

Changes in Force Composition

Background Paper
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The last 30 years have seen changes in the composition of U.S. military forces. This paper describes some of those changes in broad terms. The first section reviews historical shifts and, where possible, makes comparisons between military personnel and like civilian populations. The second section presents some basic demographic projections for the U.S. population that may affect the makeup of the future military. The last section raises some of the issues that may affect DoD's effort to shape and maintain a highly capable military force in the future.

CHANGES OVER TIME

This section gives an overview of how the average age of the force, female participation, participation by race and ethnicity, the quality of recruits, and some basic military family characteristics have changed over the life of the AVF.

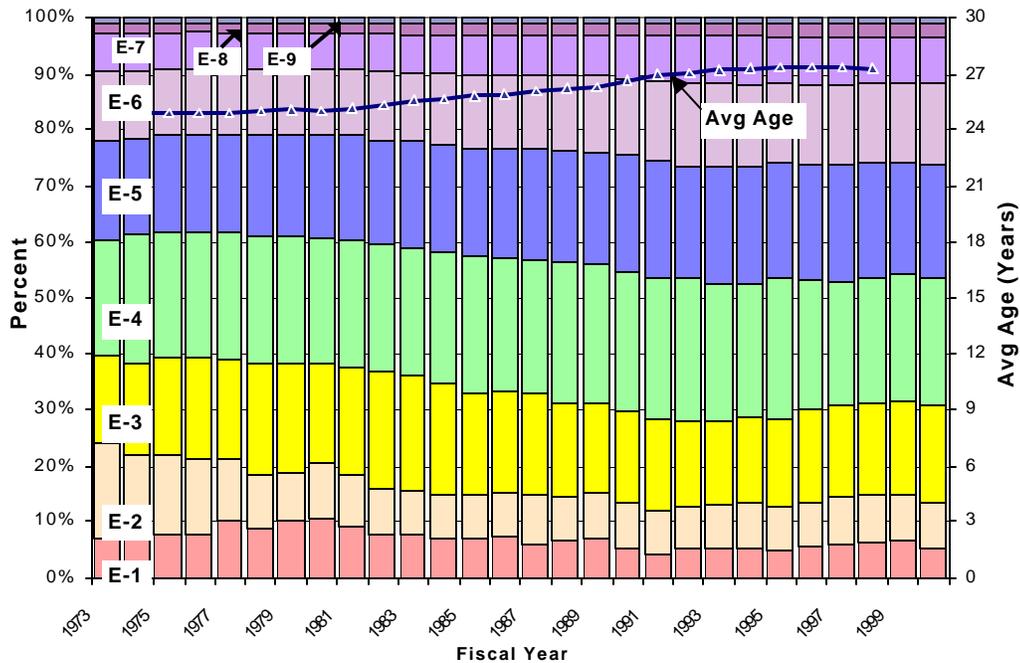
Age

Although the active-duty military remains much younger than the civilian workforce, the average age of the force has risen slightly over time.¹ For active-duty enlisted members, the mean age rose steadily from just under 25 years in FY74 to just over 27 years in FY98. Two factors contribute to this rise. First, mean age at entry rose from 19.2 years in FY74 to 20.0 years in FY98. The same trends hold for officers, whose average age increased by almost two years between FY74 and FY98 (from 32.4 to 34.2 years), outpacing the increase in age at entry (22.6 years in FY74, rising to 23.4 years in FY98). Second, rank structure changed slightly over time as well. Figure 1 shows that the enlisted force became slightly more senior over time, with E-7s and above accounting for an increasing percentage of the force. Similar trends hold for officers. This shift towards a more senior force is at least partially by design, as some Services purposely retained more senior personnel in the drawdowns over the 1990s.²

¹ *Population Representation in the Military Services, FY98* (Office of the Assistant Secretary of Defense for Force Management Policy: Washington, DC), November 1999, p. iii. The Defense Manpower Data Center (DMDC) also provided this office with data on the median age for both officers and enlisted active-duty personnel. The median was slightly lower than the mean for both, but followed the same general patterns.

² Beth J. Asch and James R. Hosek, *Military Compensation: Trends and Policy Options*, DB-273-OSD (RAND: Santa Monica, CA) 1999, pp. 46-48.

