

Population Representation in the Military Services

Fiscal Year 2008 Report

Summary



Prepared by CNA for OUSD (Accession Policy)

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Introduction

This is the 35th annual Department of Defense (DOD) report on social representation in the U.S. military services and the Coast Guard. The fiscal year (FY) 2008 technical appendices (appendices A–E) provide current data on the demographic, educational, and aptitude characteristics of applicants, new recruits, enlisted personnel, and officers of the active and reserve components, as well as time-series information on selected variables. Except where otherwise noted, data are provided by the Defense Manpower Data Center (DMDC). Due to slight differences in definitions among the services, data provided may not match statistics reported by the Directorate for Information Operations and Reports, other DOD agencies, or the individual military services.

This summary provides the reader with highlights from the roughly 150 tables that can be found in the technical appendices. We focus on the following areas:

- Endstrength, accessions, and continuation rates
- Quality of enlisted accessions
- Representation of women in the U.S. military
- Representation of various racial and ethnic groups in the U.S. military
- Home communities of active component enlisted accessions

Wherever possible, we provide historical perspective by looking at how the current numbers compare with those from previous years.

Endstrength, accessions, and continuation rates

Basic numbers on FY 2008 endstrength and accessions

In table 1 we provide basic information on the sizes of the enlisted and officer populations in the active and reserve components of the U.S. military and U.S. Coast Guard. The table also includes information on the numbers of accessions that were achieved in each component.

Table 1: Endstrength and accessions for active duty and reserve components of the U.S. military and U.S. Coast Guard, FY 2008

Component	Enlisted Personnel ¹		Officers		Warrant Officers	
	End-strength	Accessions	End-strength	Accessions	End-strength	Accessions
Active duty						
Army	452,065	80,506	72,928	7,494	14,682	1,632
Navy	275,296	38,467	49,735	4,024	1,653	187
Marine Corps	178,213	37,981	18,297	1,838	1,905	225
Air Force	258,095	27,848	64,805	4,101	0	0
DOD total	1,163,669	184,802	205,765	17,457	18,240	2,044
Reserves²						
ARNG	321,605	66,612	31,685	4,053	7,061	993
USAR	161,003	40,455	33,184	3,992	2,837	396
USNR	53,222	15,737	14,780	1,814	134	10
USMCR	34,046	7,545	3,158	913	319	32
ANG	93,564	10,692	14,115	1,243	0	0
USAFR	52,396	7,559	15,169	1,514	0	0
DOD total	715,836	148,600	112,091	13,529	10,351	1,431
Coast Guard						
Active duty	33,228	3,895	6,548	446	1,586	195
Reserves	6,590	490	1,210	221	170	32

Notes:

1. Enlisted accessions for all components include non-prior service (NPS) and prior-service (PS) accessions.
2. The reserve components are the Army National Guard (ARNG), Army Reserves (USAR), Naval Reserves (USNR), Marine Corps Reserves (USMCR), the Air National Guard (ANG), and Air Force Reserves (USAFR).

Endstrength. The FY 2008 endstrength of the DOD active components included over 1.16 million enlisted personnel, nearly 206,000 commissioned officers, and over 18,000 warrant officers. These numbers are up slightly from FY 2007. The Army was the largest of the services with a total endstrength (enlisted plus commissioned and warrant officers) of roughly 540,000. The Marine Corps was the smallest of the services with a total endstrength of a little under 200,000.

The reserve components (consisting of the Army National Guard (ARNG), Army Reserve (USAR), Naval Reserve (USNR), Marine Corps Reserve (USMCR), Air

National Guard (ANG), and Air Force Reserve (USAFR)) totaled over 715,000 enlisted personnel, over 112,000 commissioned officers, and over 10,000 warrant officers. These numbers are also generally slightly higher or equal to what they were in FY 2007. The ARNG was by far the largest of the reserve components with a total endstrength of roughly 360,000. The USMCR was the smallest with a total endstrength of a little under 38,000.

In FY 2008, the Coast Guard included roughly 33,200 enlisted personnel, 6,500 commissioned officers, and 1,600 warrant officers, for a total endstrength of over 41,300. The Coast Guard Reserves consisted of roughly 6,600 enlisted personnel, 1,200 commissioned officers, and 170 warrant officers, for a total endstrength of nearly 8,000.

Accessions. Nearly 185,000 individuals joined the active duty enlisted ranks in FY 2008. Of these, roughly 172,000 were classified as non-prior service (NPS) while 13,000 prior-service (PS) recruits were returned to the ranks. At the same time, roughly 17,500 newly commissioned officers reported for active duty and 2,000 new warrant officers joined the ranks.

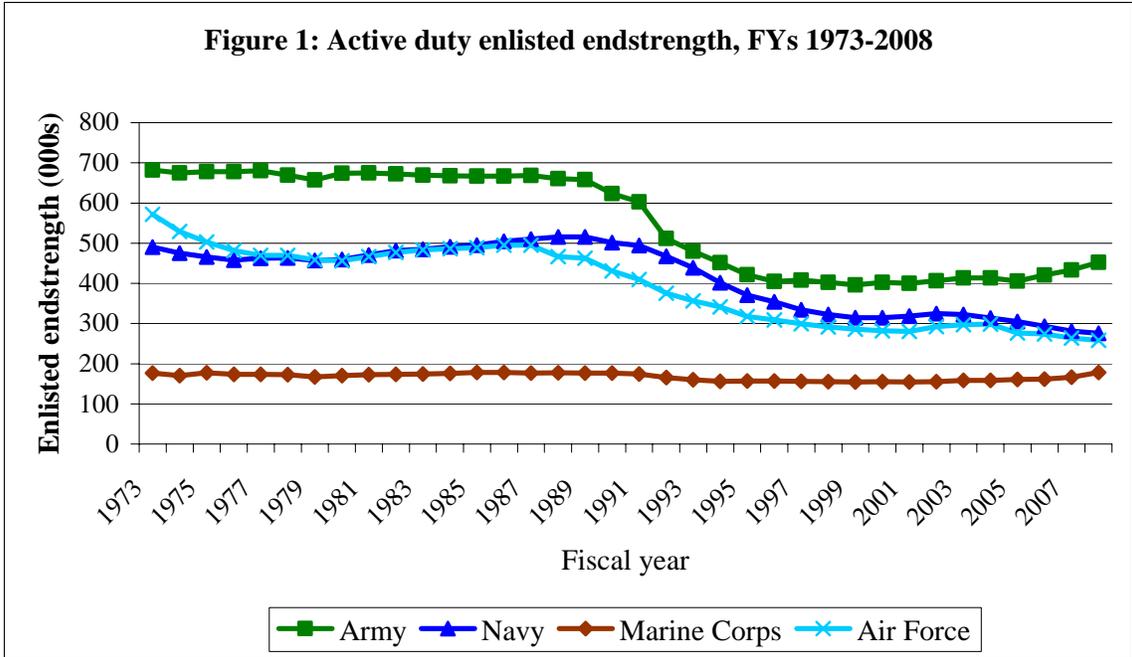
Among the reserve components, nearly 150,000 individuals joined the reserve enlisted ranks. Of these, approximately 81,000 were NPS, while nearly 68,000 were PS recruits. The reserve components also recruited roughly 13,500 new commissioned officers and nearly 1,500 new warrant officers in FY 2008.

In the Coast Guard, roughly 3,900 people joined the active duty enlisted ranks while an additional 490 joined the Coast Guard Reserve as enlisted personnel. The Coast Guard also recruited roughly 450 new commissioned officers and nearly 200 new warrant officers to its active component. Roughly 250 commissioned and warrant officers (combined) were added to the Coast Guard Reserve.

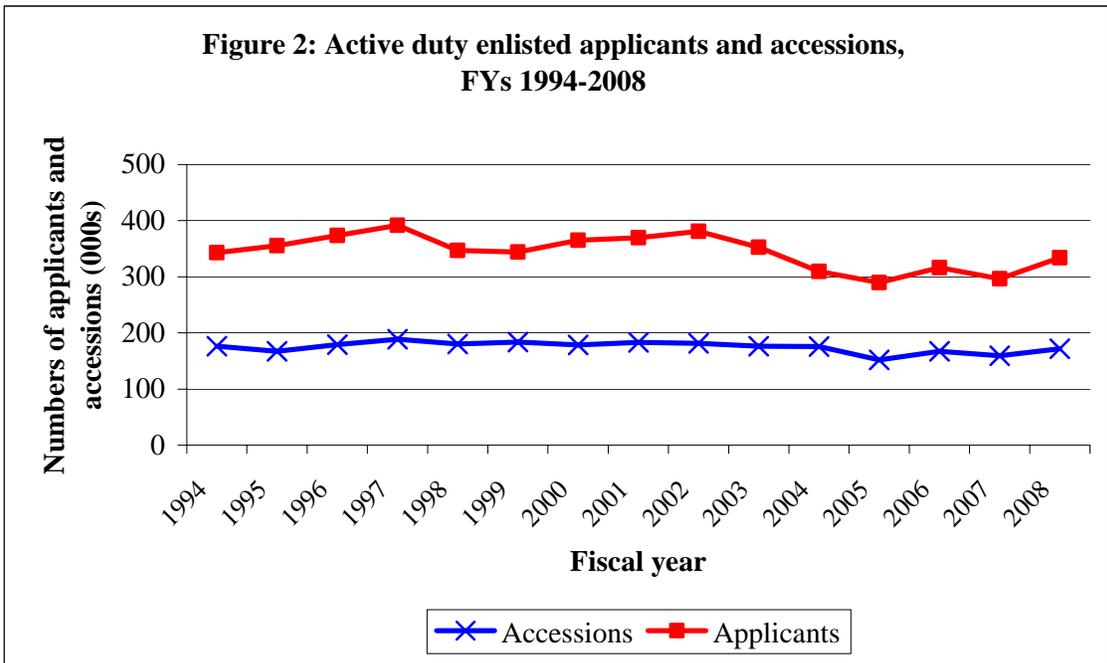
Putting FY 2008 endstrength and accession numbers into historical perspective

Active duty enlisted endstrength. Figure 1 illustrates how the enlisted endstrengths of the four active duty DOD components have changed over the past 35 years. In FY 2008 the DOD's four major branches accounted for slightly more than 1.16 million enlisted personnel. This number is down from the roughly 1.7 million enlisted personnel that were serving at the end of the Cold War.

Since FY 2003, the number of enlisted personnel in both the Navy and Air Force has fallen by 14 percent. During this same time, the number of enlisted personnel has grown by 9 percent in the Army and by 12 percent in the Marine Corps. Much of this growth can be attributed to the necessities of carrying out two simultaneous missions in Iraq and Afghanistan. Combined, the size of the enlisted force has fallen by 2.5 percent over the past 5 years, although it is slightly larger (1.8 percent) than it was in FY 2007.



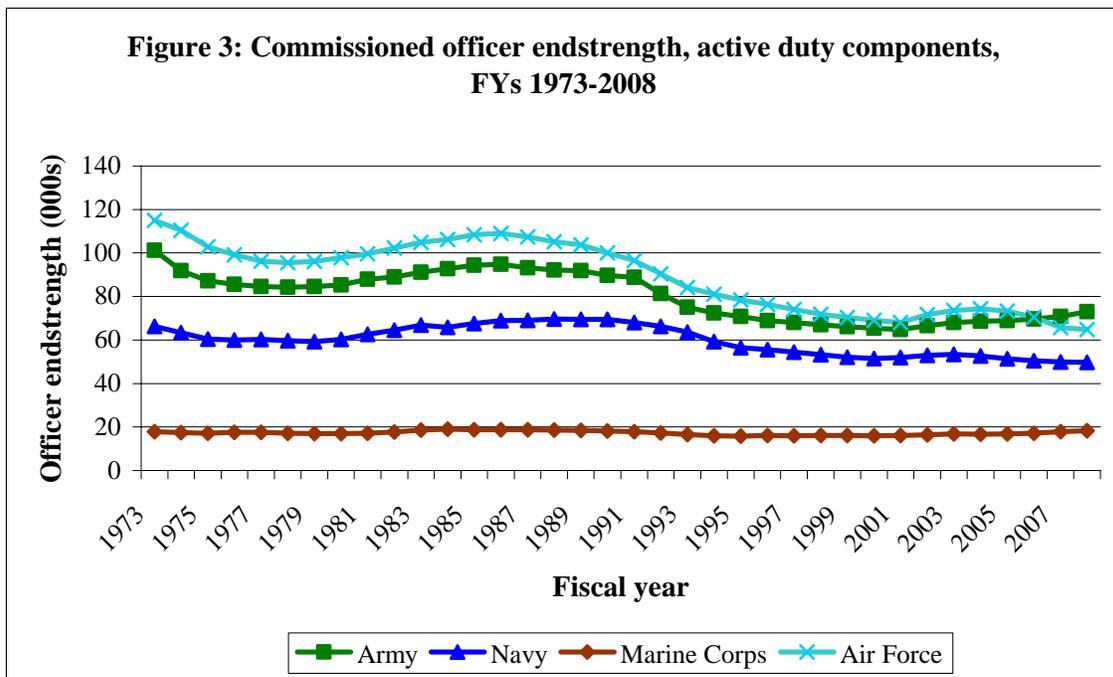
Active duty enlisted applications and accessions. Figure 2 illustrates how the numbers of applicants and accessions into the active enlisted ranks have changed since the mid-1990s. In recent years, the number of new applicants for enlisted accession has fallen dramatically. The average number of applicants for FY 2000 through FY 2002 was over 370,000. The average number of applicants for FY 2005 through FY 2007 was only 300,000. FY 2008 witnessed a strong surge in applications to 333,000, which represents an increase of 11 percent over the previous 3 years.



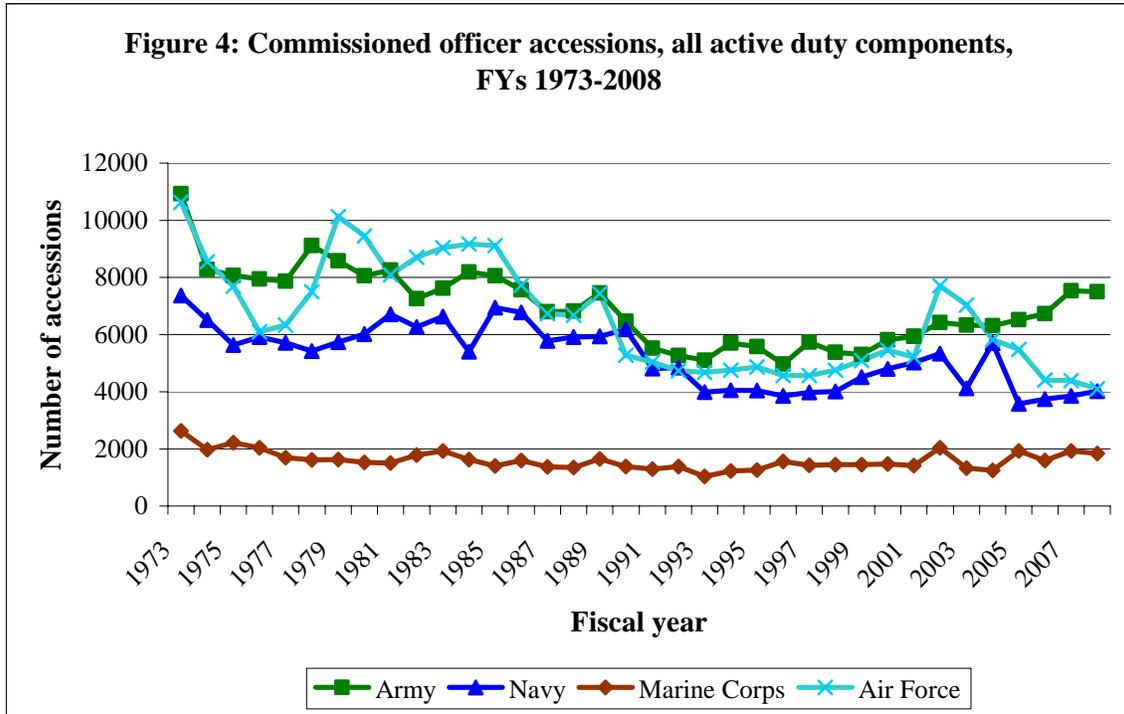
The middle part of this decade also saw a drop in enlisted accessions. Since FY 2005, however, accessions have increased to the point that they nearly equal the typical number of accessions over each of the past 15 fiscal years. In FY 2008, 51.6 percent of applicants were accessed, which is the smallest the ratio of accessions to applicants has been since FY 2004, when 50 percent of all applicants accessed.

