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Who Serves in the U.S. Military? Demographic Characteristics of Enlisted Troops and Officers

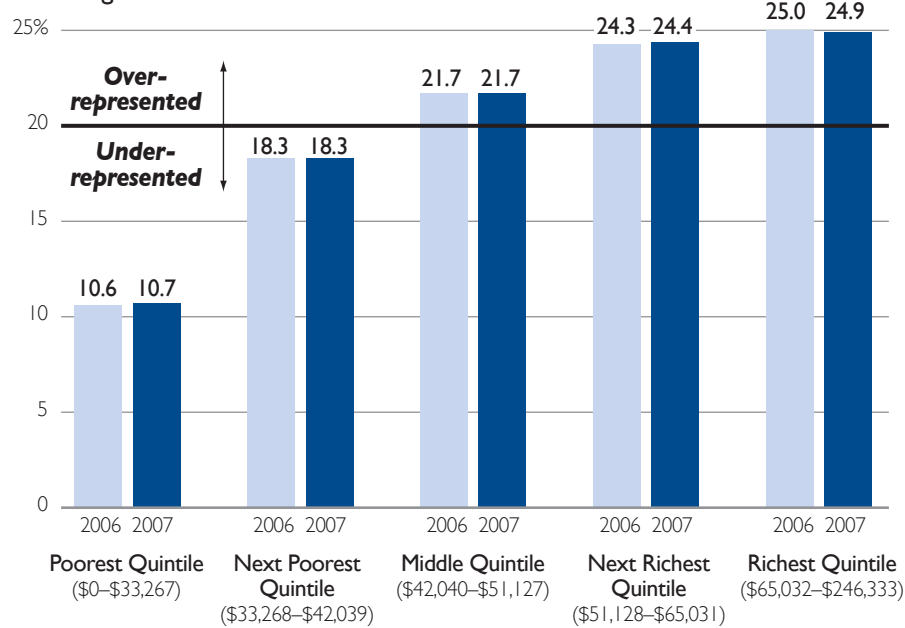
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Enlisted Recruits Are More Likely to Come from Middle- and Upper-Class Neighborhoods

Percentage of Total Recruits



Enlistees' Neighborhood Income Levels

A REPORT OF THE HERITAGE CENTER FOR DATA ANALYSIS

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WHO SERVES IN THE U.S. MILITARY? THE DEMOGRAPHICS OF ENLISTED TROOPS AND OFFICERS

SHANEA J. WATKINS, PH.D., AND JAMES SHERK

Who serves in the active-duty ranks of the U.S. all-volunteer military? Conventional wisdom holds that military service disproportionately attracts minorities and men and women from disadvantaged backgrounds. Many believe that troops enlist because they have few options, not because they want to serve their country. Others believe that the war in Iraq has forced the military to lower its recruiting standards.

Previous Heritage Foundation studies that examined the backgrounds of enlisted personnel refute this interpretation.¹ This report expands on those studies by using an improved methodology to study the demographic characteristics of newly commissioned officers and personnel who enlisted in 2006 and 2007.

Any discussion of troop quality must take place in context. A soldier's demographic characteristics are of little importance in the military, which values honor, leadership, self-sacrifice, courage, and integrity—qualities that cannot be quantified. Nonetheless, any assessment of the quality of recruits can take place only on the basis of objective criteria. Demographic characteristics are a poor proxy for the quality of those who serve in the armed forces, but they can help to explain

which Americans volunteer for military service and why.

Based on an understanding of the limitations of any objective definition of quality, this report compares military volunteers to the civilian population on four demographic characteristics: household income, education level, racial and ethnic background, and regional origin. This report finds that:

- U.S. military service disproportionately attracts enlisted personnel and officers who do not come from disadvantaged backgrounds. Previous Heritage Foundation research demonstrated that the quality of enlisted troops has increased since the start of the Iraq war. This report demonstrates that the same is true of the officer corps.
- Members of the all-volunteer military are significantly more likely to come from high-income neighborhoods than from low-income neighborhoods. Only 11 percent of enlisted recruits in 2007 came from the poorest one-fifth (quintile) of neighborhoods, while 25 percent came from the wealthiest quintile. These trends are even more pronounced in the Army Reserve Officer Training Corps (ROTC) program, in which 40 percent of enrollees come from the wealthiest neighborhoods—a number