Figure 1. Enlisted Force by Rank and Average Age

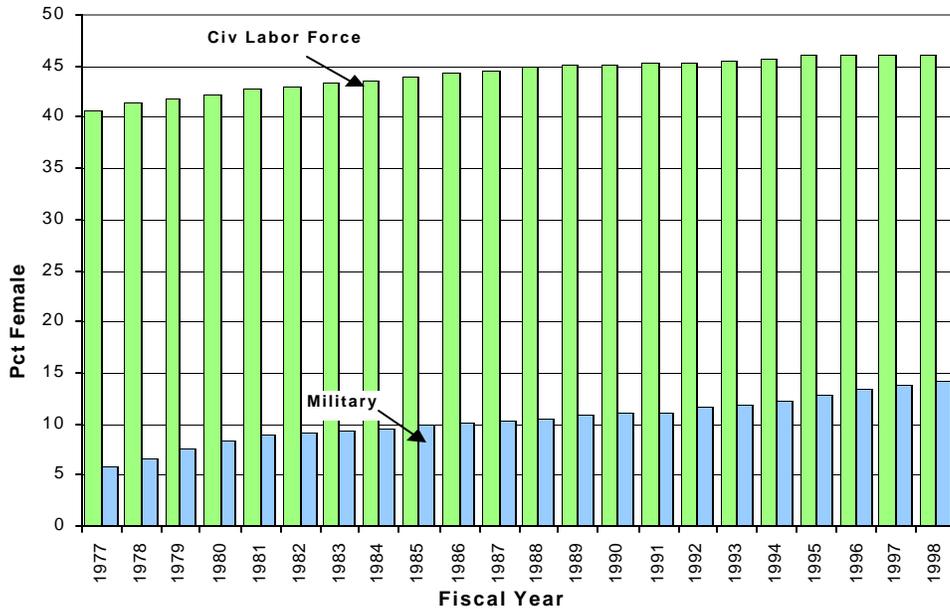


Source: DMDC, "Distribution of Active Duty Forces by Rank, Sex and Ethnic Group," FY73-00.

Female Participation

Women are a larger proportion of the military than they were in the 1970s, constituting only 6 percent in FY77 but growing to over 14 percent of all active-duty members by FY98.

Figure 2. Percentage of Females in Military and Civilian Workforce



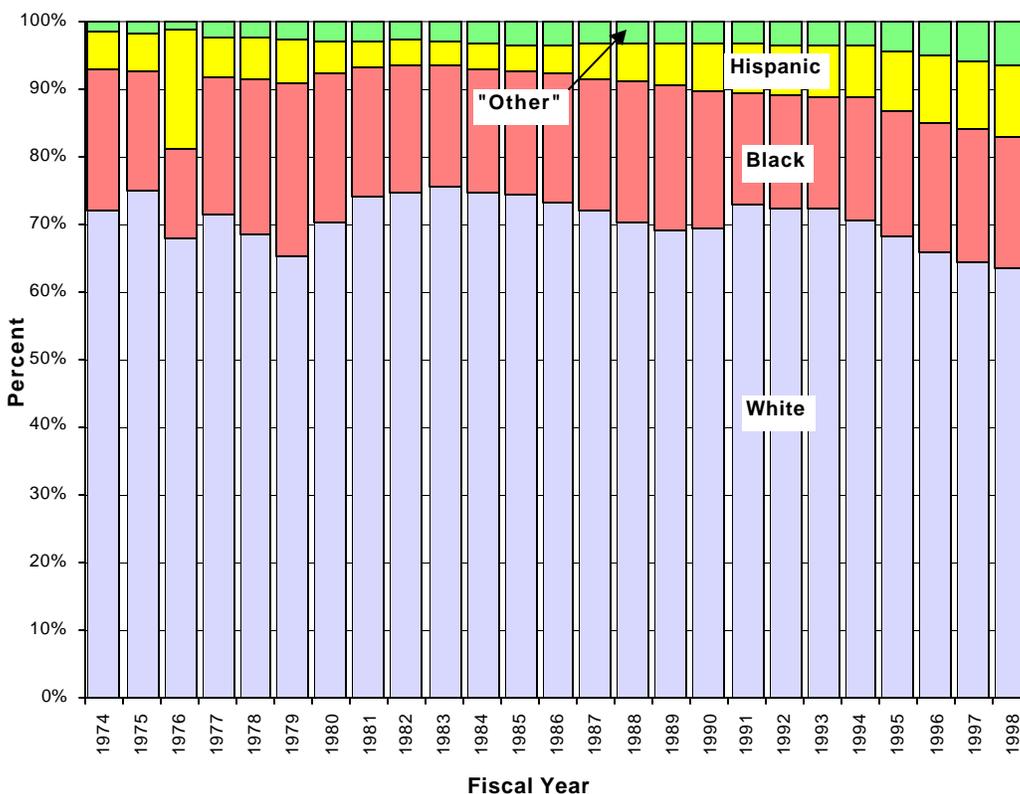
Source: Military data from OASD(FMP), 1999. Data on civilian labor force from "Current Population Survey," Bureau of Labor Statistics (BLS) (Washington, DC), 2000.

This growth reflects DoD's efforts to broaden the range of positions and specialties in which women may serve. While the percentage of women in the force rose, the share of women in the civilian labor market also increased, and the military share of the female labor force has remained roughly constant. Figure 2 shows that the percentage of the military population that is female and the percentage of the workforce that is female rose steadily since 1977, with the difference between the two remaining at about 30 percent over time. Opportunities for women have continued to increase since the AVF was instituted, yet females remain underrepresented in the military relative to their share in the labor market as a whole.

Racial/Ethnic Participation

Over time, an increasing proportion of racial and ethnic minorities is enlisting in the active-duty force (see Figure 3).³ The percentage of non-Hispanic white enlisted personnel dropped from 72 percent in FY74 to 64 percent in FY98, although there has not been a smooth downward trend. Non-Hispanic blacks have averaged around 20 percent of incoming soldiers over time, with slight fluctuations. Thus the biggest change in enlisted racial force composition is the increasing proportion of Hispanics and other ethnic groups.