Active duty commissioned officer endstrength. Figure 3 illustrates how the numbers of commissioned officers in the four active duty DOD components have changed over the past 35 years. The four components accounted for a total officer corps endstrength of roughly 206,000 in FY 2008. The Army had the largest officer corps, accounting for 35 percent of the total, while the number of officers in the Air Force was only slightly smaller, accounting for 32 percent of the total. The Navy and Marine Corps combined to account for the remaining 33 percent of all officers in the U.S. military services.

From an historical perspective, the number of officers across the four components is currently much smaller than it was 20 years ago during the final years of the Cold War. From FY 1985 though FY 1989 the number of officers averaged nearly 290,000. Since FY 2004, the size of the officer corps has average roughly 208,000. This is a drop of nearly 30 percent. The Air Force has experienced the steepest drop (35 percent), while the Marine Corps has seen the most gradual drop (7 percent). Since FY 2005, both the Army and Marine Corps have seen slight increases in the number of commissioned officers—6 and 8 percent respectively. During this same period, the numbers of commissioned officers in the Navy and Air Force have continued to fall.

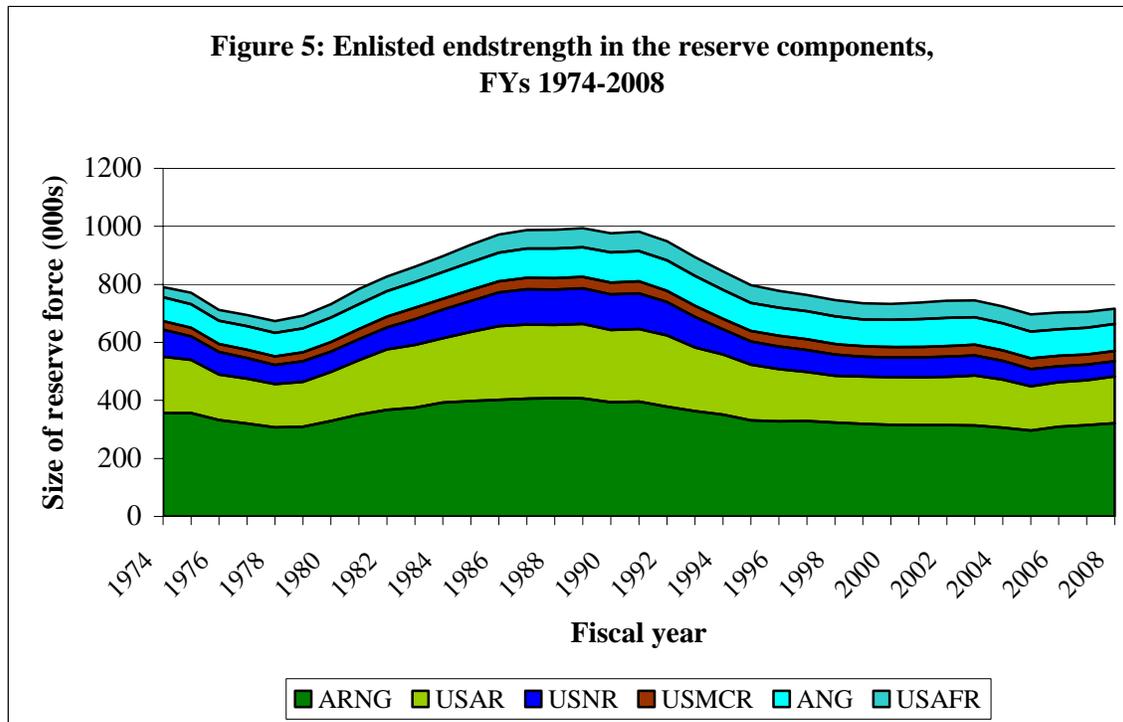


Active duty commissioned officer accessions. Figure 4 illustrates how the numbers of commissioned officer accessions have varied for each of the four active duty components since FY 1973.



Again, we see that accessions generally fell after the end of the Cold War. Interestingly, the Army has experienced a steady increase in the number of commissioned officers accessed over the past decade. Not only was the number of officers accessed into the Army in FY 2008 roughly 40 percent higher than it was in FY 1998, it is actually comparable to the numbers of officers the Army accessed in the late 1980s before the end of the Cold War. The Navy has also experienced significant growth in the numbers of accessions since FY 2005; accessions in FY 2008 were 12 percent higher than they were in FY 2005. Over the same period, Marine Corps accessions have remained flat, while Air Force accessions have fallen considerably.

Enlisted endstrength in the reserves. In Figure 5, we show how the number of enlisted personnel in the six reserve components has varied since FY 1974. The ARNG and USAR have always made up a majority of the total reserve enlisted force, with their combined share varying between 65 and 70 percent. The size of the reserves has fallen since it peaked in the late 1980s (there were nearly 1 million enlisted reservists in FY 1989). The most rapid part of the drawdown occurred in the early 1990s after the end of the Cold War. The size of the reserve force is roughly 96 percent of what it was in FY 1998, although it has increased slightly (2.5 percent) since reaching a recent low in FY 2005.

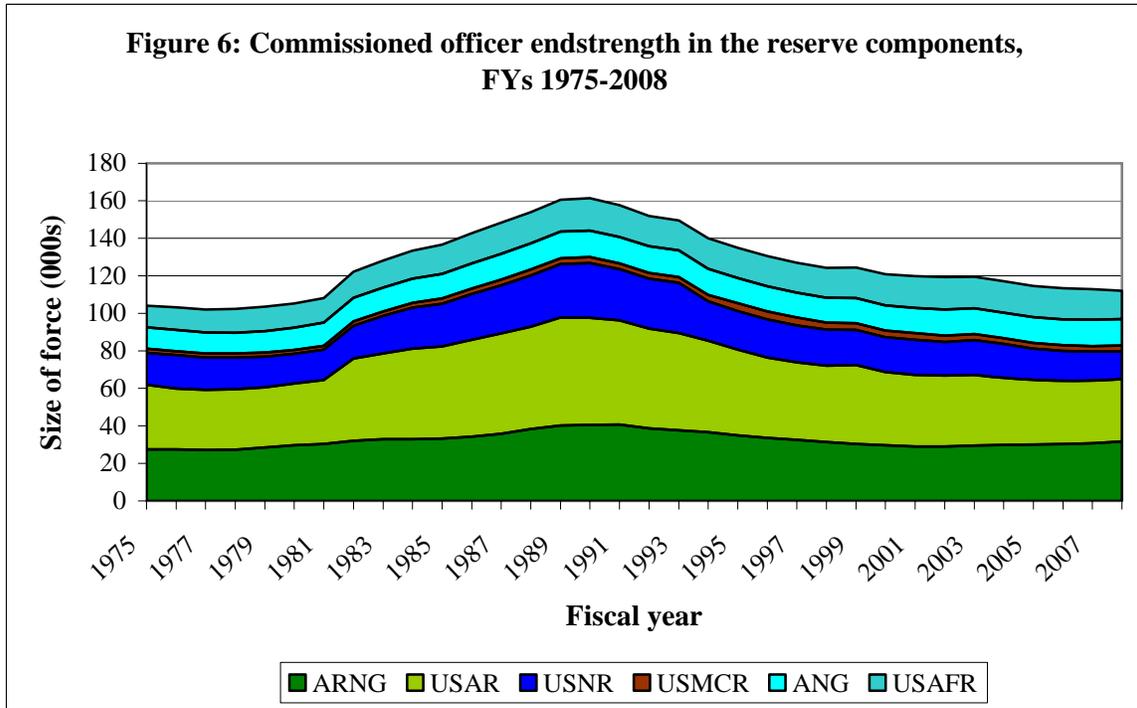


Commissioned officer endstrength in the reserves. Figure 6 depicts how the number of commissioned officers in the six reserve components has varied since the mid-1970s. In FY 2008, there were roughly 112,000 officers serving in the various National Guard and reserves branches. Roughly 58 percent of these officers served in the ARNG and USAR, 26 percent served in the ANG and USAFR, 13 percent served in the USNR, and 3 percent served in the USMCR. The current size of the reserves officer corps is small compared to its peak toward the end of the Cold War. From FY 1980 to FY 1990, the number of reserve officers grew 53 percent from 105,000 to 160,000. Since FY 1990, there has been a continuous drawdown of reserve officers to the point that there are fewer of them now than there have been in any year since FY 1981. Much of this drawdown occurred during the 1990s. Still, since FY 1998 the number of reserve officers has fallen by 10 percent.

Continuation rates for active duty enlisted personnel

Like the number of individuals who join the military each year, the number of personnel that the military retains each year can have an impact on overall endstrength. In this subsection we look at FY 2008 continuation rates for enlisted personnel in the four active duty components. We then compare these continuation rates to those from the distant past (FYs 1980 and 1990) and the more recent past (FYs 2000, 2003, and 2006).

To illustrate these continuation rates, we construct survival curves. These curves show us the percentage of all service members who enter a military component that we would expect to still be in that component at any given point of time in the future.



Continuation rates for FY 2008. In figure 7, we plot the survival curves for the Army, Navy, Marine Corps, and Air Force for FY 2008.

The Air Force experienced the best retention among the four components, while retention in the Marine Corps was the lowest due to its specific force structure requirement of having a very large first-term force. Most of the differentiation among the services seemed to occur between 4 and 6 years of service. Retention of enlisted personnel with this amount of experience was much higher in the Air Force than in the other services.

Putting current continuation rates into historical perspective. As illustrated in figure 8, current continuation rates for enlisted personnel are relatively high. Comparing enlisted retention in FY 2008 to retention in FYs 1980, 1990, and 2000, we see that overall retention was higher in FY 2008 at all years of service than it was in the earlier fiscal years.

The results presented in figure 9 indicate that retention of enlisted personnel in FY 2008 compared favorably to retention in other recent years. Overall retention is certainly higher than it was 8 years ago and is comparable to retention in both FY 2003 and FY 2006.

Figure 7: Survival curves for active duty enlisted personnel in the four components, FY 2008

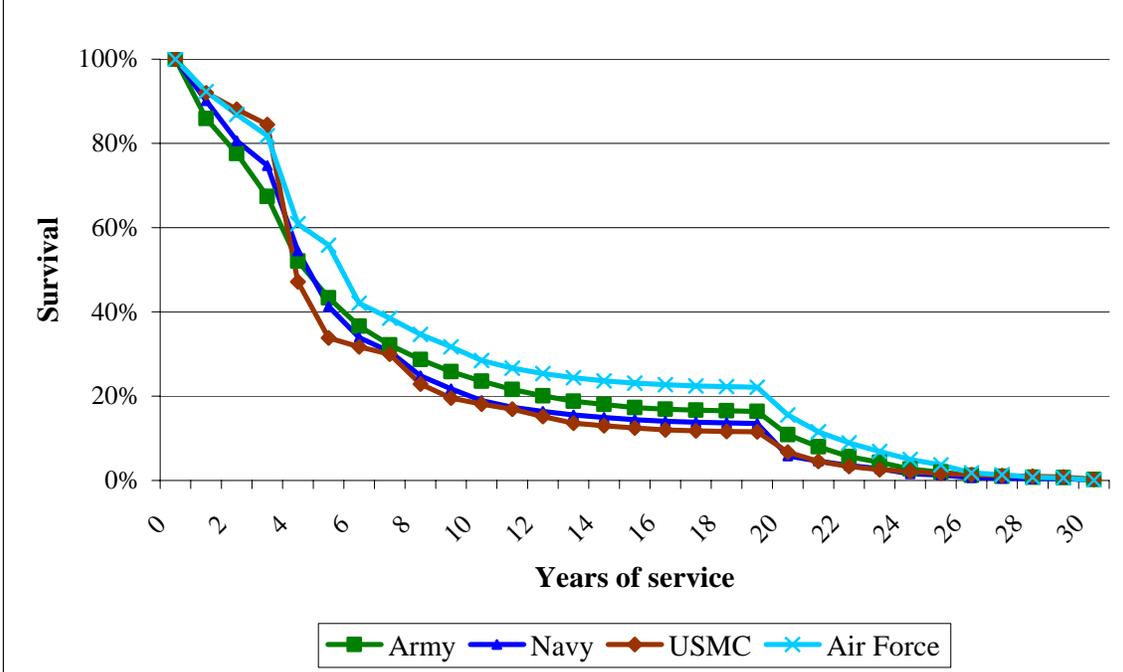
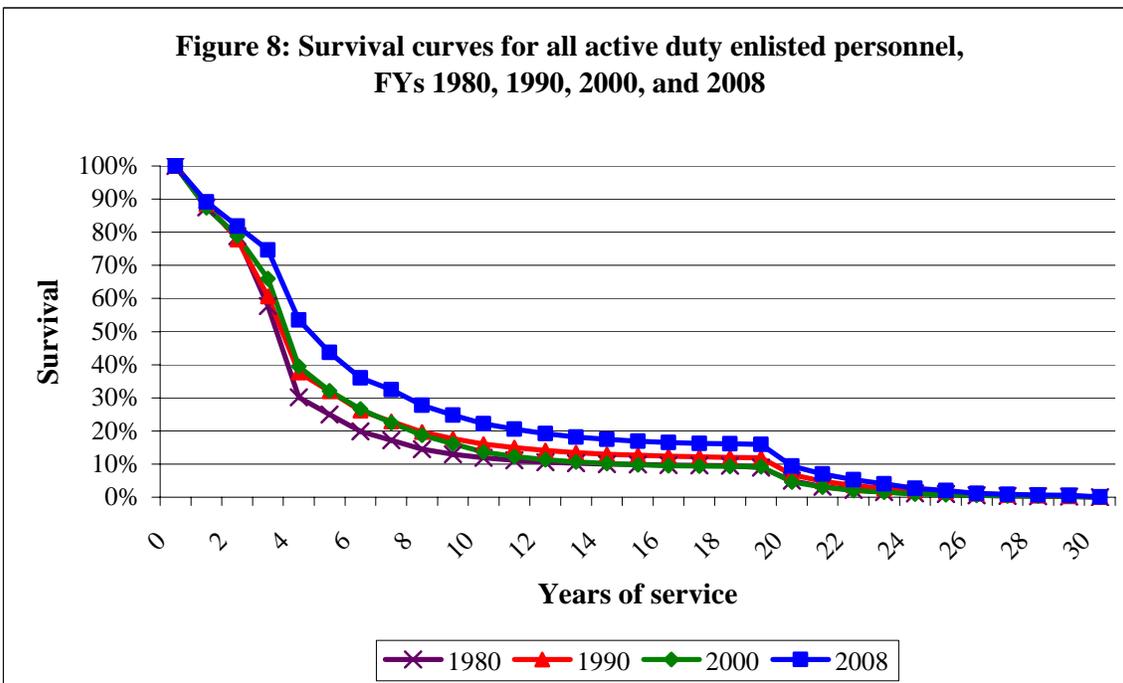
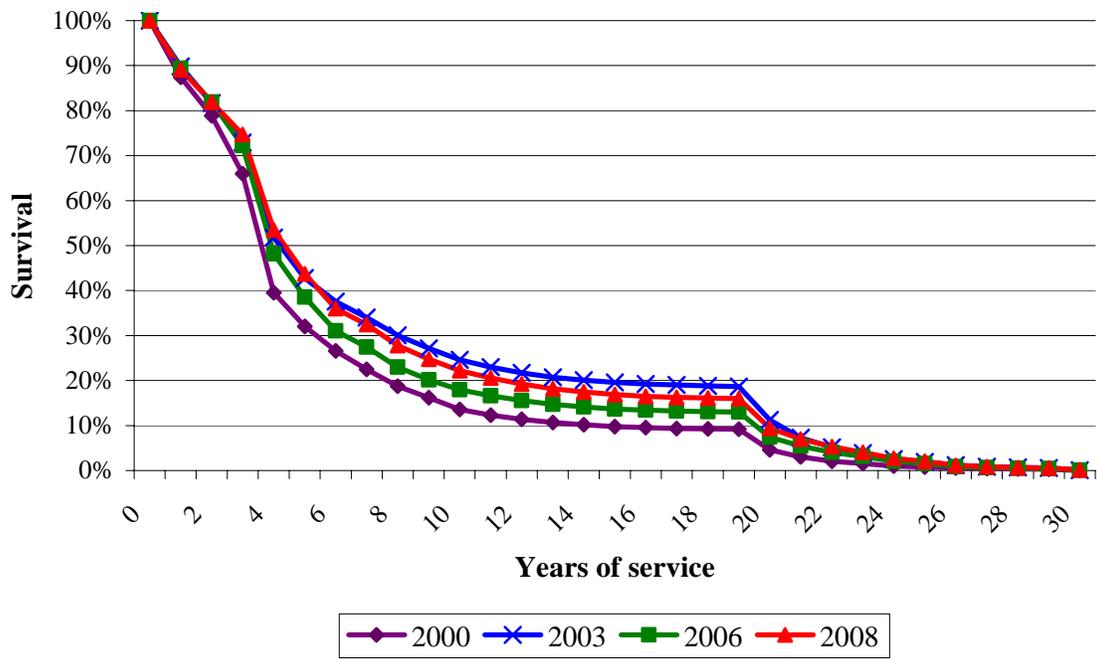


Figure 8: Survival curves for all active duty enlisted personnel, FYs 1980, 1990, 2000, and 2008



**Figure 9: Survival curves for all active duty enlisted personnel,
FYs 2000, 2003, 2006, and 2008**



Quality of enlisted accessions

Military active and reserve components need to attract not only new recruits, but also high quality new recruits. However, measuring qualifications for military service, or for any other profession, can be a challenge because many attributes that drive success are also very difficult to objectively measure. DOD currently uses two basic measures of enlisted accession quality, each of which is reported in the technical appendices.