1. Tim Kane, "Who Bears the Burden? Demographic Characteristics of U.S. Military Recruits Before and After 9/11," Heritage Foundation *Center for Data Analysis Report* No. CDA05-08, November 7, 2005, at <http://www.heritage.org/research/nationalsecurity/cda05-08.cfm>, and "Who Are the Recruits? The Demographic Characteristics of U.S. Military Enlistment, 2003-2005," Heritage Foundation *Center for Data Analysis Report* No. CDA06-09, October 26, 2006, at <http://www.heritage.org/Research/NationalSecurity/cda06-09.cfm>.

that has increased substantially over the past four years.

- American soldiers are more educated than their peers. A little more than 1 percent of enlisted personnel lack a high school degree, compared to 21 percent of men 18–24 years old, and 95 percent of officer accessions have at least a bachelor's degree.
- Contrary to conventional wisdom, minorities are not overrepresented in military service. Enlisted troops are somewhat more likely to be white or black than their non-military peers. Whites are proportionately represented in the officer corps, and blacks are overrepresented, but their rate of overrepresentation has declined each year from 2004 to 2007. New recruits are also disproportionately likely to come from the South, which is in line with the history of Southern military tradition.

The facts do not support the belief that many American soldiers volunteer because society offers them few other opportunities. The average enlisted person or officer could have had lucrative career opportunities in the private sector. Those who argue that American soldiers risk their lives because they have no other opportunities belittle the personal sacrifices of those who serve out of love for their country.

This report proceeds in two parts.

First, it examines the demographic characteristics of the enlisted personnel in 2006 and 2007, using new data from the Defense Manpower Data Center.

Second, it examines the same demographic characteristics for 2007 graduates from the United States Military Academy (USMA) at West Point² and for members of the Army ROTC who were commissioned between 2004 and 2007 or enrolled in the Army ROTC as of March 2007. Officers who were commissioned in 2004 would have enrolled before the start of the war on terrorism, while those enrolled in 2007 were well aware that they were signing up during wartime. This makes it possible to assess whether the war in Iraq has degraded the officer corps' standards.

ENLISTED PERSONNEL

The Defense Manpower Data Center provided The Heritage Foundation with data on enlisted recruits for all branches of the military in 2006 and 2007.³ These data included the recruits' racial and ethnic background, their educational attainment when they enlisted, and information connecting recruits to their home census tracts. Using census tracts enables a more precise analysis of the recruits' family income than previous Heritage Foundation reports, which had data available only at the three-digit and five-digit Zip code tabulation area level.

Household Income. Enlisted recruits in 2006 and 2007 came primarily from middle-class and upper-middle-class backgrounds. Low-income neighborhoods were underrepresented among enlisted troops, while middle-class and high-income neighborhoods were overrepresented.

Individual or family income data on enlistees do not exist. The Defense Department does not maintain records on the household income of recruits or officers. Examining the earnings of most recruits before they joined the military is not possible because, for most of them, their first full-time job is in the military.

Instead, we approximated the recruits' household incomes by assigning each recruit the median household income of the census tract in which they lived. This approximates their parents' economic status. For example, 10 recruits in 2006 came from census tract 013306 in San Diego. Accordingly, we assigned to each of these 10 recruits a median household income of \$57,380 per year (in 2008 dollars), the median income of that tract in the 2000 Census.

Census tracts are far smaller and more homogenous than five-digit Zip code tabulation areas. While the average five-digit Zip code tabulation area contains almost 10,000 residents, census tracts average approximately 4,000 residents.⁴ Using census tract data consequently allows for a more precise imputation of household income than

2. This report does not cover the demographic characteristics of the graduates from other military academies or senior military colleges. The Heritage Foundation was given data only on recent West Point graduates.

3. The data used in this analysis may be requested from The Heritage Foundation, but due to privacy concerns, any release of the data must be approved by the Office of the Under Secretary of Defense for Personnel and Readiness.

4. U.S. Census Bureau, *American Factfinder Glossary*, s.v. "Census tract," at http://factfinder.census.gov/home/en/epss/glossary_c.html (July 25, 2008).

was possible in previous reports and, correspondingly, a more accurate analysis of how the recruits differ from the civilian population.