Figure 3. Active Component Enlisted Accessions by Race/Ethnicity, FY74-98



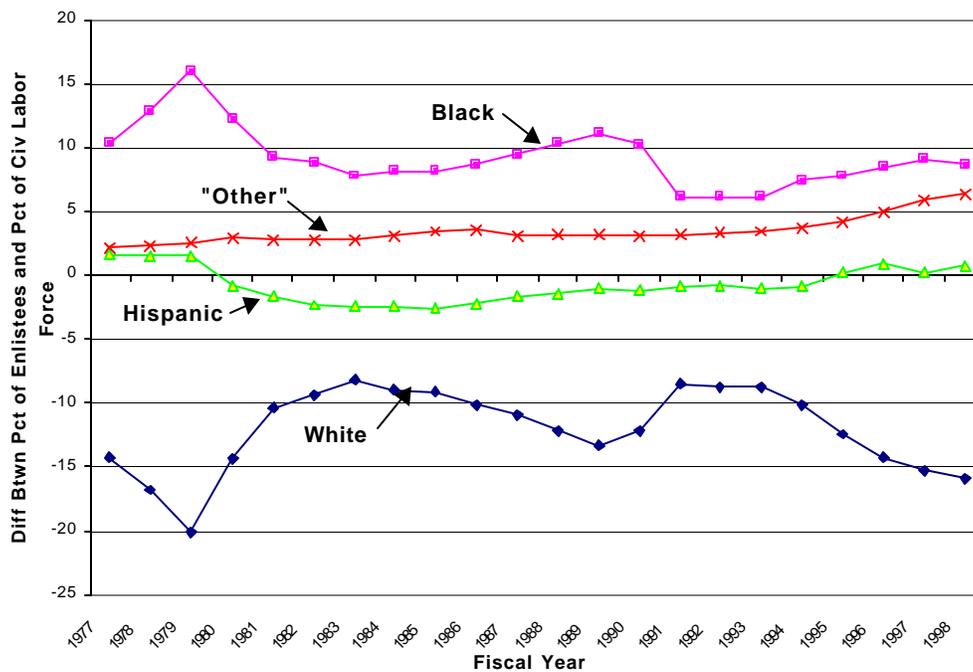
Source: OASD(FMP), 1999, pp. D-6-D-9.

³ OASD(FMP), 1999: pp. D-23-D-24.

Non-white groups make up a larger percentage of the officer corps than they did in the 1970s, although the bulk of the officer corps remains white. Officer accessions for non-Hispanic blacks rose from 3.4 percent in FY74 to 8.5 percent in FY98; Hispanic participation increased from 0.2 percent in FY74 to 4.3 percent in FY98. These percentages are only slightly less than the percentage of like minorities who are college graduates (the comparable civilian population).

How does the racial and ethnic composition of the military compare with that of the civilian labor force? Figure 4 shows the percentage of enlistees who belong to a certain racial or ethnic group minus the percentage they represent in the civilian labor force. If a group chooses a military career proportionally, the difference would be zero; for example, if blacks make up 15 percent of the workforce and also 15 percent of enlistees, they would be proportionally represented in the force and the difference shown in the chart would be zero. Figure 4 illustrates that blacks and "other" racial and ethnic groups have historically over-accessed relative to their share of the civilian labor force. In recent years, Hispanics have chosen military careers at about the same rate that they have chosen other jobs. Whites, by contrast, continue to choose civilian employment at much higher rates than they do military service, a trend that became stronger during the 1990s.

Figure 4. Difference Between Percent of Enlisted Accessions and Percent in Civilian Labor Force



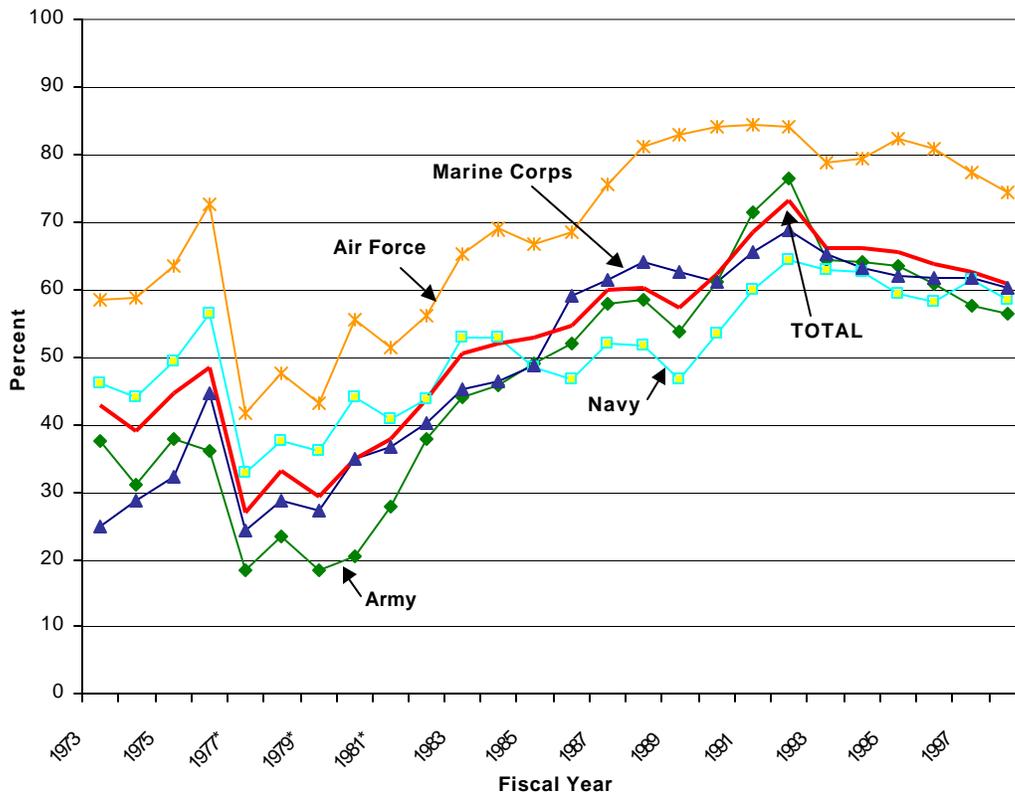
Source: Enlisted data from OASD(FMP), 1999, p. D-4; labor force data from BLS.