Measures of accession quality

Armed Forces Qualifying Test (AFQT). All applicants for the enlisted ranks must take the Armed Services Vocational Aptitude Battery (ASVAB), which is a series of tests used both to determine if an individual qualifies for military service and to provide an indication of the person's aptitude for specific job assignments. ASVAB scores on tests that measure word knowledge, paragraph comprehension, arithmetic reasoning, and mathematics knowledge are used to compute the AFQT score. Based on this score, applicants are sorted into six categories, which correspond to the following percentile ranges.

- Category I: 93rd to 99th percentile
- Category II: 65th to 92nd percentile
- Category IIIA: 50th to 64th percentile
- Category IIIB: 31st to 49th percentile
- Category IV: 10th to 30th percentile
- Category V: Below the 10th percentile

Generally, applicants placed in categories I–IIIA are considered to be the best candidates for enlistment. The goal set by DOD is that at least 60 percent of all recruits in each component be in categories I–IIIA.

Educational credentials. In addition to AFQT scores, educational credentials represent an important component of applicant and accession quality as measured by DOD. Educational credentials are used to group individuals into one of three tiers.

- Tier 1: High school diploma graduate, adult education, or some college credit
- Tier 2: Alternate credentials, such as the General Education Certificate (GED)
- Tier 3: Non-high school graduate

The goal set by DOD is that at least 60 percent of all recruits in each component be tier 1.

High quality accessions. These two measures of quality – aptitude and education – are combined to determine which accessions are of high quality. A high quality accession has an AFQT score in any of categories I, II, and IIIA and also has a high school diploma (education tier 1).

Quality of NPS enlisted active duty accessions in FY 2008

Table 2 documents the quality of NPS active duty enlisted accessions for each of the four active components compared to the quality of civilians in their late teens and early twenties. The civilian control group for the AFQT scores is made up of 18 to 23 year-olds who were tested in 1997. The civilian control group for educational tier is made up of 18 to 24 year-olds and reflects their levels of education as of FY 2008. The final “high quality” measure discussed above cannot be generated for the civilian comparison group.

Table 2: Quality of NPS accessions for all active duty components compared to civilian comparison group, FY 2008

Measure	Army	Navy	Marine Corps	Air Force	Civilians ¹
AFQT category					
I	5.16%	6.76%	4.48%	7.07%	7.86%
II	31.58%	39.36%	35.24%	44.48%	27.66%
IIIA	25.31%	27.39%	26.05%	27.78%	15.54%
IIIB	34.40%	26.49%	30.81%	20.68%	18.78%
IV	3.55%	0.01%	3.42%	0.00%	20.75%
Unknown	0.00%	0.00%	0.00%	0.00%	9.41%
Educational tier ²					
1 or 2	99.47%	98.65%	99.88%	99.99%	82.18%
3	0.53%	1.35%	0.12%	0.01%	17.82%
High quality?					
Yes	45.60%	67.90%	62.07%	77.81%	N/A
No	54.40%	32.10%	37.93%	22.19%	N/A
<p>1. The comparison group for AFQT category consists of civilians between 18 and 23 years of age who took the test in 1997. The comparison group for educational tier consists of civilians between 18 and 24 years of age.</p> <p>2. We combine tiers 1 and 2 for the active components in order to make comparisons to the civilian data, which combine tiers 1 and 2.</p>					

The accessions to all four components compared favorably with their civilian counterparts across both measures of quality. For instance, roughly 68 percent of all accessions scored above the 50th percentile on the AFQT, while only 51 percent of the civilians were able to do so (see table B-4 in appendix B). Air Force and Navy accessions did particularly well, while the Army and Marine Corps accessions still did better than the civilian comparison group.

The accessions were also more likely to have a high school degree (or its equivalent) than the typical civilian in their age group. Overall, more than 99 percent of all active duty enlisted accessions had a high school degree or equivalent as compared to 82 percent among the civilian comparison group. Among the components, Air Force accessions

were the most likely to have a traditional high school diploma, while the Army accessions were most likely to have non-traditional high school credentials.

Putting quality of current accessions into historical perspective

As we have seen, NPS active duty enlisted accessions in FY 2008 compared favorably with their civilian counterparts. We now look at how they compared to accessions from previous years.

Figure 10 compares the AFQT scores of FY 2008 accessions and those accessions who joined the active enlisted ranks in the late 1980s and 1990s. The numbers for the 1988 comparison group represent the averages for the cohorts that joined between FYs 1986 and 1990. The numbers for the 1998 comparison group represent the averages for the cohorts that joined between FYs 1996 and 2000. The FY 2008 cohort had a slightly higher percentage of accessions in categories I–IIIA, and among those in the top three categories, more of them were in the top two categories (at the 65th percentile or above) than in the previous periods.

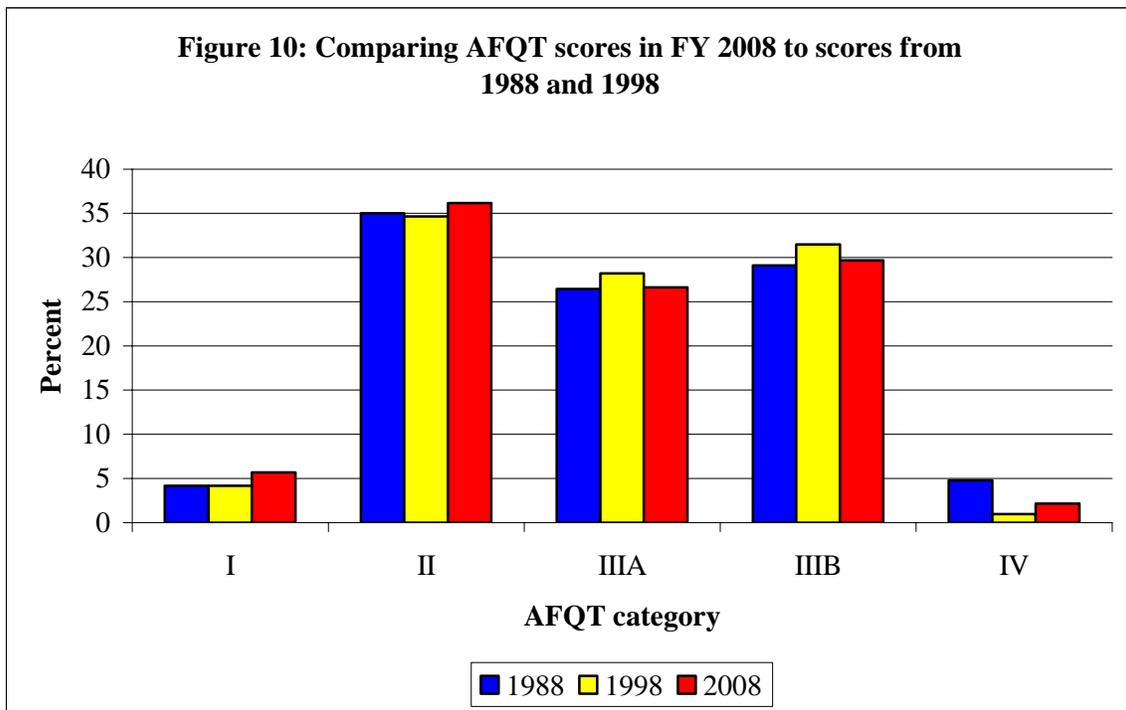
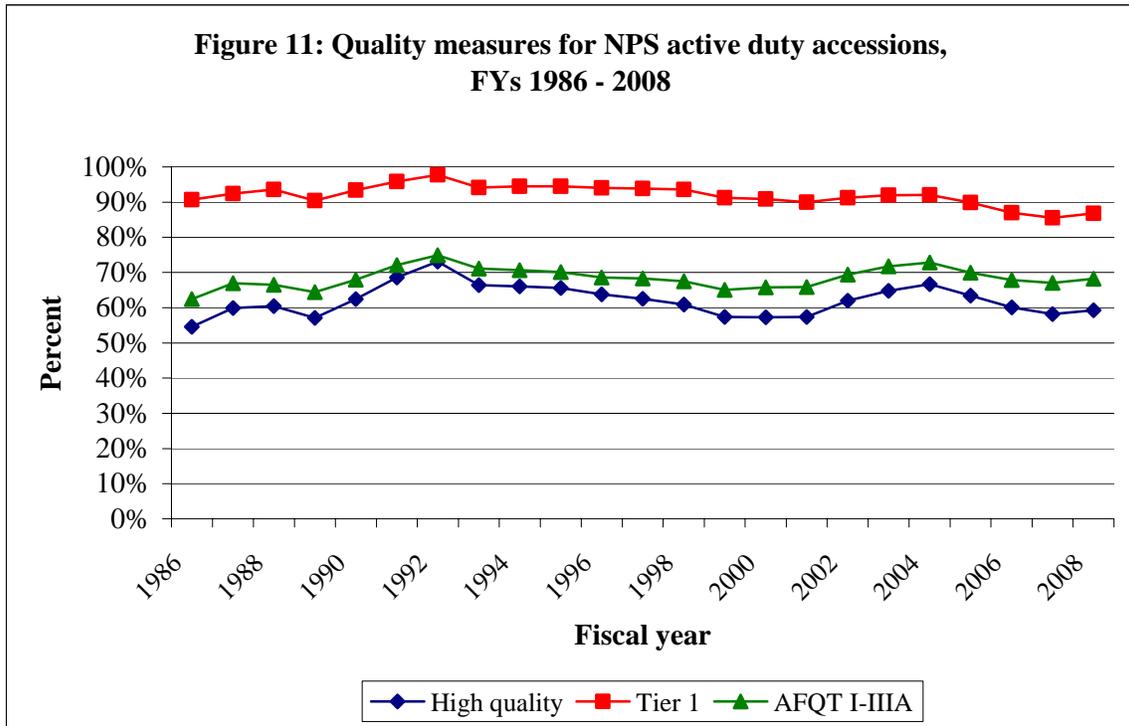


Figure 11 illustrates the historical quality of NPS active duty accessions from FY 1986 through FY 2008, based on all three definitions of quality described above. For each fiscal year, it shows (1) the percentage of all accessions that had traditional high school diplomas when they accessed; (2) the percentage of all accessions with AFQT scores in categories I–IIIA; and (3) the percentage of accessions that were considered high quality based on these first two criteria. A few topics merit discussion. First, the percentage of all accessions rated as high quality has fallen over the past 4 years. While this is partly due to a decrease in the number of accessions with AFQT scores above the 50th percentile, it

appears to be driven more by a decreasing percentage of new recruits with a traditional high school diploma. The current cohort is comparable with the cohorts accessed between FYs 1997 and 2002, but does not compare favorably with any of the other cohorts who have accessed between FYs 1990 and 1996. One explanation for this is the difficulty of recruiting members during wartime. Also, FY 2008 did see a slight increase in quality after 3 straight years of decline. Despite this drop, the reader should remember that the FY 2008 cohort still compared favorably with its civilian counterpart.



Quality of NPS enlisted reserve accessions in FY 2008

Table 3 compares the quality of NPS reserve enlisted accessions to the quality of civilians in their late teens and early twenties. All six of the reserve components are included. Note that we do not include data for the USAFR, because the AFQT scores for many of the accessions are unknown or unavailable, thus it is difficult to determine the exact quality of these recruits. As was the case for active duty accessions, the civilian control group for the AFQT scores is made up of 18 to 23 year-olds who were tested in 1997. The civilian control group for educational tier is made up of 18 to 24 year-olds and reflects their levels of education as of FY 2008.

Overall, the quality of NPS reserve accessions compares favorably with that of their civilian counterparts. A greater percentage of NPS accessions, when compared with the civilian control group, scored in the top three AFQT categories (I-III A); 61 percent as compared to 51 percent. The USMCR and ANG had the highest quality accessions based

on this measure. Roughly three-quarters of all NPS accessions in these two components scored in one of the top three AFQT categories.

As far as level of education is concerned, the NPS reserve accessions again compared favorably with members of the civilian comparison group. More than 93 percent of all reserve accessions had a high school diploma or some equivalent credential, compared to 82 percent among the civilian control group.

Table 3: Quality of NPS accessions for all select reserve components compared to civilian comparison group, FY 2008

Measure	ARNG	USAR	USNR	USMCR	ANR	Civilians ¹
AFQT category						
I	4.4%	4.5%	4.4%	9.3%	8.0%	7.9%
II	30.1%	29.7%	31.6%	43.8%	42.7%	27.7%
IIIA	24.6%	23.9%	31.0%	22.2%	24.8%	15.5%
IIIB	39.3%	37.7%	25.9%	22.2%	23.4%	18.8%
IV	1.3%	3.4%	0.2%	2.5%	0.2%	20.8%
Unknown	0.4%	0.9%	6.9%	0.0%	1.0%	9.4%
Educational tier ²						
1 or 2	89.6%	97.7%	98.5%	99.9%	99.5%	82.2%
3	10.6%	2.3%	1.5%	0.1%	0.5%	17.8%
<p>1. The comparison group for AFQT category consists of civilians between 18 and 23 years of age who took the test in 1997. The comparison group for educational tier consists of civilians between 18 and 24 years of age.</p> <p>2. We combine tiers 1 and 2 for the active components in order to make comparisons to the civilian data, which combine tiers 1 and 2.</p>						

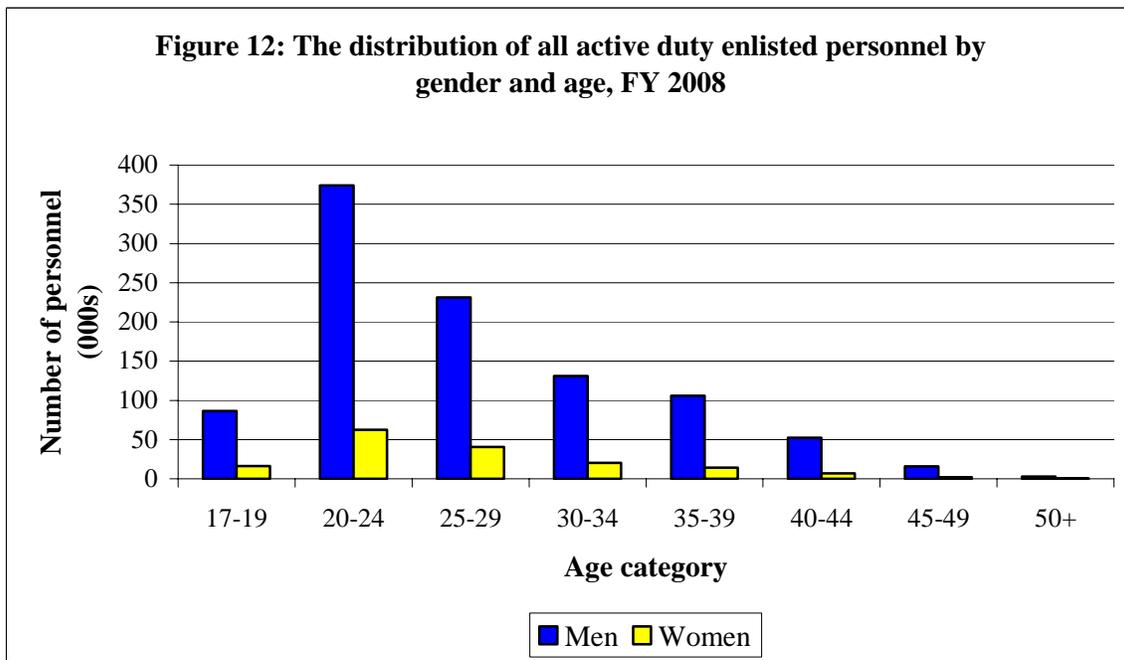
Representation of women in the U.S. military

In this section, we look at the representation of women in both the enlisted and officer ranks of the active duty and reserve components. We provide information on their representation not only in the current forces, but also in the enlisted and officer accession cohorts in FY 2008. Finally, we discuss whether women who join the military take on different occupations from those taken on by their male counterparts. To the extent possible, we provide historical perspective by looking at the representation of women in the military services over the past 30 years.