Using the median household incomes in their census tracts, the average household income for all 2006 recruits was \$54,834 per year (in 2008 dollars).⁵ The average enlisted recruit in 2007 had a household income of \$54,768. This is modestly above the national average of \$50,428. Chart 1 shows the distribution among enlisted recruits and the population as a whole by household income quintile.

As Chart 1 shows, low-income families are underrepresented in the military, and high-income families are overrepresented. Individuals from the bottom household income quintile make up 20.0 percent of the population of those who are 18–24 years old but only 10.6 percent of the 2006 recruits and 10.7 percent of the 2007 recruits. Individuals in the top two quintiles make up 40.0 percent of the population, but 49.3 percent of the recruits in both years.

Chart 2 shows the household income distribution of enlisted recruits for 2006 and 2007 in more detail. It also shows the difference in income distribution between enlisted forces and the overall civilian population.

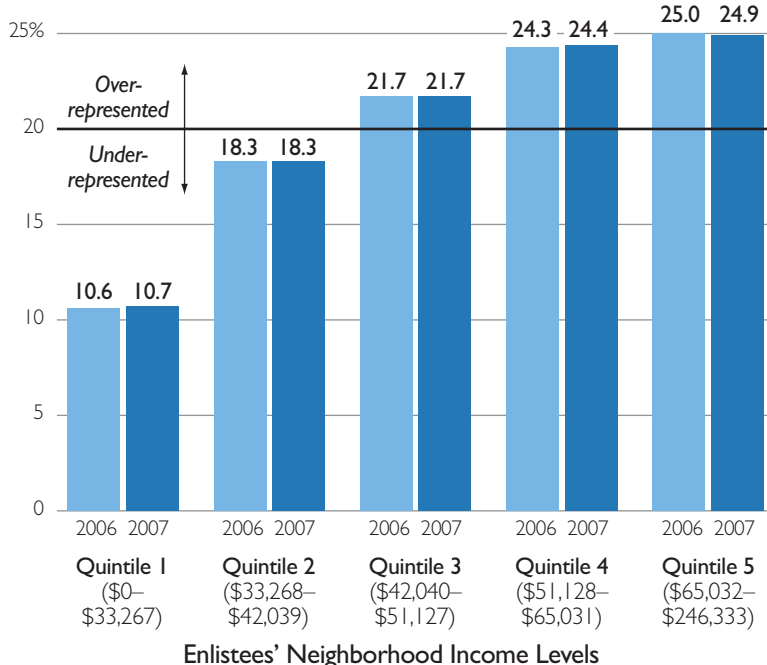
Every income category above \$40,000 per year is overrepresented in the active-duty enlisted force, while every income category below \$40,000 a year is underrepresented. Low-income families are significantly underrepresented in the military. U.S. military enlistees disproportionately come from upper-middle-class families.

Members of America’s volunteer army are not enlisting because they have no other economic opportunities. Most recruits come from relatively affluent families and would likely earn above-average wages if they did not join the military.

Enlisted Recruits Are More Likely to Come from Middle- and Upper-Class Neighborhoods

One-quarter of enlisted recruits come from the wealthiest fifth of U.S. neighborhoods. Less than 11 percent come from the poorest quintile.

Percentage of Total Recruits



Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; Non-Prior Service Accessions, 2006 and 2007, and U.S. Census Bureau, United States Census 2000.

Chart 1 • CDA 08-05 heritage.org

Education. Contrary to popular perceptions, America’s enlisted troops are not poorly educated. Previous Heritage Foundation studies found that enlisted troops were significantly more likely to have a high school education than their peers. This is still the case. Only 1.4 percent of enlisted recruits in 2007 had not graduated from high school or completed a high school equivalency degree, compared to 20.8 percent of men ages 18 to 24. America’s soldiers are less likely than civilians to be high school dropouts.