Quality

Two key objectives in creating the AVF were increasing professionalism and enhancing personnel quality. Figure 5 shows that, as measured by aptitude tests, the quality of incoming recruits in fact rose steadily throughout the 1980s (problems with misnormed test scores in the

late 1970s and early 1980s make earlier comparisons difficult). Recruit quality peaked in FY92, and has fallen since then. Still, by FY98 almost 50 percent more incoming soldiers were “high quality” than when the AVF was initiated in 1973. Moreover, while the quality of recruits has declined in recent years, it remains much higher than it was for much of the 1970s and 1980s.

Figure 5. Percent of High-Quality Recruits, by Service^a



Source: OASD(FMP), 1999, p. D-14.

^a High-quality is defined as high school graduates who score in Categories I through IIIa (the top 50 percent) on the Armed Forces Qualification Test (AFQT).

^b FY77-81 values reflect misnorming of Armed Services Vocational Aptitude Battery (ASVAB).

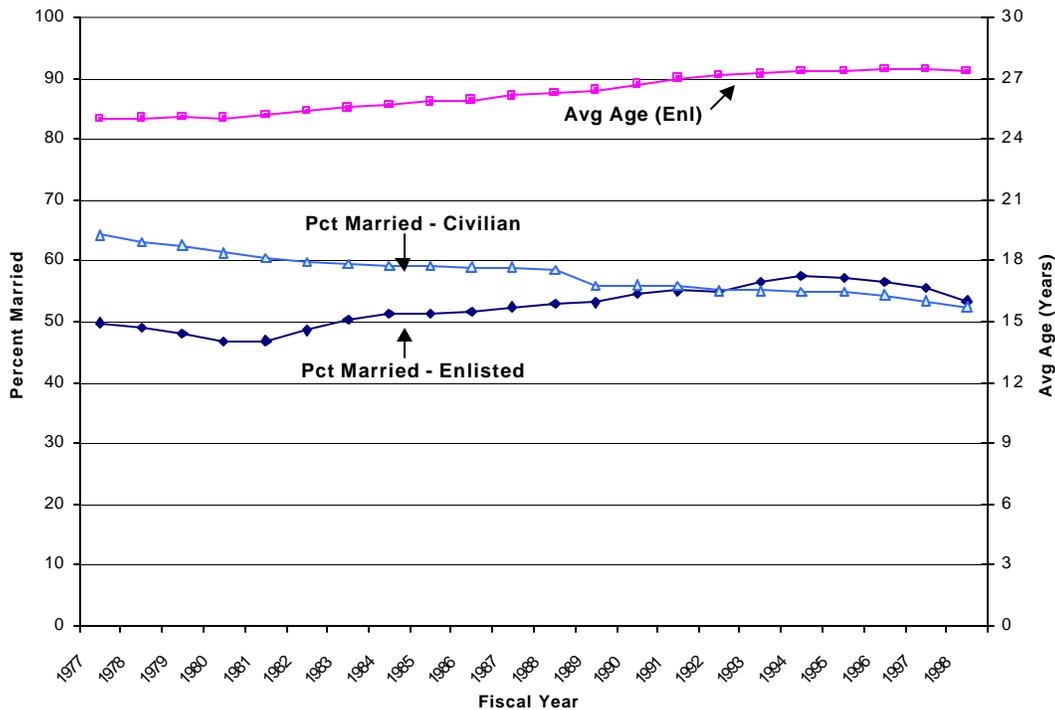
Family Issues

Growth in the number of military families was another major change that occurred with the shift from conscripts to volunteers. Over time, the percentage of the force that is married has risen slightly. Not surprisingly, the percentage of military members with dependents is also higher, although the average size of military families remains fairly stable over time.

