backgrounds (as measured by neighborhood income) of these men and women generally reflect the U.S. population's distributions, although enlisted recruits are somewhat underrepresented in neighborhoods in the lowest and highest household income quintiles. Black servicemembers are somewhat overrepresented in the enlisted force relative to the civilian labor force; Hispanic representation, while growing in the enlisted military, is somewhat behind overall population growth. Geographically, the military gets its proportional share of recruits from the West and Midwest, but recruits from the South are overrepresented, and recruits from the Northeast are underrepresented. Women make up 14.3 percent of the enlisted force and 16.4 percent of the officer corps.

Minorities are underrepresented in the AC commissioned officer corps relative to their representation in the civilian labor force. But commissioned officers are college graduates. If we restrict the comparison to college graduates in the civilian labor force, we see a slightly different picture. Commissioned officers are somewhat less likely to be black—8.7 percent versus 9.1 percent for 21- to 49-year-old college graduates in the civilian workforce. Hispanics are underrepresented—5.5 percent versus 8.3 percent for 21- to 49-year-old college graduates in the civilian workforce. Finally, given the civilian benchmark of comparably aged college graduates in the civilian workplace, we find that Asians are the most underrepresented group, making up 10 percent of college graduates and only 4.5 percent of commissioned officers.

In FY12, AC endstrength was 1.39 million; RC endstrength was 840,000. The AC has greater racial and ethnic diversity than the RC, but the RC has a larger percentage of women. RC personnel are older than AC personnel, but personnel in both components are considerably younger than the civilian workforce. By age, military personnel are more likely than civilians to be married; AC male personnel are the most likely to be married.

Finally, FY12 was a banner year for recruiting. Not only did all DOD services and the Coast Guard achieve their numerical recruiting goals, but all achieved the highest quality marks since the inception of the All-Volunteer Force 40 years ago.