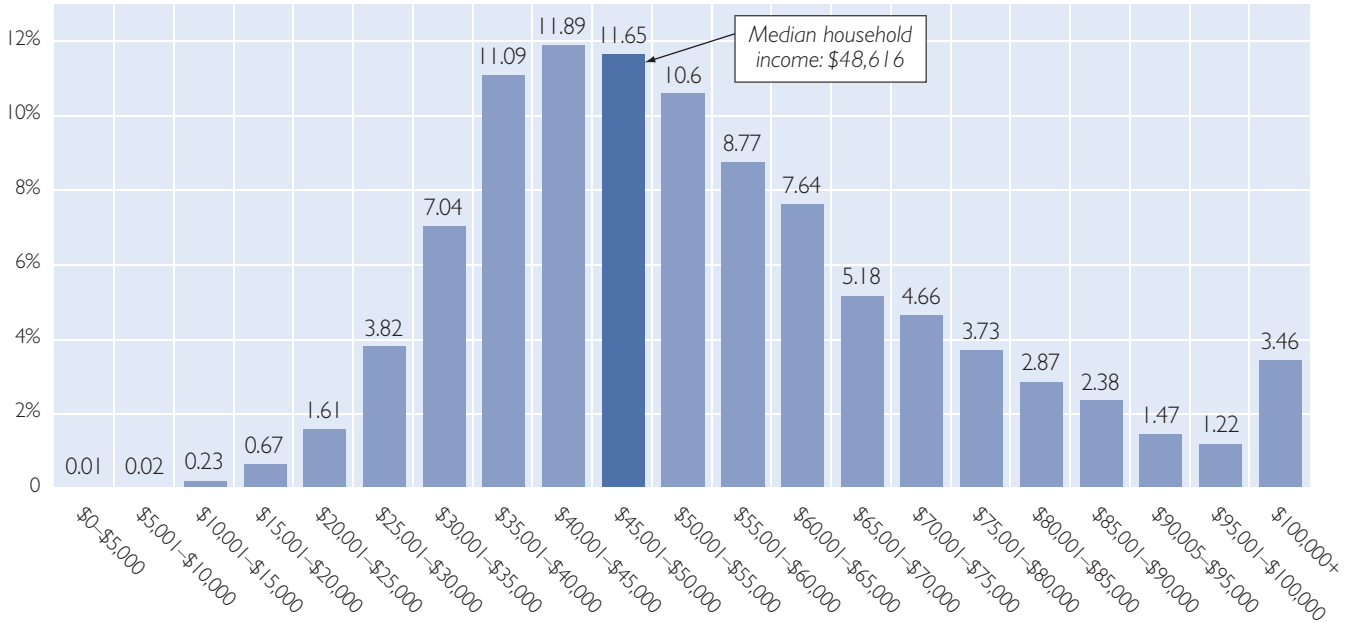
The military requires at least 90 percent of enlisted recruits to have high school diplomas.⁶ Most enlisted recruits do not have a college degree because they enlist before they would attend col-

5. For details of these calculations, see the Technical Appendix. All figures are adjusted for inflation using the personal consumption expenditure (PCE) deflator and expressed in 2008 dollars.
 6. A General Education Development (GED) credential does not count toward this requirement.