Marriage Rates. Figure 6 shows that, while the percentage of the enlisted force that is married rose since 1977, the percentage of married civilians fell. The increase in military marriage rates may be a function of several factors. For example, the increase appears to be

correlated with a rise in the average age of enlistees, also included in the figure.⁴ Higher marriage rates may also reflect a shift in military or civilian culture (i.e., a higher value might be placed on married households in the military), or other influences.⁵

Figure 6. Percentages of Married Service Members and Civilians and Average Enlistment Ages



Source: OASD(FMP), 1999, pp. D-17, D-20, D-21.

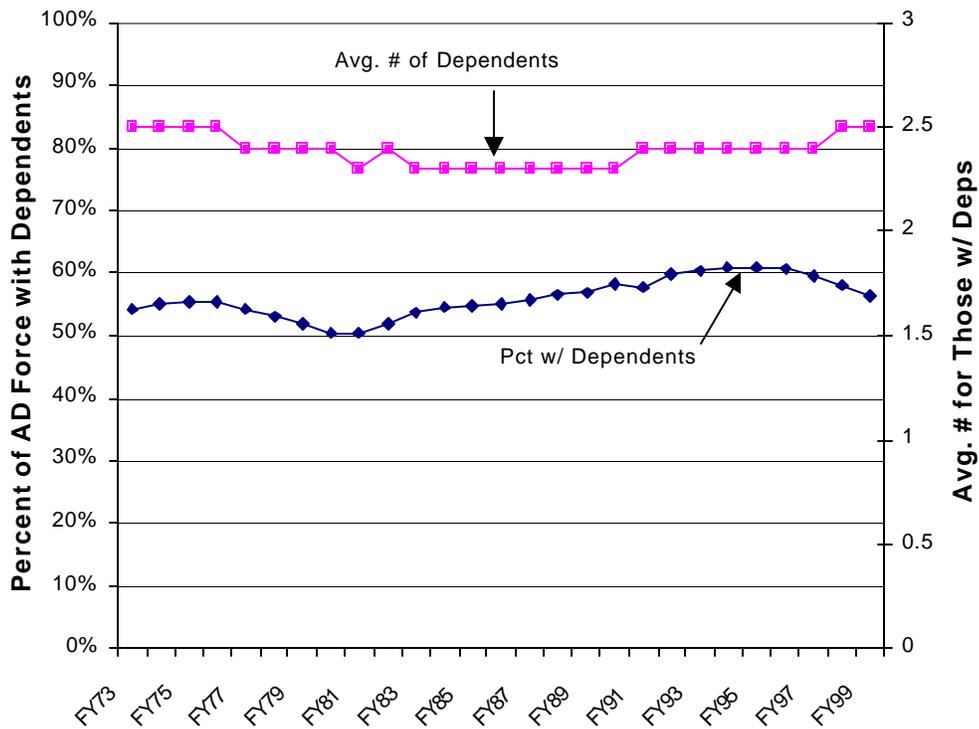
^a Civilian marriage rates are for 18 to 44-year-olds.

Family Size. Family size has increased only slightly since the inception of the AVF. As Figure 7 shows, the percentage of military members with families rose from about 50 percent of the active-duty force in the early 1980s to just over 60 percent by the mid-1990s, then declined somewhat during the latter years of the decade. This trend closely follows the marriage patterns discussed above. The average number of dependents is even more stable: for those military members with families, the average number of dependents declined from 2.5 in the mid-1970s to 2.3 for most of the 1980s, before rising again to 2.4 in the early to mid-1990s and then returning to 2.5 in recent years. Thus family size, both in terms of the percentage of active-duty members who have families and the number of dependents in those families, has changed little since the AVF was created.

⁴ This figure shows the average for enlisted active-duty members. The officer marriage rate has remained fairly stable (at around 70 percent) since the mid-1980s. *Profile of the Military Community: 1999 Demographics* (Military Family Resource Center: Arlington, VA) 1999.

⁵ For example, unlike civilian compensation packages, some parts of military compensation are greater for married personnel with families.

Figure 7. Percentage of Military Families and Average Number of Dependents



Source: Defense Manpower Data Center.

FUTURE DEMOGRAPHIC & ECONOMIC TRENDS

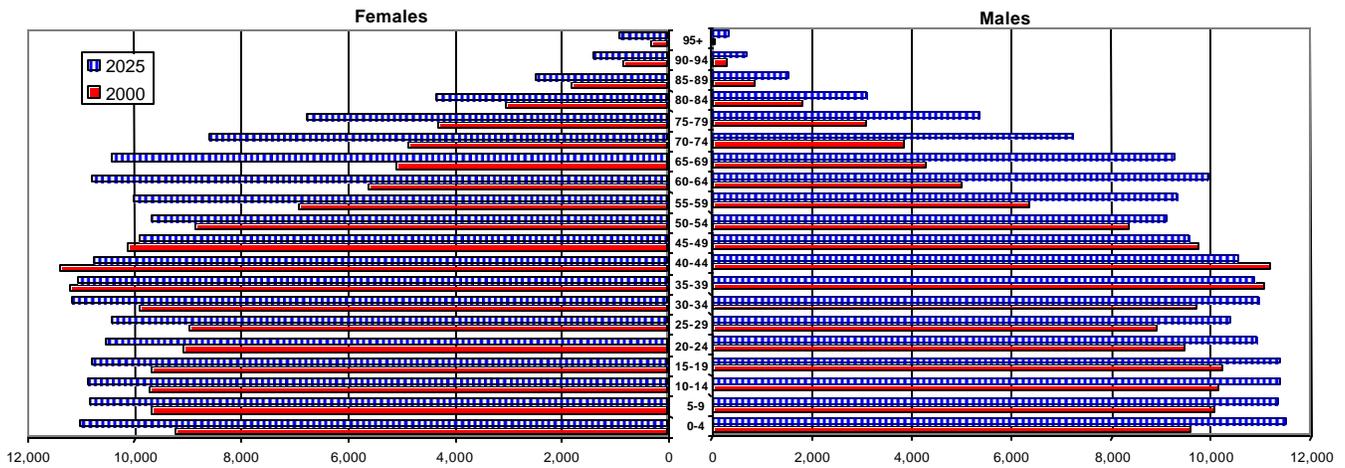
The previous section described some historical changes in the composition of the All Volunteer Force. This section examines broader demographic trends in the civilian sector, and touches on some of their implications for the AVF.