Representation of women in the active duty components

Current enlisted members. Figure 12 presents the distribution of the active duty enlisted force, which numbers 1.16 million, by gender and age. There are two facts:

- Enlisted personnel are overwhelmingly men. Only 14 percent of enlisted personnel in FY 2008 were women.
- The enlisted ranks are made up primarily of young people. Seventy percent of enlisted members were under the age of 30 in FY 2008.



The representation of women varies across the active duty components. Women are most represented in the Air Force (20 percent of the total enlisted force) and least represented in the Marine Corps (a little over 6 percent of the enlisted force). The percentages of women in the enlisted ranks of the Army (13 percent) and Navy (15 percent) are both very close to the overall average (14 percent) across the four DOD active components.

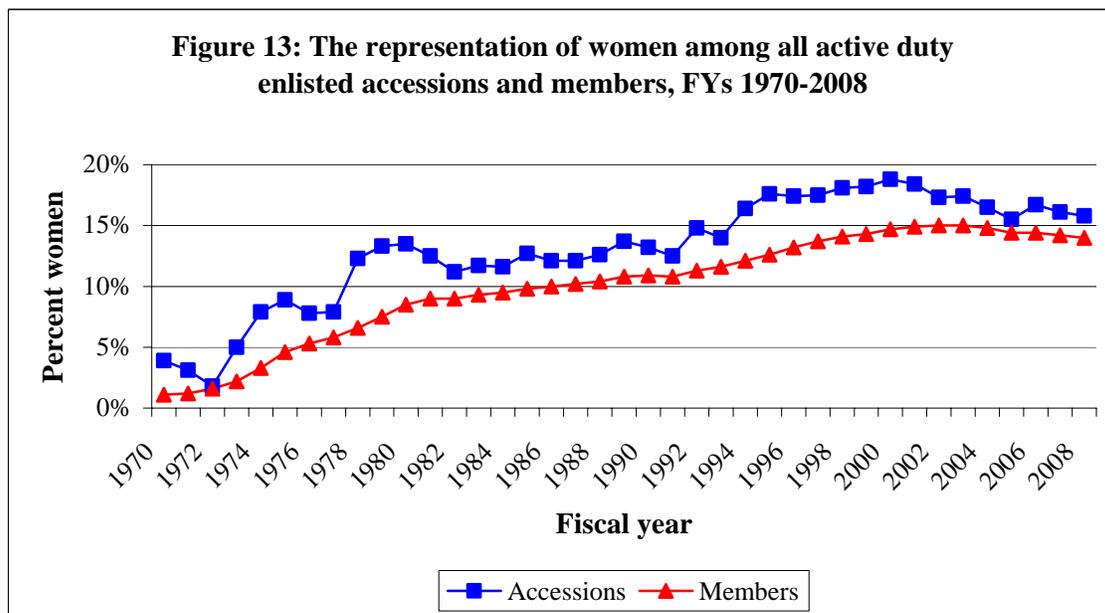
Enlisted applicants and accessions. In table 4, we provide numbers on the men and women who applied for enlistment and who eventually enlisted. Across the active components, roughly 19 percent of all applicants in FY 2008 were women, while women made up 16 percent of all accessions. The highest female application and accession rates were found in the Air Force, and the lowest were found in the Marine Corps. Within each active component, female applicants were less likely to access than their male counterparts. DOD-wide, roughly 54 percent of male applicants accessed, while a little over 42 percent of female applicants did the same.

Table 4: Applicants and NPS enlisted accessions broken out by gender, FY 2008

		Men	Women	Total	% Women
Army	<i>Applicants</i>	111,019	25,014	136,033	18.4%
	<i>Accessions</i>	58,060	11,285	69,345	16.3%
	<i>% who accessed</i>	52.3%	45.1%	51.0%	
Navy	<i>Applicants</i>	65,397	20,266	85,663	23.7%
	<i>Accessions</i>	30,772	7,179	37,941	18.9%
	<i>% who accessed</i>	47.1%	35.4%	44.3%	
Marine Corps	<i>Applicants</i>	56,482	4,739	61,221	7.7%
	<i>Accessions</i>	34,545	2,465	37,010	6.7%
	<i>% who accessed</i>	61.2%	52.0%	60.5%	
Air Force	<i>Applicants</i>	36,676	14,070	50,746	27.7%
	<i>Accessions</i>	21,476	6,262	27,738	22.6%
	<i>% who accessed</i>	58.6%	44.5%	54.7%	
DOD	<i>Applicants</i>	269,574	64,089	333,663	19.2%
	<i>Accessions</i>	144,853	27,191	172,044	15.8%
	<i>% who accessed</i>	53.7%	42.4%	51.6%	

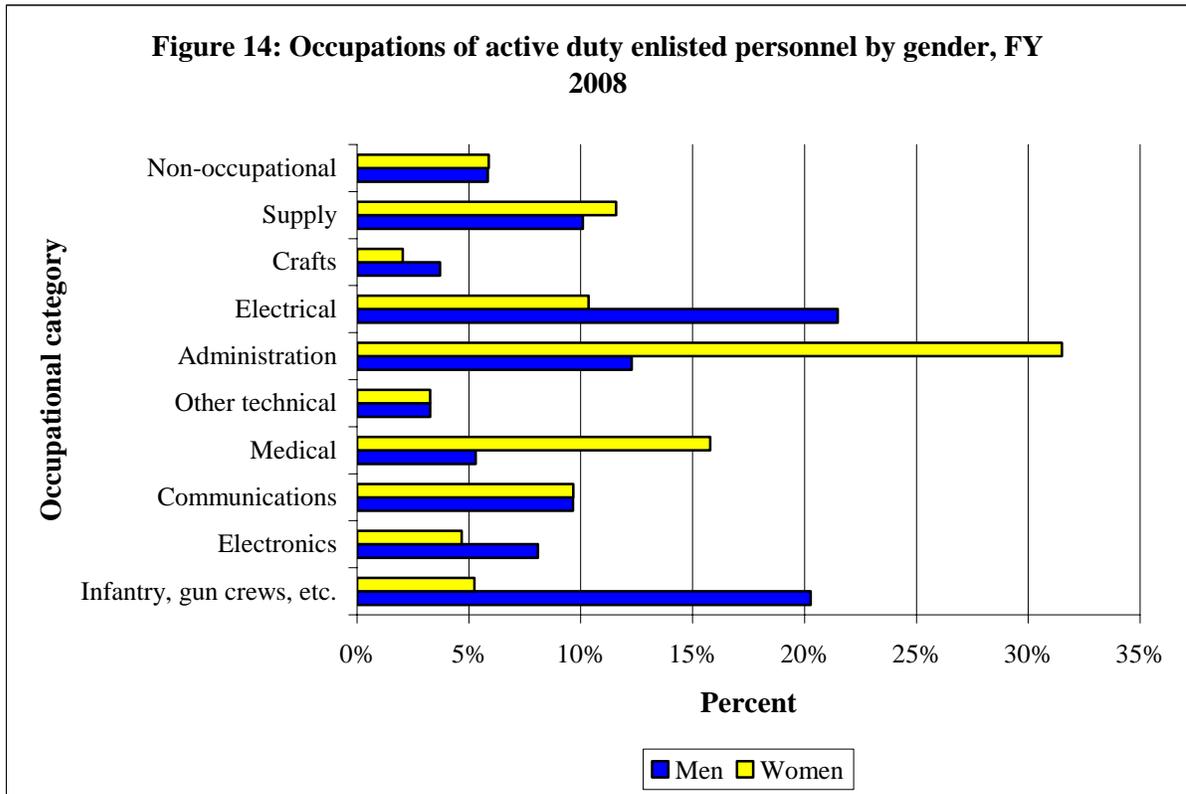
Putting the representation of women among enlisted personnel in historical perspective. While women make up a little more than half of the U.S. civilian population, the fact that they make up only 14 percent of active duty military enlisted members is not surprising given historical numbers. As figure 13 illustrates, women made up only about 1 percent of the total enlisted ranks in FY 1970 and the representation of women has grown considerably over the past four decades. By FY 1980 women made up 8.5 percent of all enlisted personnel and by FY 2000 they made up nearly 15 percent of the total. The representation of women in the enlisted ranks reached a peak in FYs 2002 and 2003, when 15 percent of enlisted personnel were women.

One reason for this increase in the number of women in the enlisted ranks is that they have grown to make up a greater percentage of all enlisted accessions. Before the late 1970s, women never accounted for more than 10 percent of all enlisted accessions. This changed dramatically starting in the late 1970s and by FY 2000, women accounted for nearly 19 percent of all accessions. Over the past few years, the percentage of women among enlisted members and accessions has fallen slightly, but it still remains high compared to the period prior to the late 1990s. The increases in the numbers of both accessions and current enlisted personnel reflect DOD policy to increase the number of jobs for women. Nearly 260,000 positions were opened to women in the early 1990s including positions in combat aviation and on board combatant Navy vessels, among others. Currently, over 80 percent of all positions are open to women.



Gender differences in jobs performed while in the enlisted ranks. As figure 14 illustrates, men and women typically take on different occupations while serving in the active duty enlisted ranks. The most common jobs for women are in administration (32 percent), health care (16 percent), and supply operations (12 percent). The most common

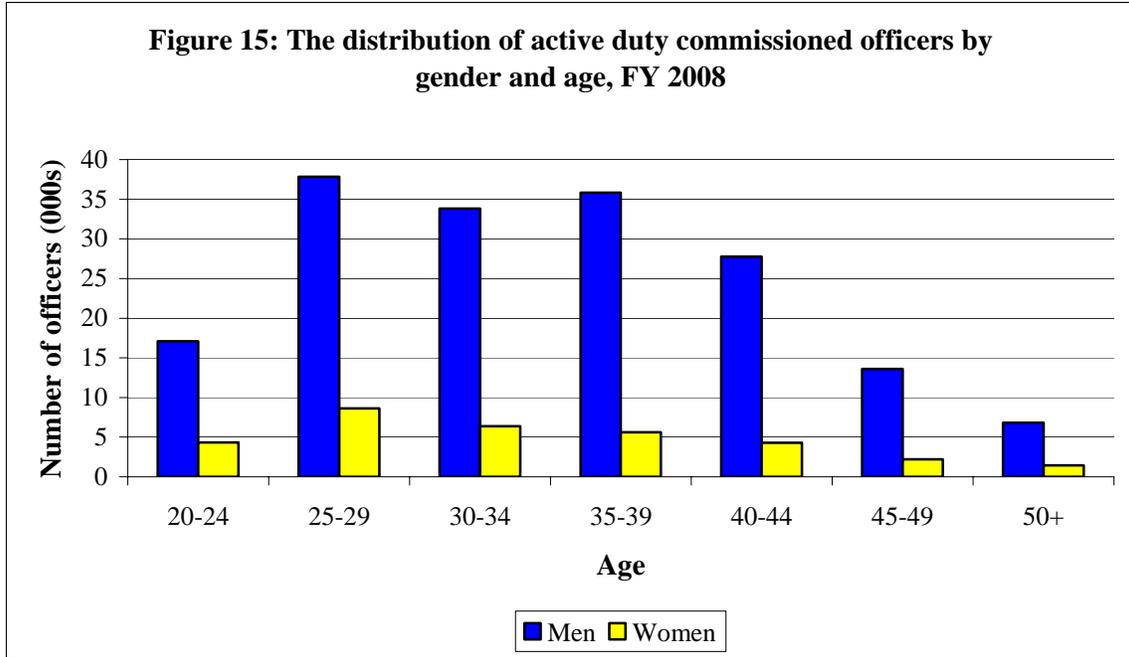
occupations for men are in electrical (22 percent), combat operations (20 percent), and administration (12 percent).



Current commissioned officers. Figure 15 presents the distribution of active duty officers by gender and age. Commissioned officers, as a group, tend to be older than their enlisted counterparts. Roughly one-third of officers are in their twenties, 40 percent are in their thirties, and a little over one-quarter of them are aged forty and older. Women make up 16 percent of the total officer corps, and they are more heavily represented in the younger cohorts. For instance, women account for 19 percent of all officers under the age of 30, 14.7 percent of all officers aged 30 to 39, and 14 percent of all officers aged 40 and older.

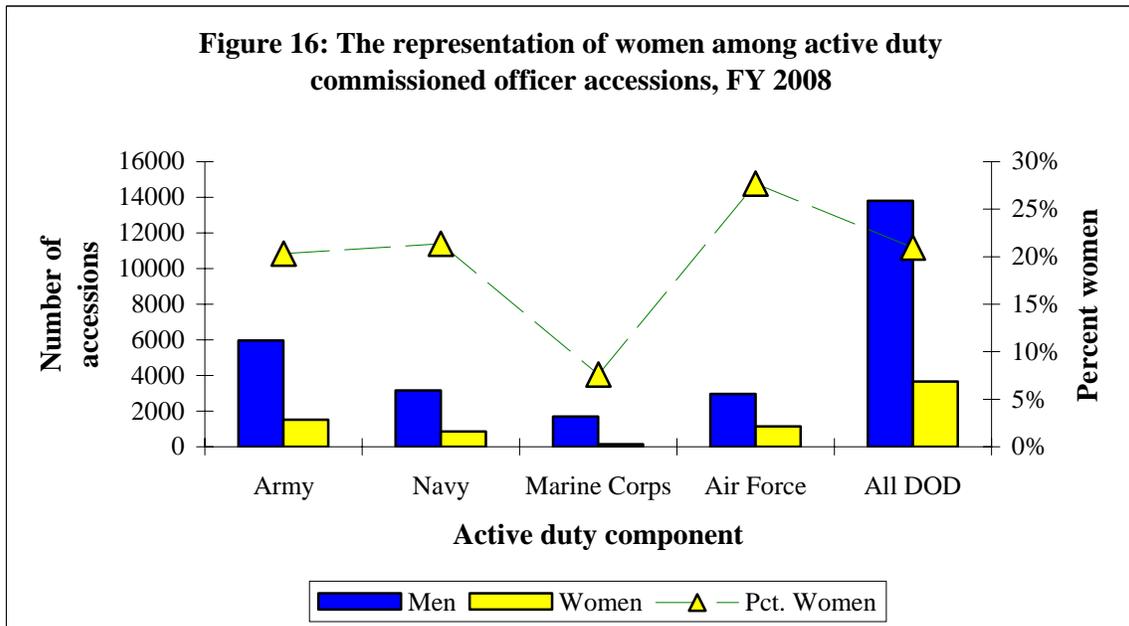
There is a good deal of variation in the representation of women across the active components. The component with the most women on a percentage basis is the Air Force, where women account for 18.3 percent of all commissioned officers. The component with the fewest women on a percentage basis is the Marine Corps, where women account for 5.9 percent of all commissioned officers. In the Army, women account for nearly 17 percent of officers, and in the Navy, women account for roughly 15.5 percent.