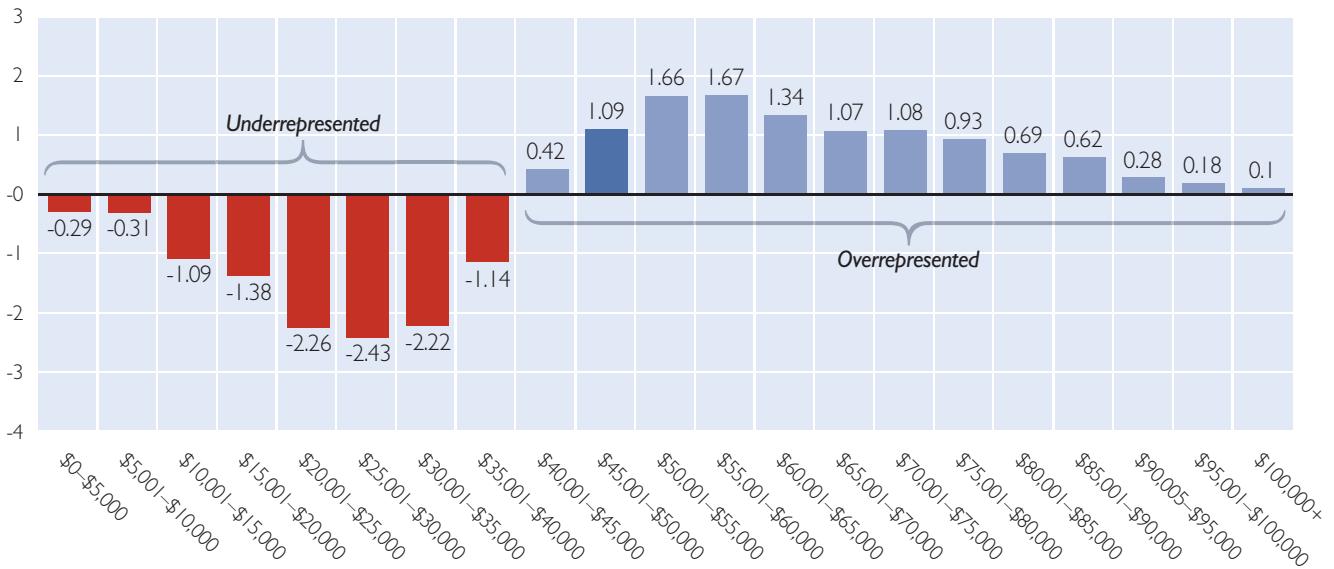
Neighborhood Incomes of Enlisted Recruits

More than three-quarters (75.5%) of enlisted recruits come from neighborhoods where the median family income is more than \$40,000 per year. Recruits from neighborhoods where the median family incomes are less than \$40,000 are underrepresented compared to the total population, while those from higher-earning areas are overrepresented.

Percentage of Total Recruits by Neighborhood Median Household Income



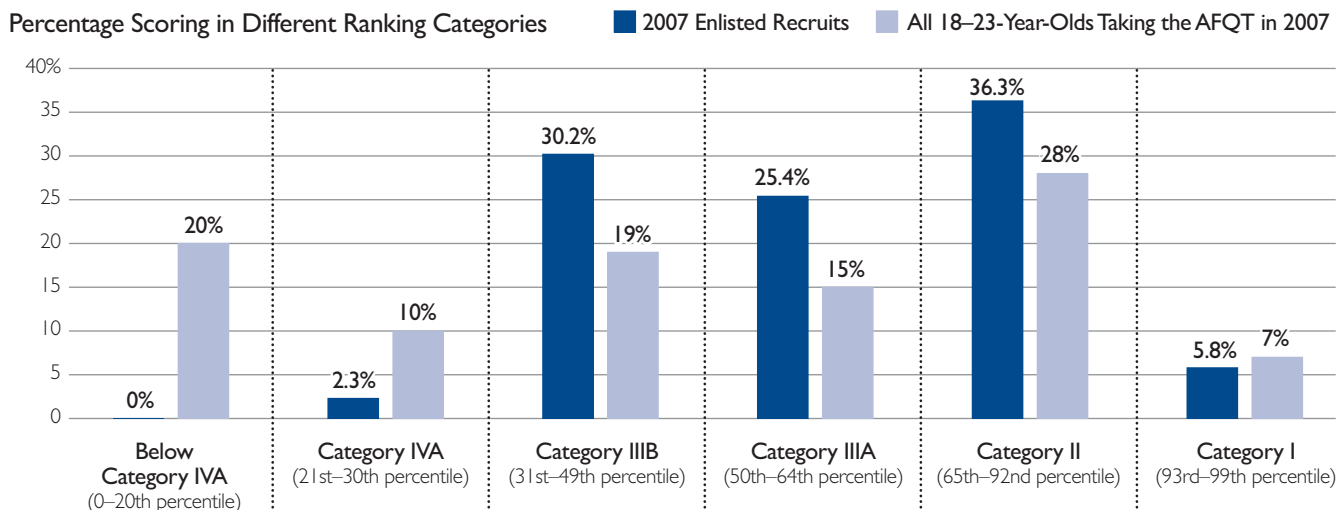
Difference Between Percentage of Total Recruits and Percentage of Total Population, in Percentage Points



Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; Non-Prior Service Accessions, 2006 and 2007, and U.S. Census Bureau, United States Census 2000.