Population by Age

Figure 8 shows the Census Bureau’s estimated age and sex distributions for 2000 and 2025. In general, they expect the overall U.S. population to grow, with a greater proportion of older people (aging baby boomers). At the same time, the Census Bureau projects that long-term growth in the number of youths will stem largely from immigration, which is expected to account for almost two-thirds of the country’s population growth by 2050.⁶ Only in the middle-aged groups (ages 35-49) will have fewer people than there are currently. This aging of the general population is likely to lead to higher benefit costs for retirees; the implied increases in Social Security and other “non-discretionary” federal spending may displace funding for the discretionary portion of the federal budget, which includes defense.

⁶ *Futurework: Trends and Challenges for Work in the 21st Century* (US Department of Labor: Washington, DC) 2000.

Figure 8. U.S. Population by Age and Sex, 2000 and 2025

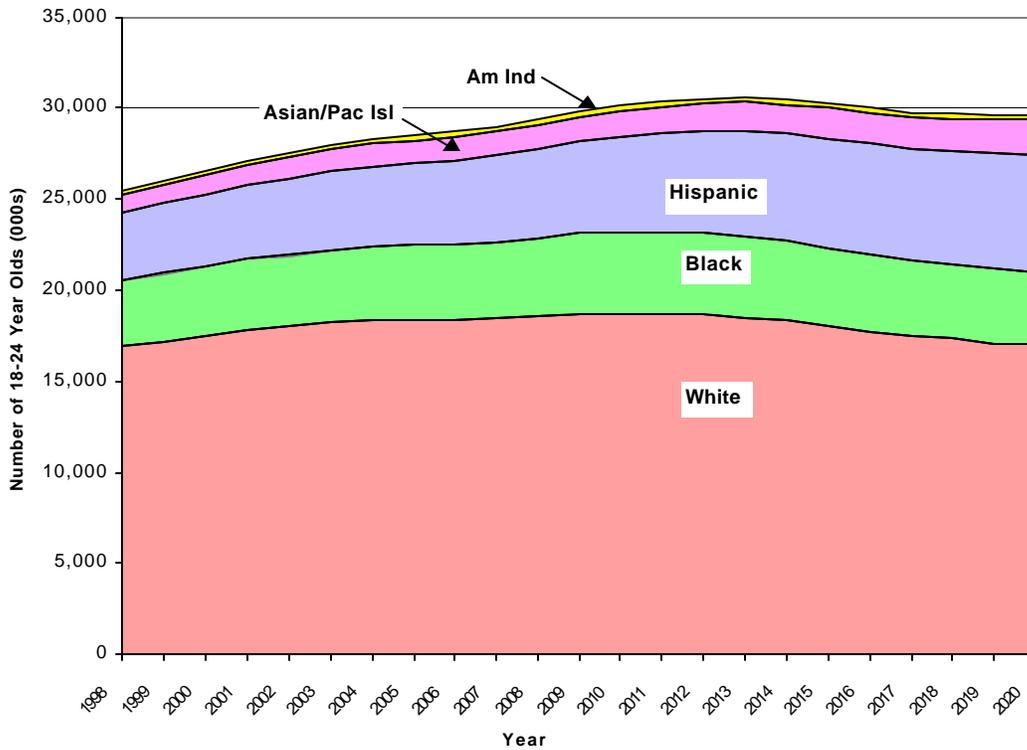


Source: U.S. Census Bureau, "Midyear Population Estimates," in 000s.