Figure 15: The distribution of active duty commissioned officers by gender and age, FY 2008

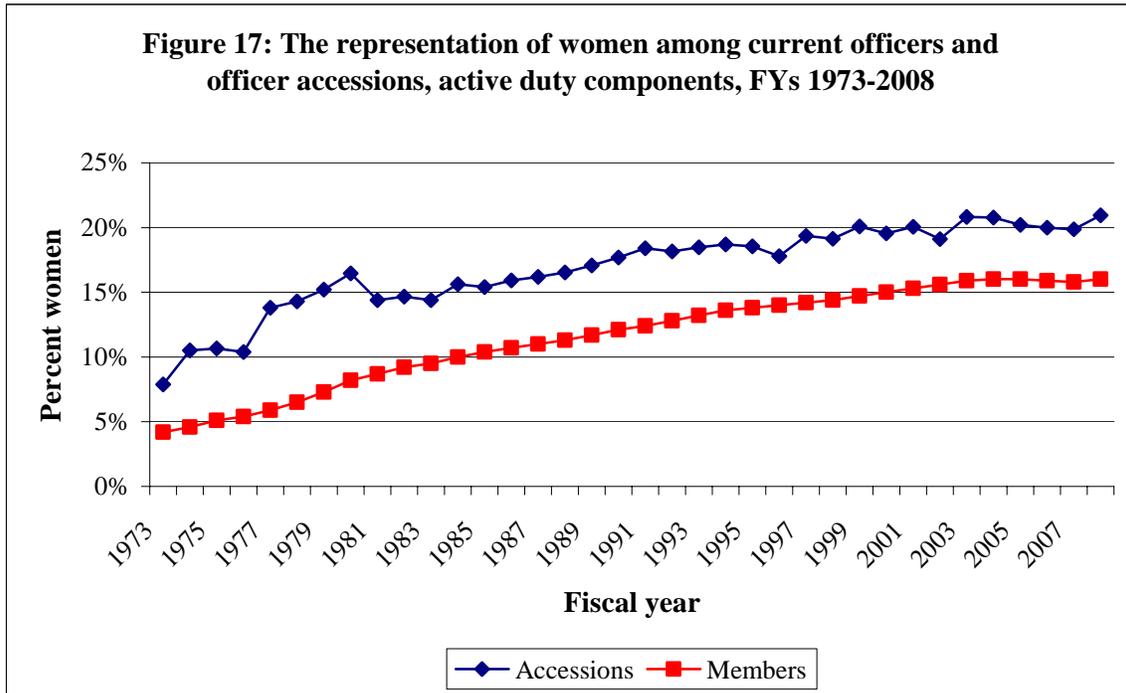


Officer accessions. Figure 16 depicts the numbers of accessions for each of the four active components broken out by gender. Roughly 21 percent of all active duty officer accessions in FY 2008 were women. Again there is a fair amount of variation in the representation of women across the components. Women account for over one-quarter of all officer accessions in the Air Force, but fewer than 8 percent of all officer accessions in the Marine Corps. The numbers for the Army and the Navy were very close to the DOD-wide average of 21 percent.

Figure 16: The representation of women among active duty commissioned officer accessions, FY 2008

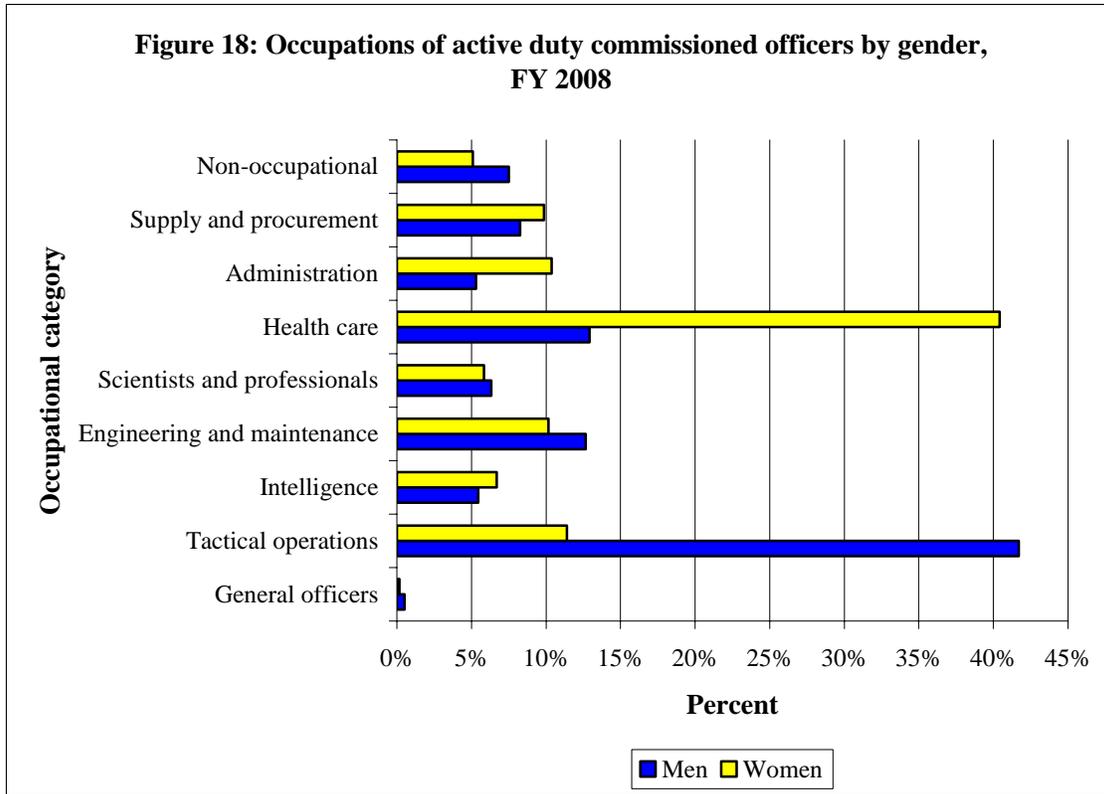


Putting the representation of women among commissioned officers in historical perspective. If we look at how the representation of women has evolved over the past 35 years, we see that the active duty components have made significant progress in attracting women and employing them as productive members of their officer corps. Figure 17 illustrates how the representation of women has grown since FY 1973 among both current officers and officer accessions.



In the early 1970s, women made up less than 5 percent of the total population of active duty commissioned officers. Since then, the number has grown steadily to the point where women now make up 16 percent of all officers. This is the highest it has ever been. As far as accessions are concerned, the general trend is toward a greater representation of women in the future officer corps.

Gender differences in jobs performed while in the officer corps. As figure 18 illustrates, men and women typically take on different roles while they are serving as active duty commissioned officers. Women are most heavily represented in health care services (40 percent), while men are most heavily represented in tactical operations or war fighting (42 percent). Otherwise, women are more likely than men to work as administrators or in procurement activities and less likely to work in engineering and maintenance operations.



Representation of women in the reserve components

Enlisted members and gains. Figure 19 presents the distribution of reserve enlisted members by gender and age for FY 2008. Across the six selected reserve components, women made up approximately 18 percent of all enlisted personnel. As in the active components, there was a good deal of variation across the reserve components. Women made up roughly one-quarter of all enlisted members in the USAR and USAFR, while they made up 5 percent of all such members in the USMCR. Compared to the active components, a greater percentage of enlisted personnel in the reserve components are over the age of 30 (45 percent compared to 30 percent).

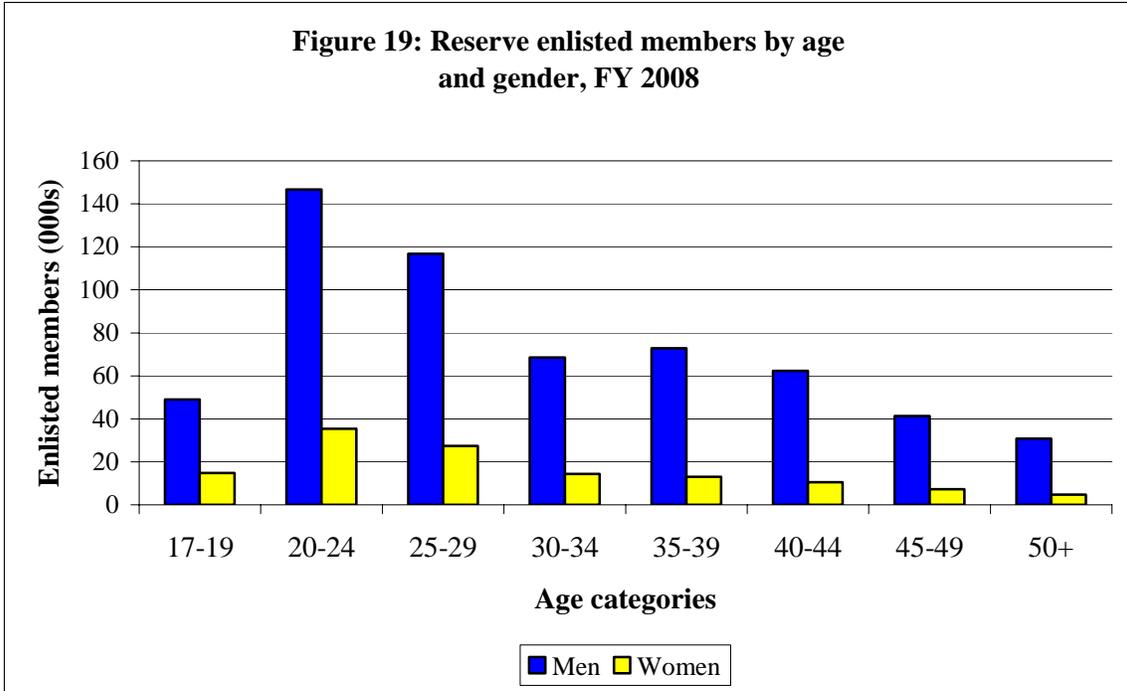
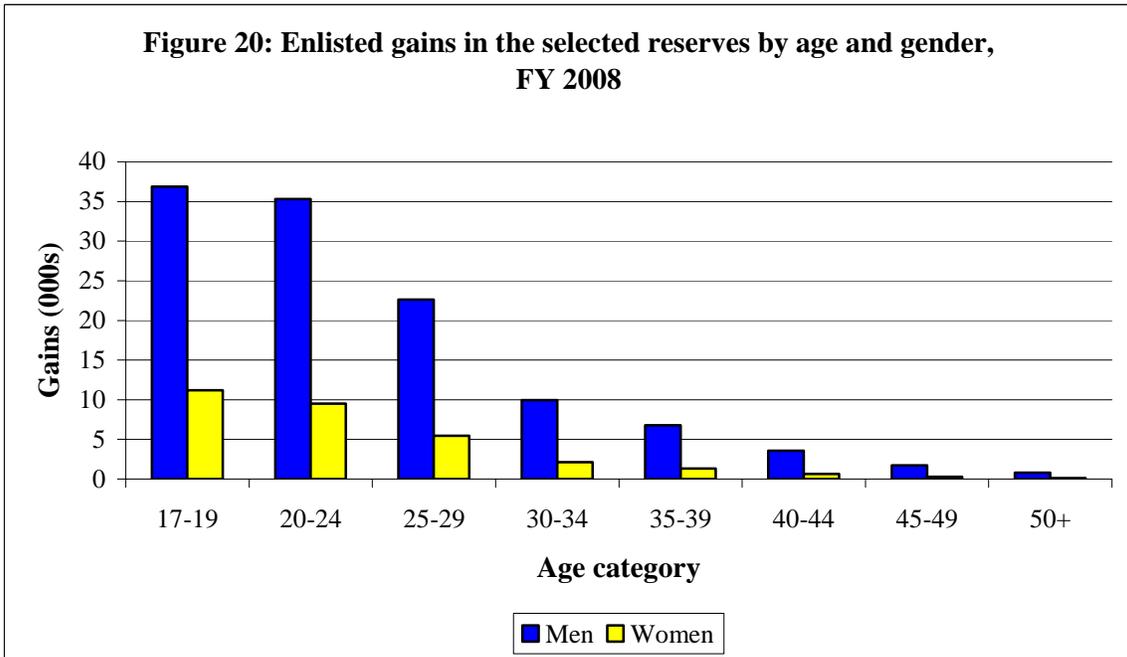
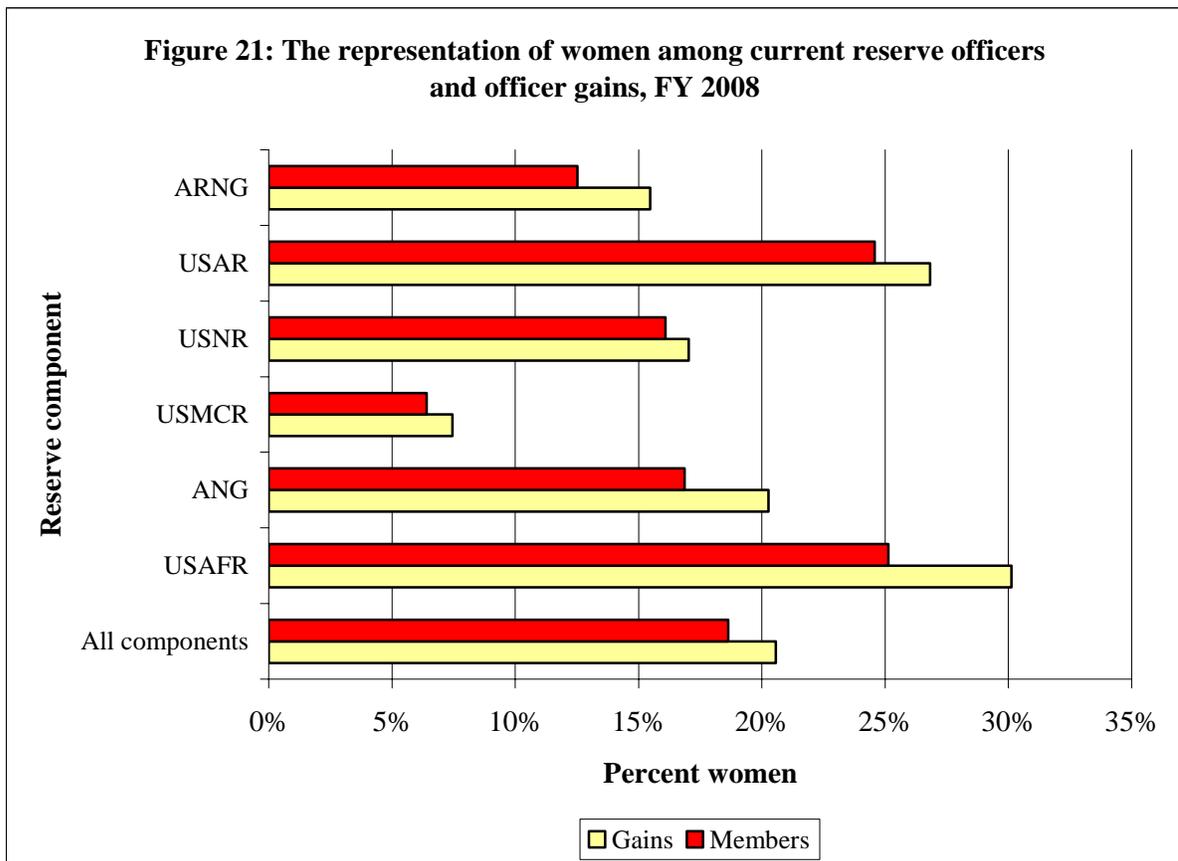


Figure 20 presents the distribution of reserve enlisted gains by gender and age for FY 2008. These gains include both NPS and PS recruits. Not surprisingly, the enlisted gains were generally very young; nearly two-thirds of them were under 25 years of age. Across the reserve components, women comprised 22.8 percent of the NPS gains, 18.1 percent of the PS gains, and 20.7 percent of all enlisted gains combined.



There was variation across the different reserve components. Women accounted for 30 percent of all enlisted gains in the USAFR and one-quarter of all gains in the USAR, while they made up 5.5 percent of all gains in the USMCR.

Commissioned officers and gains. Figure 21 illustrates the representation of women in the current officer corps and among officer gains for each of six select reserve components in FY 2008. These numbers are very similar to those for the enlisted ranks. Women account for 18.6 percent of all reserve officers and they are most heavily represented in the USAFR and USAR and least heavily represented in the USMCR. Women also accounted for 20.6 percent of all reserve officer gains in FY 2008. Again, the USAFR had the most women as a percentage of all officer gains, while the USMCR had the fewest women as a percentage of all officer gains.



Representation of racial and ethnic groups in the U.S. military

Defining race and ethnicity in this report

On 30 October 1997, the Office of Management and Budget (OMB) published “Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity.” These new standards motivated a change in the way DOD reported demographic information on members of the armed services.

Since 2003, when information on race has been collected, individuals have been asked to choose *one or more* of the following race categories:

- American Indian or Alaskan Native (AIAN)
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander (NHPI)
- White

In a separate question on ethnicity, they are also asked to indicate whether they identify themselves as Hispanic.

Since FY 2003, the *Population Representation in the Military Services* report has provided *separate* tables for the answers to these two questions and has used mutually exclusive categories when reporting information on racial identity. As a result, Hispanic individuals who identify themselves as “White” are grouped with the non-Hispanic Whites in tables that provide information on racial identity. This is true with other racial identities as well. For instance Hispanic Blacks are grouped with non-Hispanic Blacks, Hispanic Asians are grouped with non-Hispanic Asians, and so on. Unless otherwise indicated, those individuals who identify more than one racial group are counted in a separate category called “2 or more.” In this section of the report, the charts and tables all refer to data reported in the mutually exclusive race categories as described above.