Enlisted Recruits Performed Strongly in Qualifying Test

Enlisted recruits in 2007 outperformed the U.S. population in three of the four top scoring categories of the Armed Forces Qualifying Test (AFQT).



Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; Non-Prior Service Accessions, 2007.

Chart 3 • CDA 08-05 heritage.org

lege. However, many recruits use the educational benefits offered by the military to attend college after they leave the armed forces.

More evidence of the quality of America's enlisted forces comes from the standardized Armed Forces Qualifying Test (AFQT) that the

military administers to all recruits. Over two-thirds of enlisted recruits scored above the 50th percentile on the AFQT. The military tightly restricts how many recruits it accepts with scores below the 30th percentile, and only 2.3 percent of recruits in 2007 scored between the 21st and 30th percentiles (Category IVA; see Chart 3). The military does not accept any recruits in the bottom 20 percent.

Race. The all-volunteer force was instituted in 1973 amid concerns over whether the military could maintain race representation proportional to the overall population. In a time of war, people and policymakers would be even more concerned if the burden of war fell disproportionately on certain sections of the population.⁷

As reported in Table 2, the percentage of white active-duty recruits with no prior military service was 65.3 percent in 2006 and 65.5 percent in 2007. Based on calculations from the Integrated Public Use Microdata Series (IPUMS), almost 62 percent of the U.S. male population ages 18 to 24 classified themselves as white in 2006.⁸ The troop-to-popula-

Educational Attainment of Non-Prior Service Enlisted Troops

	2006 Recruits	2007 Recruits	U.S. 18-24-Year-Old Population
No High School Diploma	1.3%	1.4%	20.8%
High School Graduate or GED	91.9%	91.8%	36.1%
Some College, No Degree	2.7%	2.6%	32.2%
Associates Degree or Greater	4.2%	4.2%	6.8%

Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; Non-Prior Service Accessions, 2006-2007, and U.S. Census Bureau, 2006 American Community Survey.

Table 1 • CDA 08-05 heritage.org

7. See David J. Armor and Curtis L. Gilroy, "Changing Minority Representation in the U.S. Military," paper presented at Biennial Conference of the Inter-University Seminar on Armed Forces and Society, Chicago, October 26, 2007.

Racial Composition of New Enlisted Recruits in 2006 and 2007

Groups with recruit-to-population ratios greater than 1.0 are overrepresented among enlisted recruits, and groups with ratios less than 1.0 are underrepresented.

	2006 Percentage of Total U.S. Male Population, 18–24 Years Old	2006 Percentage of Total Recruits	2006 Recruit/Population Ratio	2007 Percentage of Total Recruits	2007 Recruit/Population Ratio*
White	61.99%	65.32%	1.05	65.50%	1.06
Black or African American	11.87	12.34	1.04	12.82	1.08
Asian/Pacific Islander	3.49	3.31	0.95	3.25	0.93
Combination of two or more races	1.56	0.57	0.37	0.66	0.42
American Indian/Alaska	0.73	2.16	2.96	1.96	2.68
Declined to specify race/ethnicity		3.49		2.76	

* Calculated using 2006 population estimates.

Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; Non-Prior Service Accessions, 2006–2007, and Steven Ruggles, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander; Integrated Public Use Microdata Series: Version 4.0, University of Minnesota, Minnesota Population Center, 2008, at <http://usa.ipums.org/usa> (July 21, 2008).

Table 2 • CDA 08–05 heritage.org

tion ratio in these years was 1.05, indicating that the representation of whites in the military is similar to, although slightly above, their representation in the overall population.⁹

The representation of blacks in the military is also above their population representation, with

recruit-to-population ratios of 1.03 in 2006 and 1.08 in 2007. The percentage of Asian and Pacific Islander recruits is smaller than their population representation, with recruit-to-population ratios of 0.94 in 2006 and 0.93 in 2007.

Hispanics Are Underrepresented Among New Enlisted Recruits

The proportion of enlisted recruits that are Hispanic is significantly less than the proportion of Hispanics as part of the total U.S. population. Ratios greater than 1.0 indicate overrepresentation, and ratios less than 1.0 indicate underrepresentation.