Racial/Ethnic Makeup

Figure 9 shows the projected change in the racial and ethnic composition of the population over the next 20 years. The Census Bureau expects that the total number of 18 to 24-

Figure 9. Projected Number of 18 to 24-Year-Olds by Race and Hispanic Origin, 1998-2020



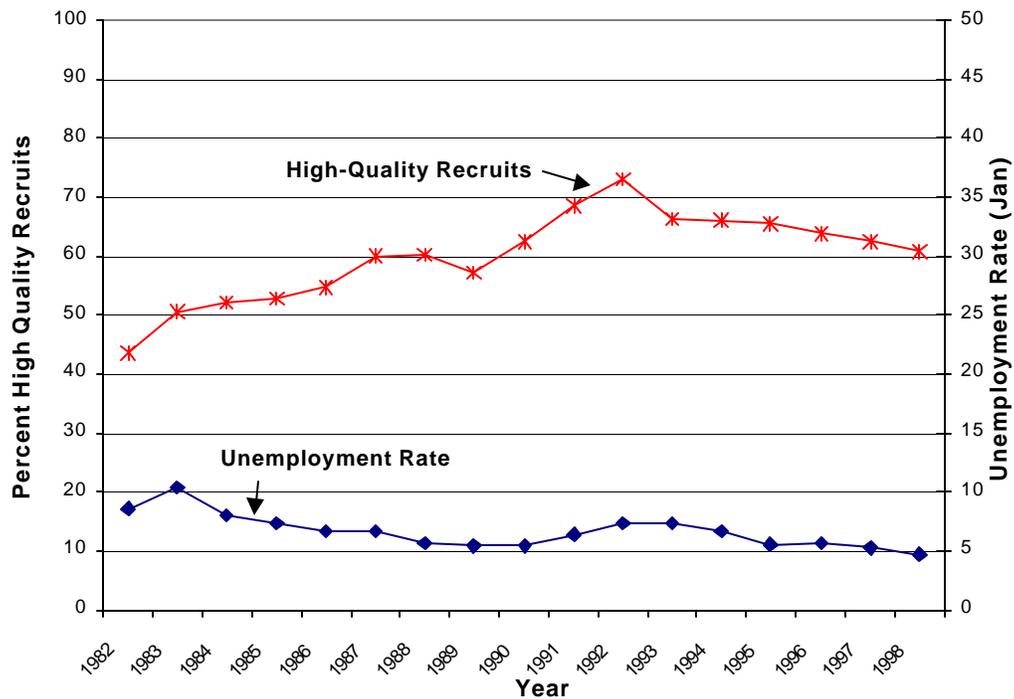
Source: U.S. Census Bureau, "Projections of the Total Resident Population," Population Projections Program.

year-olds (the primary market for military recruiting) will grow from about 25 million in 1998 to a peak of over 30 million in the early 2010s before falling off slightly to just under 30 million by 2020. They project that Hispanics will become an increasingly larger percentage of this population group, as will (to a lesser extent) Asian-Pacific Islanders. Military force composition probably will change as well.

Quality

One cannot know the quality of future recruits, but economic and demographic trends can suggest the type of labor market the military may face in the future. Figure 10 shows some correlation, particularly over the 1990s, between lower-quality recruits and lower unemployment. Both WEFA and Standard & Poor’s DRI project that the unemployment rate will stay below 5 percent until at least 2012, which suggests that competition for skilled individuals will remain stiff for the foreseeable future.⁷

Figure 10. Recruit Quality and Unemployment Rates, 1982-98^a



Source: Recruit data from OASD(FMP), unemployment rate from BLS “Current Population Survey.”
^a High quality is defined as high school graduates in AFQT Categories I-IIIa.

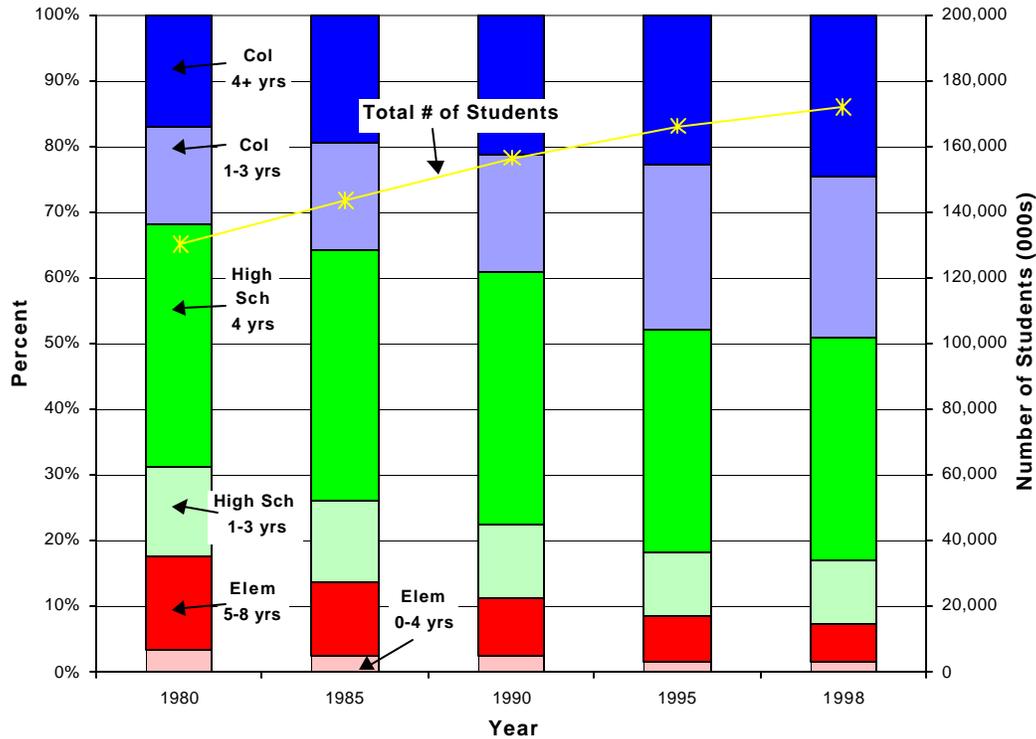
The military trends to train people after they enlist, rather than recruiting people with substantial post-high school education.⁸ Figure 11 shows that fewer people stop their education at the high school level. The total number of students has climbed steadily since 1980, as has the