Race and ethnicity of current active duty personnel

Table 5 presents the race and ethnicity of current active duty enlisted personnel and commissioned officers. These data are based on data presented in tables B-17 and B-25 in appendix B. They differ, however, from the numbers in those tables in one important aspect. In the appendix tables, there is a category that identifies individuals whose race is unknown. The numbers of such individuals can be quite significant. Seven percent of all active duty officers and 5 percent of enlisted personnel fall into this category. This can make it difficult to compare these numbers with those in our civilian comparison groups, since there are no civilians with missing data. To deal with this issue, we, in effect, dropped individuals with missing data when computing the percentages presented in table 5. Consequently, these percentages are slightly higher than the ones reported in tables B-17 and B-25.

Table 5: Race and ethnicity of active duty enlisted members and officers, FY 2008

	Army¹	Navy	Marine Corps	Air Force	DOD	Civilian²
Enlisted members						
<i>Race</i>						
White	72.7%	62.8%	83.2%	75.6%	72.5%	79.5%
Black	22.7%	21.3%	11.6%	17.8%	19.6%	12.7%
AIAN	1.0%	5.2%	1.2%	0.7%	2.0%	0.9%
Asian	3.5%	6.3%	2.3%	2.5%	3.8%	5.0%
NHPI	0.0%	1.0%	0.9%	1.2%	0.7%	0.4%
Two or more	0.0%	3.4%	0.8%	2.2%	1.4%	1.5%
<i>Ethnicity</i>						
Hispanic	11.9%	16.0%	13.1%	5.5%	11.6%	17.9%
Officers						
<i>Race</i>						
White	81.3%	85.4%	89.4%	88.4%	85.2%	80.3%
Black	13.6%	8.2%	5.7%	6.5%	9.3%	8.6%
AIAN	0.5%	0.6%	0.7%	0.4%	0.5%	0.4%
Asian	4.6%	3.9%	2.6%	3.2%	3.8%	9.4%
NHPI	0.0%	0.3%	0.4%	0.3%	0.2%	0.3%
Two or more	0.0%	1.6%	1.2%	1.2%	0.9%	0.9%
<i>Ethnicity</i>						
Hispanic	5.5%	5.8%	6.5%	3.7%	5.1%	7.2%
<p>1. The Army does not report NHPI and “2 or more” as separate categories. For the Army there are only four mutually exclusive categories for race: White, Black, Asian, and AIAN.</p> <p>2. The civilian comparison groups are different for enlisted members and officers. The comparison group for enlisted members is made up of individuals between the ages of 18 and 44 in the civilian workforce. The comparison group for the officers is made up of college graduates between the ages of 21 and 49 in the civilian workforce.</p>						

Considering table 5, it becomes apparent that, when it comes to race and ethnicity, the active duty military components are quite diverse. Still, their populations do not amount to a “random draw” from the relevant civilian comparison group populations. Whites tend to be slightly “under-represented” in the enlisted ranks in all but one of the components (the Marine Corps being the exception).¹ At the same time, Whites tend to be “over-represented” among officers in all of the components. Blacks appear to be over-represented in the enlisted ranks in all of the components except the Marine Corps. They make up roughly 20 percent of all active duty enlisted personnel, but only 13 percent of the civilian comparison group. Among officers, the representation of Blacks is more

¹ We use the terms “under-represented” and “over-represented” to simply indicate whether a group makes up a lesser or greater proportion of the DOD population than of the relevant civilian population. This in no way implies that we have come up with the optimal proportions of various racial and ethnic groups that should be present in the military services.

mixed. They are over-represented in the Army, but under-represented in the Marine Corps and the Air Force.

Among the other racial groups, Asians tend to be under-represented among both enlisted personnel and officers; this is especially pronounced among officers. The only exception to this is among Navy enlisted personnel, where Asians make up more than 6 percent of the population as compared to 5 percent of the relevant civilian population. Native Hawaiians and Pacific Islanders (when they are reported) are over-represented in the enlisted ranks but are neither over- nor under-represented among officers. Representation of American Indians and Alaskan Natives is as one would expect when compared with the civilian comparison groups, which is roughly 1 percent of the population. However, members of this group tend to be greatly over-represented among the enlisted ranks in the Navy (by a 5-to-1 margin). Individuals identifying themselves as multi-racial are over-represented in both the Navy and Air Force enlisted ranks and among Navy officers.

Finally, Hispanics are generally under-represented in the active duty components. They make up 11.6 percent of the enlisted ranks across the military, while accounting for nearly 18 percent of the population in the relevant civilian comparison group. They also make up 5 percent of the officers, while accounting for a little over 7 percent of the population of individuals in the relevant comparison group.

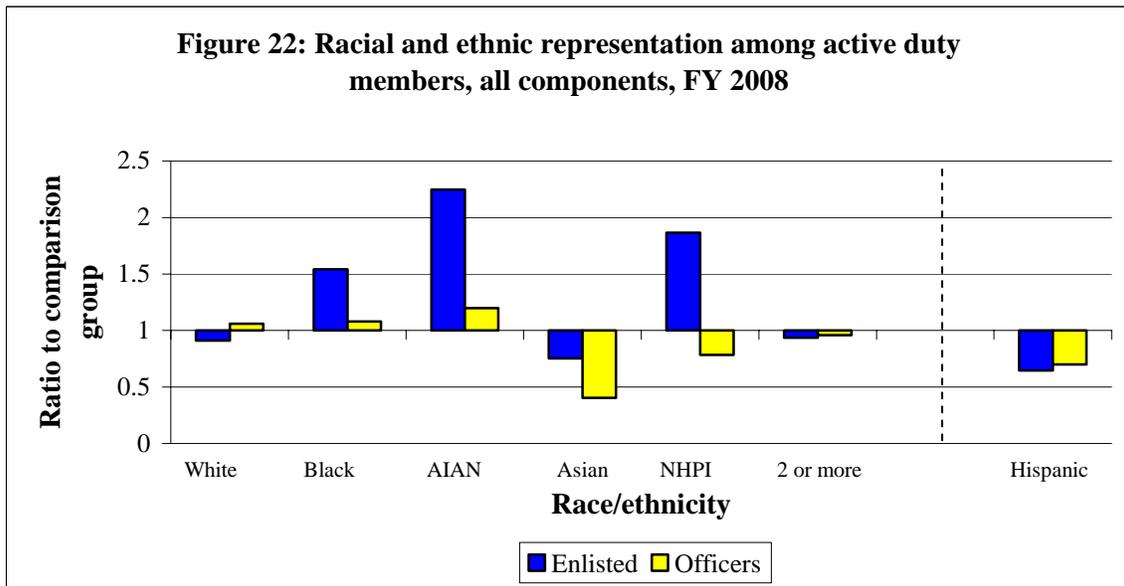


Figure 22 illustrates these results for the active duty military as a whole. Values greater than one indicate over-representation in the active duty components. Values between zero and one indicate under-representation.

Race and ethnicity of enlisted and officer accessions

Enlisted accessions. Figure 23 illustrates the racial composition of enlisted accessions for the various active duty components. Compared with the civilians, we see that

generally Whites are slightly under-represented among accessions across DOD, except for in the Navy, where they are greatly under-represented, and the Marine Corps, where they are significantly over-represented. As we discussed above, there are many more American Indians and Alaskan Natives and multi-racial individuals among the Navy accessions than one would expect given the numbers from the civilian comparison group. The Navy also has more Blacks than one would expect among their accessions, while the Marine Corps has fewer Blacks. Blacks are slightly over-represented among Army and Air Force accessions.

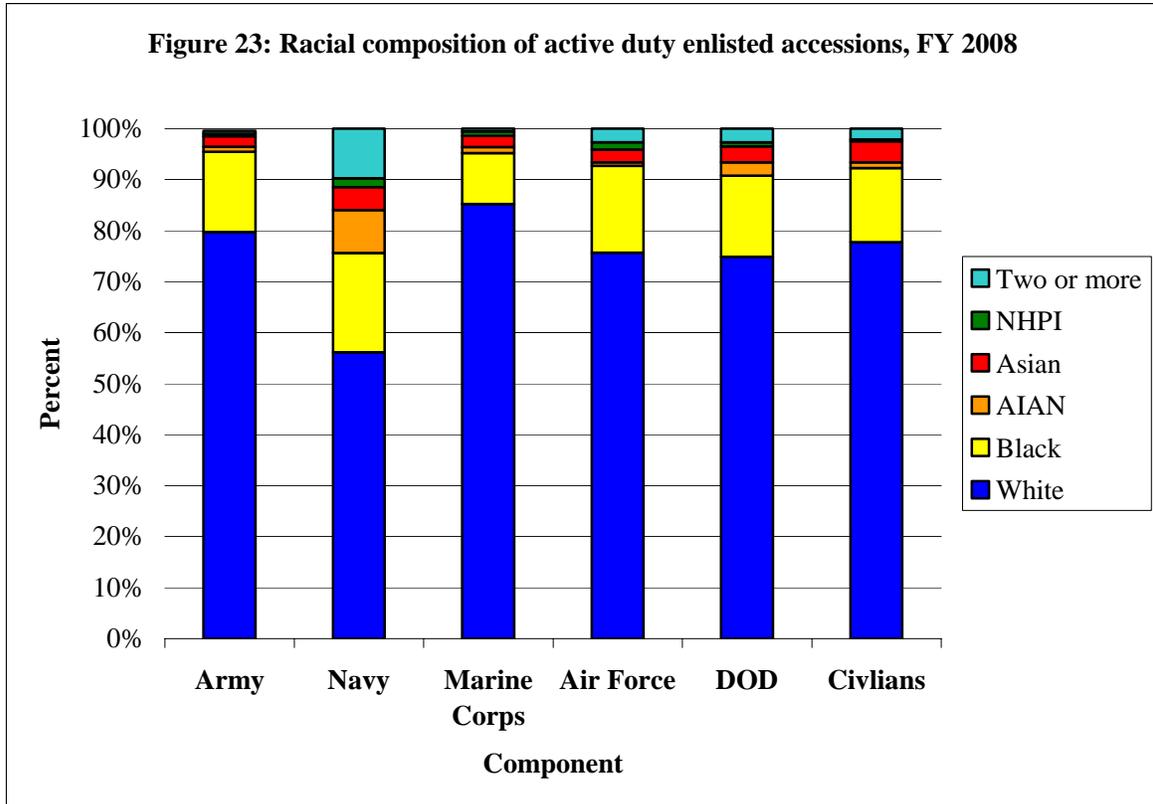
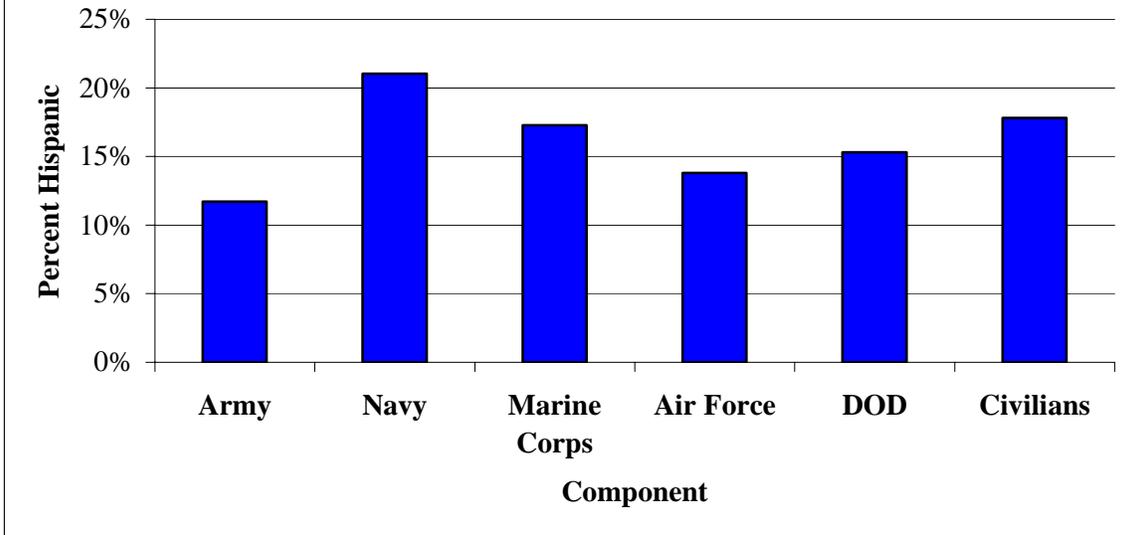


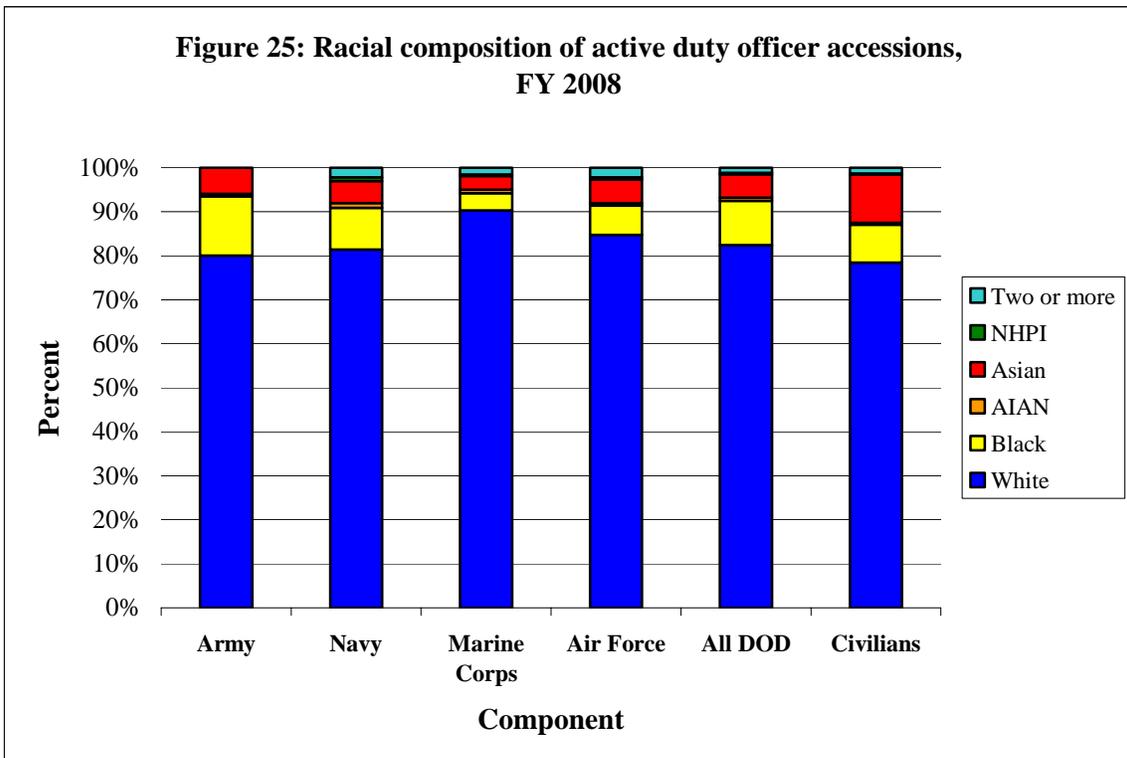
Figure 24 illustrates the representation of Hispanics among the enlisted accessions for the various active duty components. We find that Hispanics are somewhat under-represented among enlisted accessions, making up 15 percent of these accessions as compared to 18 percent of individuals in the relevant civilian population. The one major exception is the Navy, where Hispanics made up 21 percent of the new accessions in FY 2008. Also, in the Marine Corps, the representation of Hispanics is very close to their representation in the relevant civilian population.

Figure 24: The representation of Hispanics among active duty enlisted accessions, FY 2008



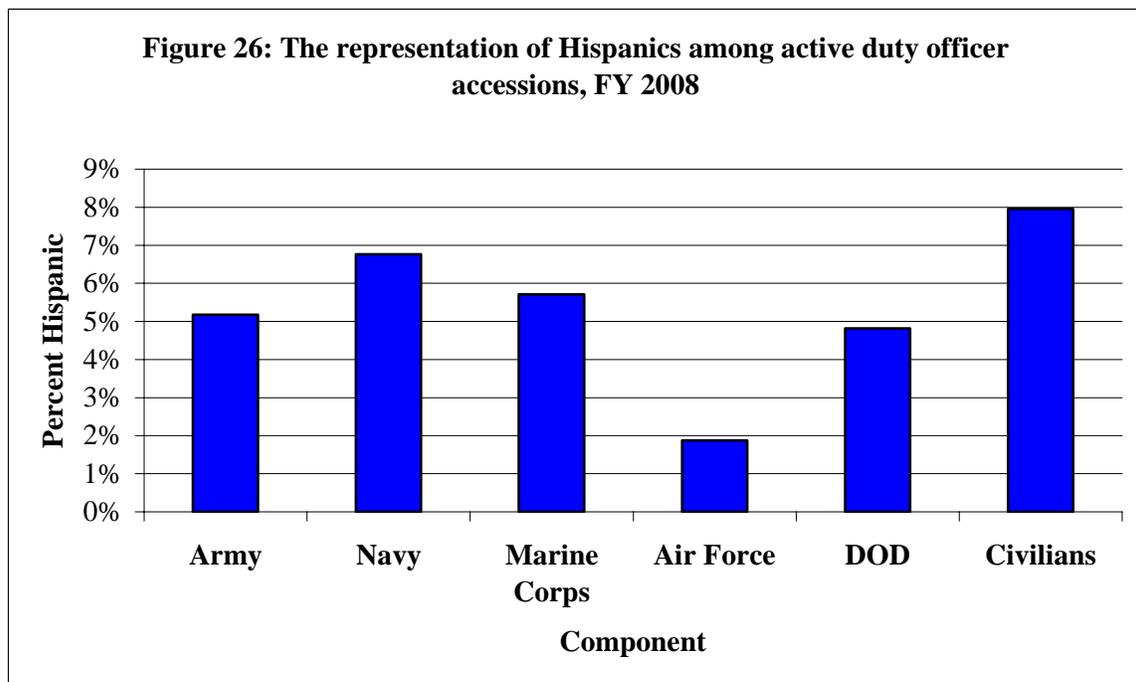
Officer accessions. Figure 25 illustrates the racial composition of officer accessions for the various active duty components.

Figure 25: Racial composition of active duty officer accessions, FY 2008



Whites are slightly over-represented among Army and Navy officer accessions and even more so among Marine Corps and Air Force officer accessions. Blacks are over-represented in the Army (13 percent versus 9 percent among the civilians) and under-represented in the Marine Corps (4 percent). Again, we find that Asians are quite under-represented across the components. They account for 11 percent of the relevant civilian population, but never more than 6 percent of any of the components' officer accessions.

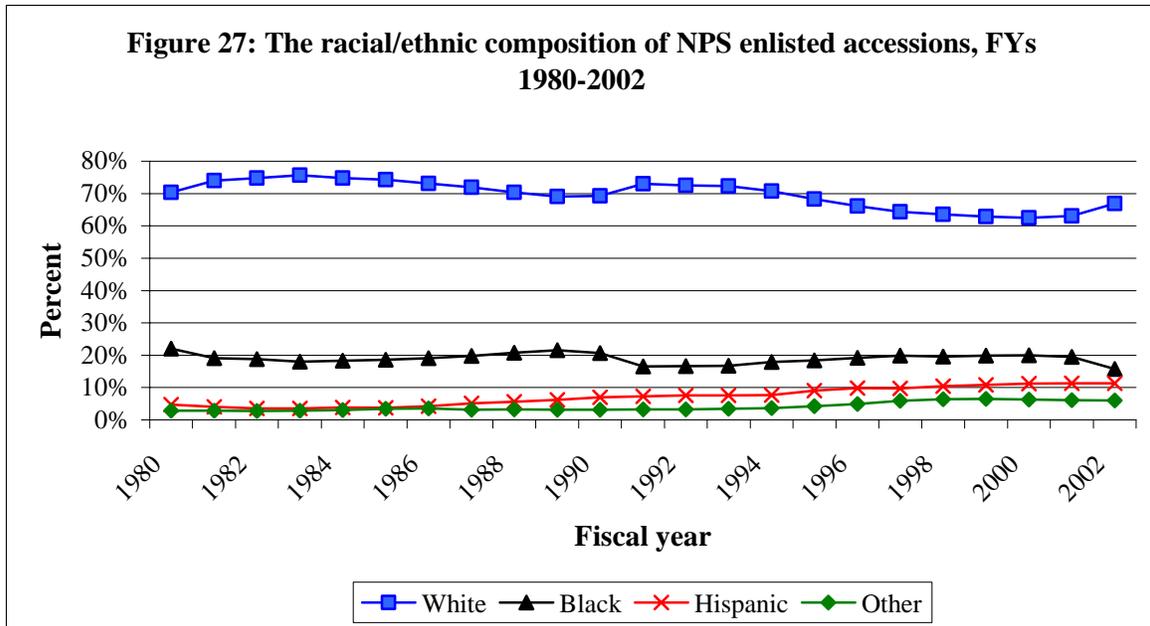
Figure 26 illustrates the representation of Hispanics among officer accessions for the various active duty components. According to the data, the Navy accessed more Hispanics, as a percentage of its total officer accessions, than the other components. But even in the Navy, Hispanics were under-represented in the population of officer accessions. Hispanics make up roughly 8 percent of all young college graduates, but only 6.75 percent of the Navy's officer accessions and a little less than 5 percent of all officer accessions across the four components.



Putting the racial/ethnic profile of enlisted accessions in historical context. Figure 27 presents how the racial/ethnic composition of active duty enlisted accessions evolved between FYs 1980 and 2002. There is a break in the time series between FYs 2002 and 2003 because DOD adopted a new way of reporting race and ethnicity in FY 2003. Prior to FY 2003, data on race and ethnic characteristics were used jointly to define demographic groups for reporting purposes. The most common set of mutually exclusive categories was the following:

- Non-Hispanic White
- Non-Hispanic Black
- Hispanic
- Other

The percentage of accessions identifying themselves as Non-Hispanic White fluctuated between 70 and 77 percent from FY 1980 through the mid-1990s and then fluctuated between 60 and 70 percent between the mid-1990s and FY 2002. The percentage of accessions describing themselves as Non-Hispanic Black generally fluctuated between 15 and 20 percent. The percentage of accessions describing themselves as Hispanic grew steadily throughout this time period from less than 4 percent in the early 1980s to a little more than 11 percent by FY 2002. The percentage of accessions describing themselves as another race also grew steadily over time from 3 percent in the early 1980s to over 6 percent by FY 2000.



Since FY 2002, the racial composition of enlisted accessions has remained relatively stable, although the percentage of recruits who identified themselves as Black fell from roughly 15 percent in FY 2003 to 13 percent in FYs 2005 and 2006. Since FY 2006 the percentage of recruits identifying themselves as Black has rebounded to nearly 16 percent. During these same years, the percentage of accessions identifying themselves as Hispanic has continued to grow to the point that it reached 15 percent in FY 2008 (see figure 28).

Race and ethnicity in the reserve components

Figure 29 presents the racial composition of current enlisted members and officers from the reserve components along with information on the racial compositions of their civilian comparison groups. Overall, the results are very similar to those found among the active duty members. Whites are slightly over-represented among the officers, while Blacks are over-represented among both the enlisted personnel and officers. Asians are under-represented among both groups, especially among the officers.

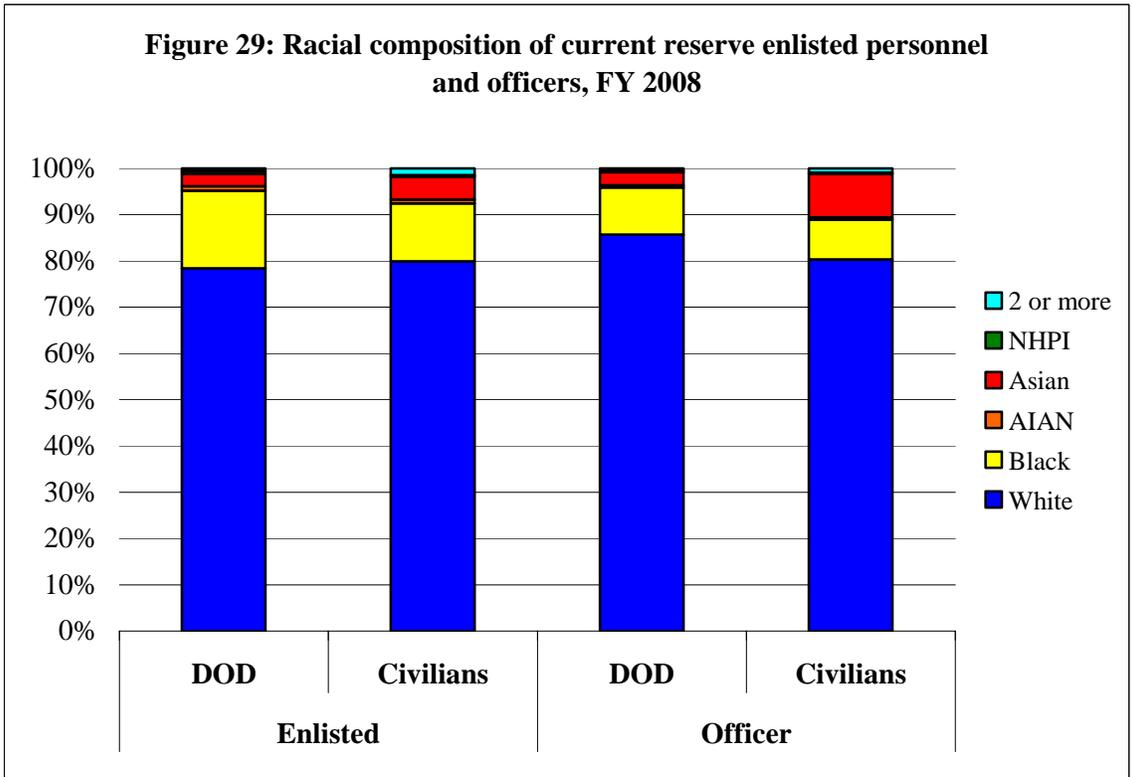
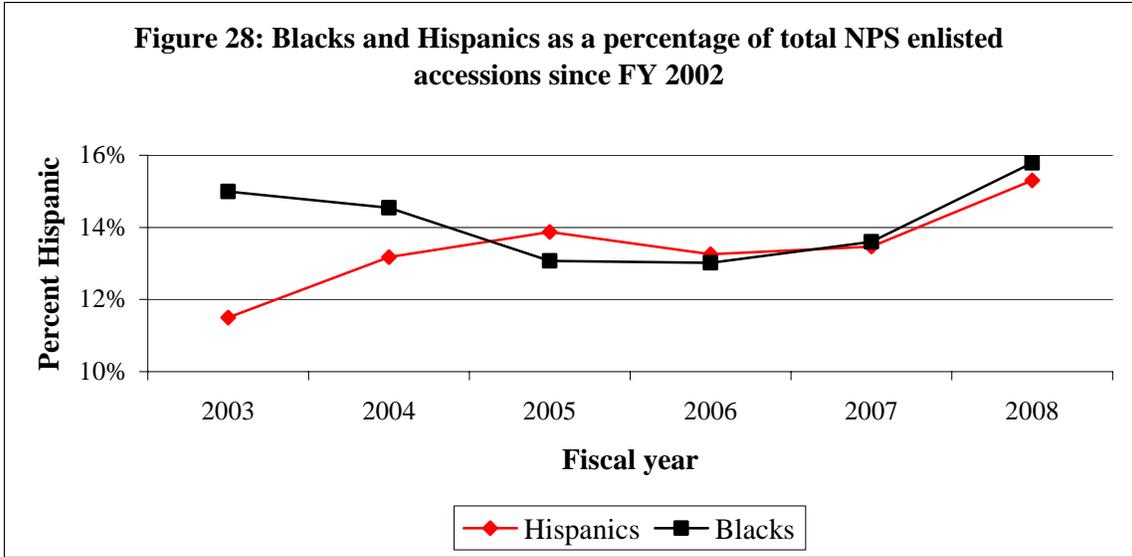
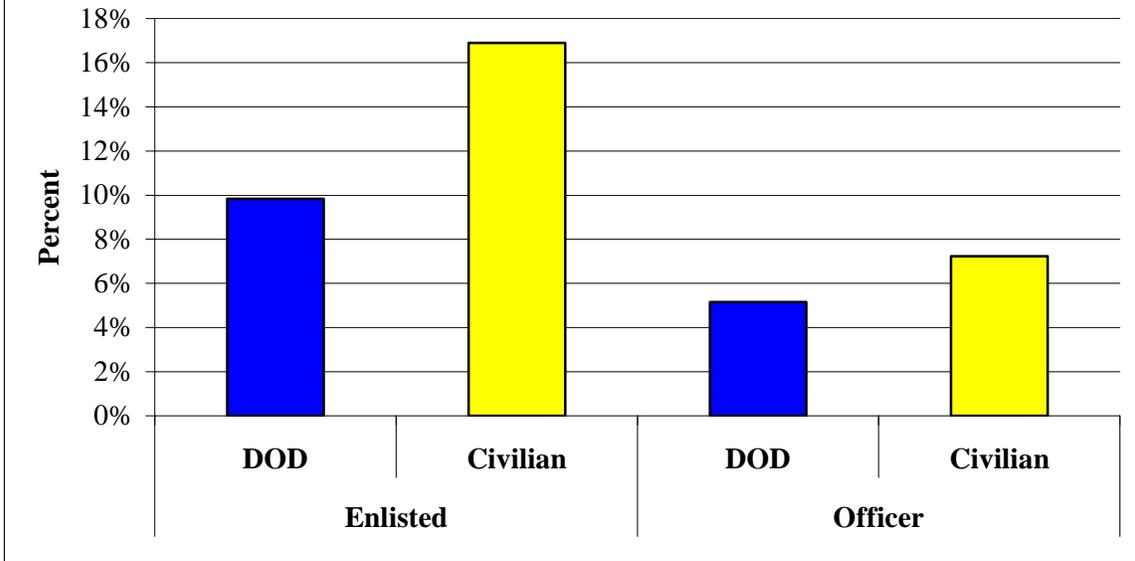


Figure 30 presents data on representation of Hispanics among reserve enlisted members and officers along with information on their representation in the relevant civilian comparison groups. Roughly 10 percent of enlisted members are Hispanic as compared to 17 percent in the relevant civilian comparison group. Among the officers, 5 percent are Hispanic as compared to 7 percent in the relevant civilian comparison group. These results are very similar to those found for active duty personnel.

Figure 30: The representation of Hispanics among current reserve enlisted personnel and officers, FY 2008



Home communities of active component enlisted accessions

In this section, we focus on the communities from which the FY 2008 active duty enlisted accessions were drawn. We first focus on the question of whether these accessions were drawn more disproportionately from certain regions of the country. We then turn our attention to specific characteristics of the communities in which the enlisted accessions lived prior to joining the military.

Regional differences

Figure 31 illustrates the variation in accession rates from each of the nine census divisions. The average nationwide accession rate was roughly 5.85 accessions per 1,000 individuals aged 18 to 24 years. All of the southern census divisions had accession rates of at least 6, and the West South Central division's accession rate was the highest at 7.4 accessions per 1,000 individuals. New England and the Middle Atlantic had accession rates that were much lower than the national average—4.6 and 4.4, respectively. The two North Central divisions had accession rates that were roughly on par with the national average. In the west, the Mountain division had a higher than average accession rate (6.4) and the Pacific division had a lower than average accession rate (5.3).