⁷ Standard & Poor’s DRI, *The U.S. Economy: The 25-Year Focus* (Standard & Poor’s DRI: Lexington, MA) Winter 2000, pp. 21-22, and WEFA, pp. 4.67-4.68.

⁸ This is changing somewhat, as the Services are more aggressively pursuing possible recruits who have some college background, and by increasing educational support programs.

percentage of 25-year-olds who have completed at least some college (which rose from 30 percent in 1980 to almost 50 percent by 1998). If this trend continues, DoD may not be able to sustain the current recruiting policy and rank structure.

Figure 11. Trends in Civilian Educational Attainment for People 25 Years and Older, 1980-98

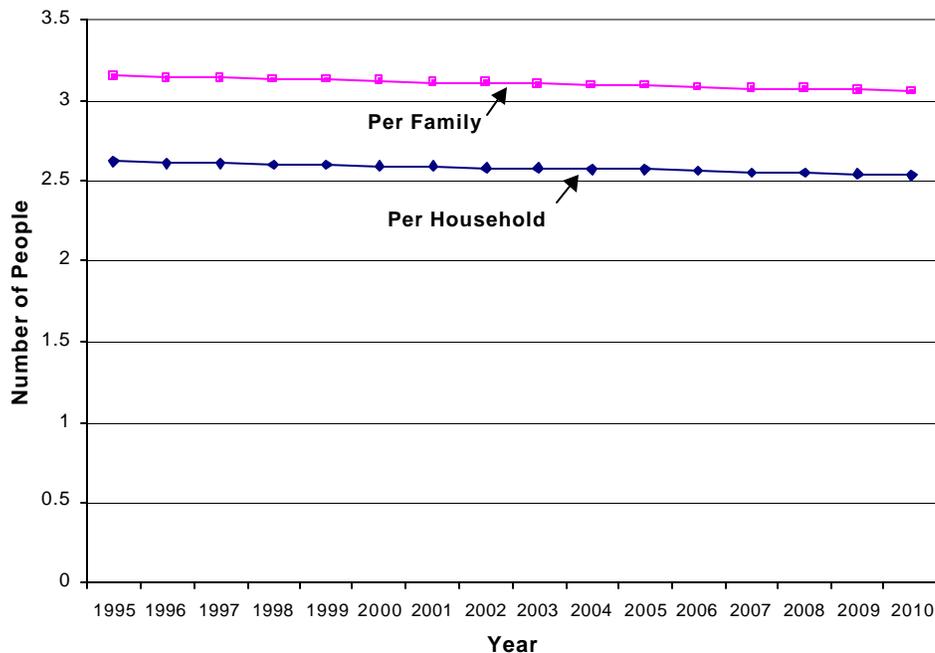


Source: U.S. Census Bureau, "Trends in Education," December 10, 1998.

Family Issues

The Census Bureau expects that the average size of civilian families and households will fall over the next ten years, as shown in Figure 12. It is not clear whether projected civilian declines will be reflected in military trends.

Figure 12. Average Size of Civilian Households, 1995-2010



Source: U.S. Census Bureau, "Projections of Household By Type," Series 1, May, 1996.

FUTURE CHALLENGES AND ISSUES

To summarize, over the 28 years that the AVF has been in existence, its composition has changed. Of principal importance are:

- Recruit quality has grown since the AVF was instituted, although there have been some recent declines;
- The force is slightly older, although the military population is (by design) still much younger than the civilian workforce;
- The percentage of women serving in the active duty force has doubled, though the gap between females choosing military service and those participating in the civilian labor force has remained constant over time;
- Non-Hispanic whites under-access relative to the civilian labor force, Hispanics are slightly more likely to enlist (so that they now show about equal preference for military and civilian jobs), and other racial and ethnic groups over-access;
- The percentage of the active-duty force that is married is slightly higher than civilians, but the average number of military dependents has changed little.

Projections for the future indicate that the overall population is expected to age (though the number of recruit-eligible youths should increase somewhat); that a higher percentage of those youths will be of Hispanic and Asian-Pacific origin. Also, an expected strong economy

and increasing returns to education will continue to pose a competitive challenge for military recruiters. Whether military marriage and family patterns will more closely approximate those in the broader civilian population is uncertain.

Given these trends, the Department of Defense must find ways to continue fielding a highly skilled and capable force of volunteers. Its primary challenges include finding and persuading an adequate number of appropriately-skilled youth to join the armed forces, and developing a set of employment conditions and benefits that will retain them over time. Negotiating this balance within fiscal constraints may push the bounds of past practice, and lead the All Volunteer Force into a new era.