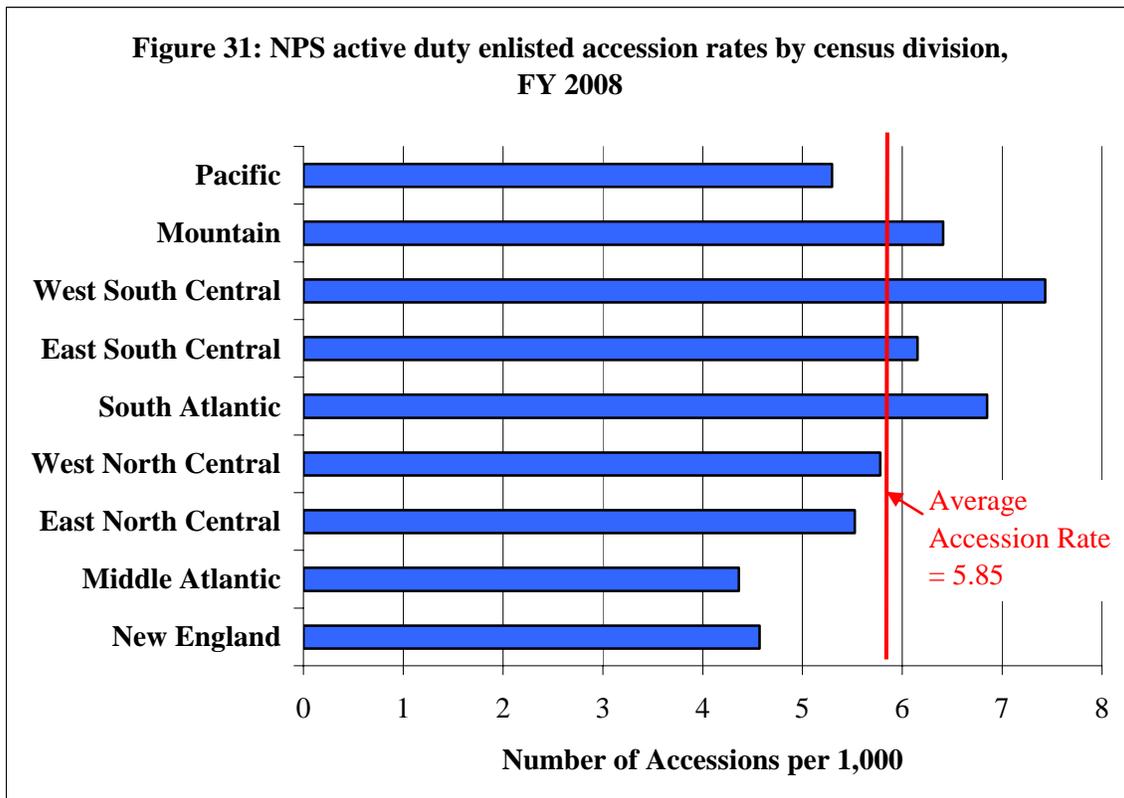
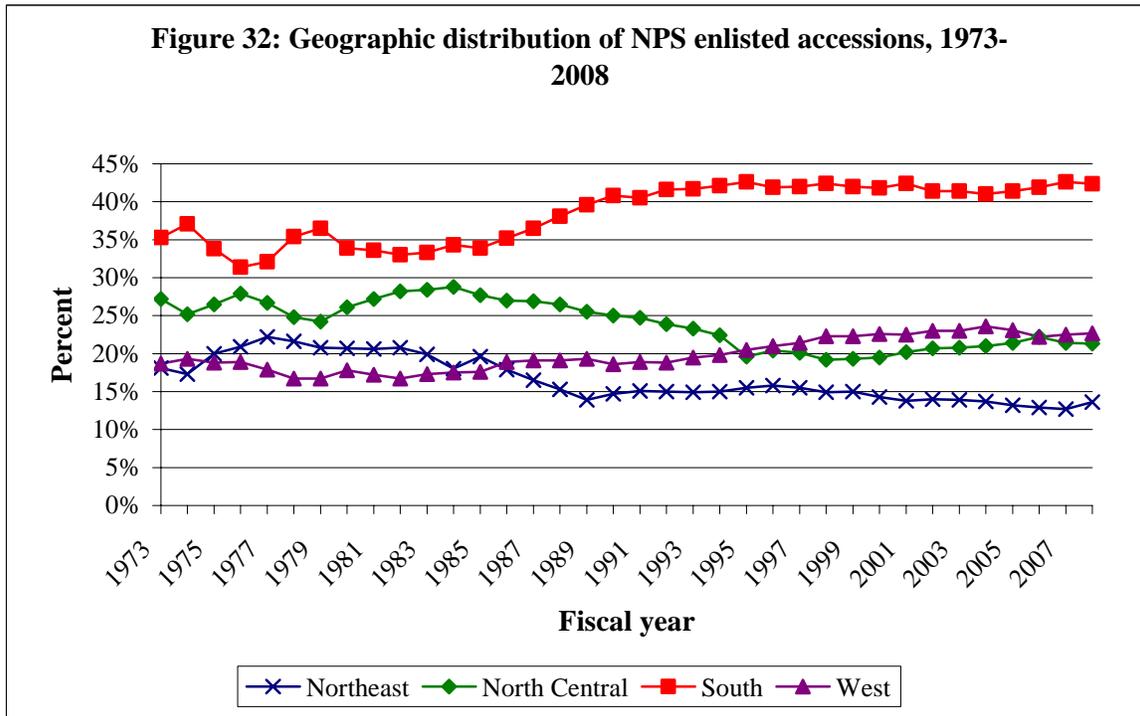


Figure 32 explores how each Census region’s share of total accessions has changed over the past 35 years.



The southern region has always provided the largest share of enlisted accessions, but its share has increased since the mid-1980s. Then, 35 percent of all accessions came from the south. Since the mid-1990s, roughly 42 percent of all accessions have come from there. Of course, the south’s share of total population has also grown, so the result may simply reflect this population shift. Also, since the mid-1980s, the percentage of accessions coming out of the west has grown, while the percentages of accessions coming out of the northeast and the north central regions have fallen. Again, this could be due to shifts in the civilian population over time.

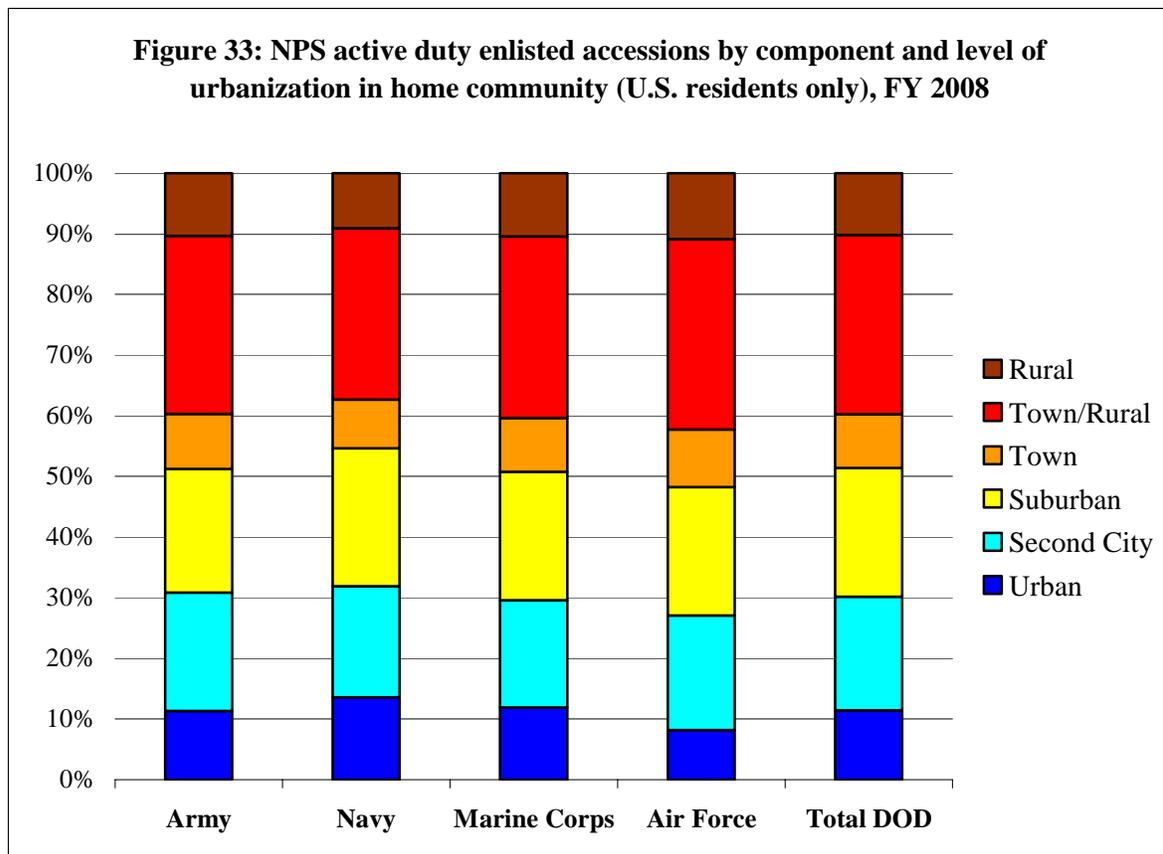
Home communities of enlisted accessions

To create tables B-41 through B-45 in appendix B and the charts that follow, we combined information on the home of record reported by each active duty enlisted accession with socioeconomic data on communities within the U.S. The home communities are defined at the 5-digit zip code level. Accessions residing outside of the U.S. at the time of enlistment are excluded from our population.

Level of urbanization. A proprietary model classifies locations within the U.S. by both population density and proximity to the downtown core in the nearest metropolitan area. The result places each community into one of the following six categories.

- Urban: high density population center; the downtown of a major city and its surrounding neighborhoods (example: Washington, DC)
- Second city: medium density area that serves as the population center for the surrounding community (example: Richmond, Virginia)
- Suburban: may have a population density comparable to that found in a second city, but is dependent on a neighboring population center (example: Fairfax County, Virginia)
- Town: smaller population center than a second city with a lower population density (example: Harrisonburg, Virginia)
- Town/Rural: areas near towns
- Rural: the remainder of the country

Figure 33 presents the distribution of NPS accessions' home communities across these levels of urbanization. Roughly 30 percent of the accessions came from relatively urban places (high and medium density population centers). Nearly half of the accessions came from relatively small towns or rural areas. We also see that there was little variation across the four active components in this regard.



Racial/ethnic diversity of the home communities. We also looked at the racial/ethnic diversity of the home communities of NPS enlisted accessions. The racial/ethnic diversity categories are defined in exhibit 1.

Exhibit 1: Definitions of the racial/ethnic diversity categories for home communities

Category	White	Black	Hispanic	Asian
White (W)	>90%			<2%
White, Black, Hispanic Mix (W, B, H, Mix)		>10%	>10%	<2%
White, Black, Asian, Hispanic Mix (W, B, A, H, Mix)		>10%	>10%	>2%
White, Black Mix (W, B, Mix)	<90%			<2%
White, Asian Mix (W, A, Mix)		<10%	<10%	>2%
White, Black, Asian Mix (W, B, A, Mix)		>10%	<10%	>2%
White, Asian, Hispanic Mix (W, A, H, Mix)		<10%	>10%	>2%

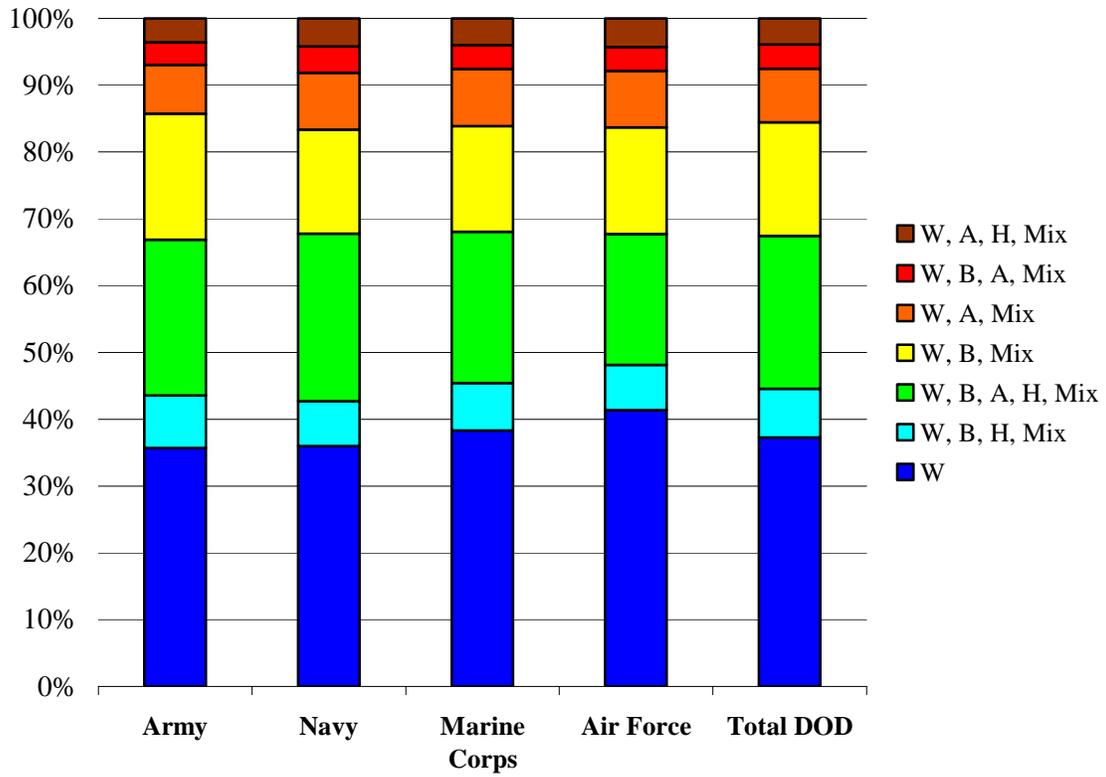
To help understand the categories, consider a few of examples.

- Example 1: A community is 93 percent White, 4 percent Black, 2 percent Hispanic, and 1 percent Asian. In this case, the community would be categorized as “White” (W).
- Example 2: A community is 85 percent White, 7 percent Black, 7 percent Hispanic, and 1 percent Asian. In this case, the community would be categorized as “White, Black Mix” (W, B, Mix).
- Example 3: A community is 85 percent White, 6 percent Black, 6 percent Hispanic, and 3 percent Asian. In this case, the community would be categorized as “White, Asian Mix” (W, A, Mix).

Figure 34 illustrates the types of communities that the FY 2008 enlisted accessions came from with respect to racial and ethnic diversity. The majority of the accessions came from either fairly homogeneously White communities (37 percent) or from extremely diverse (W, B, A, H, Mix) communities (23 percent). The other fairly common type of home community is like the one in example 2 above, with a minority population greater than 10 percent, but with no significantly large single minority group (W, B, Mix).

There is some variation across the components. Marine Corps and Air Force accessions were more likely (roughly 40 percent for each) than their counterparts in the Army or Navy (roughly 35 percent for each) to come from fairly homogenous White communities. Navy accessions were most likely (25 percent) to come from the most diverse communities, while Air Force accessions were the least likely (20 percent) to come from such communities.

Figure 34: NPS active duty enlisted accessions by component and racial/ethnic mix of home community (U.S. residents only), FY 2008



List of acronyms

AFQT	Armed Forces Qualifying Test
AIAN	American Indian/Alaskan Native
ANG	Air National Guard
ARNG	Army National Guard
ASVAB	Armed Services Vocational Aptitude Battery
DMDC	Defense Manpower Data Center
DOD	Department of Defense
FY	Fiscal Year
GED	General Education Certificate
NHPI	Native Hawaiian/Pacific Islander
NPS	Non-prior service
OMB	Office of Management and Budget
PS	Prior service
USAFR	U.S. Air Force Reserve
USAR	U.S. Army Reserve
USMCR	U.S. Marine Corps Reserve
USNR	U.S. Navy Reserve

Source data for figures

Figure 1	Table D-11
Figure 2	Table D-3
Figure 3	Table D-17
Figure 4	Table D-15
Figure 5	Table D-20
Figure 6	Table D-21
Figure 7	Author's calculations using table B-40
Figure 8	Author's calculations using table D-32
Figure 9	Author's calculations using table D-32
Figure 10	Author's calculations using table D-8
Figure 11	Tables D-7, D-8, and D-9
Figure 12	Table B-15
Figure 13	Tables D-5 and D-13
Figure 14	Table B-20
Figure 15	Author's calculations
Figure 16	Table B-30
Figure 17	Tables D-16 and D-19
Figure 18	Table B-28
Figure 19	Table C-11
Figure 20	Tables C-1 and C-8
Figure 21	Table C-18
Figure 22	Author's calculations using tables B-17 and B-25b
Figure 23	Table B-3
Figure 24	Table B-3
Figure 25	Table B-25a
Figure 26	Table B-25a
Figure 27	Table D-23
Figure 28	Table D-31
Figure 29	Tables C-13 and C-20b
Figure 30	Tables C-13 and C-20b
Figure 31	Author's calculations using table B-47
Figure 32	Table D-10
Figure 33	Table B-41
Figure 34	Table B-41

Source data for tables

Table 1	Various tables found in appendices B, C, and E ¹
Table 2	Tables B-4, B-6, and B-8
Table 3	Tables C-4 and C-6
Table 4	Tables A-1 and B-3
Table 5	Tables B-17 and B-25

Notes:

1. These tables include:

- From appendix B: tables B-1, B-12, B-15, B-22, and B-34
- From appendix C: tables C-1, C-8, C-11, C-16, C-17, and C-28
- From appendix E: tables E-5, E-10, E-12, E-15, E-19, E-20, E-22, E-24, E-26 and E-29