Ethnicity	2006 Percentage of Total U.S. Male Population, 18–24 Years Old	2006 Percentage of Total Recruits	2006 Recruit/Population Ratio	2007 Percentage of Total Recruits	2007 Recruit/Population Ratio*
Hispanic	20.02%	13.19%	0.66	12.93%	0.65
Not Hispanic	79.98	86.81	1.09	87.07	1.09
Total Responses					
Hispanic	20.02	12.81	0.64	13.05	0.65
Not Hispanic	79.98	79.57	0.99	82.61	1.03
Declined to specify Hispanic ethnicity		7.62		4.34	

* Calculated using 2006 population estimates.

Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; Non-Prior Service Accessions, 2006–2007, and Steven Ruggles, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander; Integrated Public Use Microdata Series: Version 4.0, University of Minnesota, Minnesota Population Center, 2008, at <http://usa.ipums.org/usa> (July 21, 2008).

Table 3 • CDA 08–05 heritage.org

8. This does not include people who classify themselves as white in combination with any other race. All race categories in both military and census data are reported in this manner.
9. A troop-to-population ratio of 1.00 would be exact proportional representation.

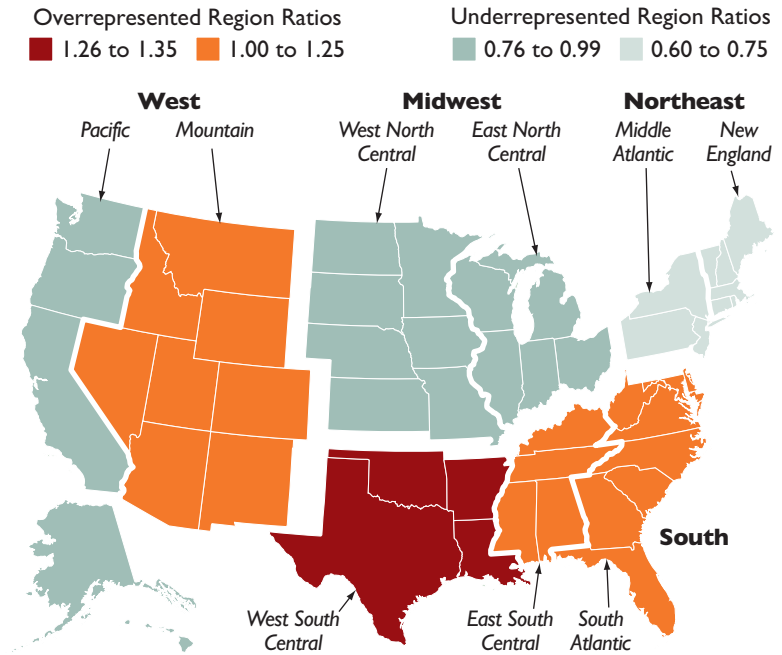
American Indian and Alaskan natives are largely overrepresented in the military compared to their representation in the overall population. In 2006, the IPUMS reported that less than 1 percent of males ages 18 to 24 characterized themselves as American Indian or Alaskan. Yet this group accounted for 2.16 percent of new enlisted recruits in 2006 and 1.96 percent in 2007. This group is the most overrepresented among new recruits, with troop-to-population ratios of 2.96 in 2006 and 2.68 in 2007.

The population percentages and ratios for Hispanics are presented in Table 3. Hispanics are largely underrepresented among new recruits, with troop-to-population ratios of 0.64 in 2006 and 0.65 in 2007. Compared to the previous versions of this paper,¹⁰ the Hispanic indicator variable had more complete responses, with many fewer recruits declining to indicate Hispanic ethnicity. However, the non-response rates for the Hispanic ethnicity indicator variable were still large enough that they may confound the results of the Hispanic analysis. If only recruits who responded to the Hispanic ethnicity question are considered, we still find that this group is underrepresented in the military.

Region. Representation by census region and division for recent active-duty military enlistees is found in Map 1. Similar to previous Heritage Foundation reports on the regional representation of troops, we find that the strong Southern military tradition continues with the 2006 and 2007 enlisted recruits. The South accounts for more than 40 percent of new enlistees—a proportional overrepresentation.

Military Enlisted Recruit-to-Population Ratios, by Region in 2007

Ratios less than 1.0 indicate underrepresentation of recruits, and ratios more than 1.0 indicate overrepresentation.



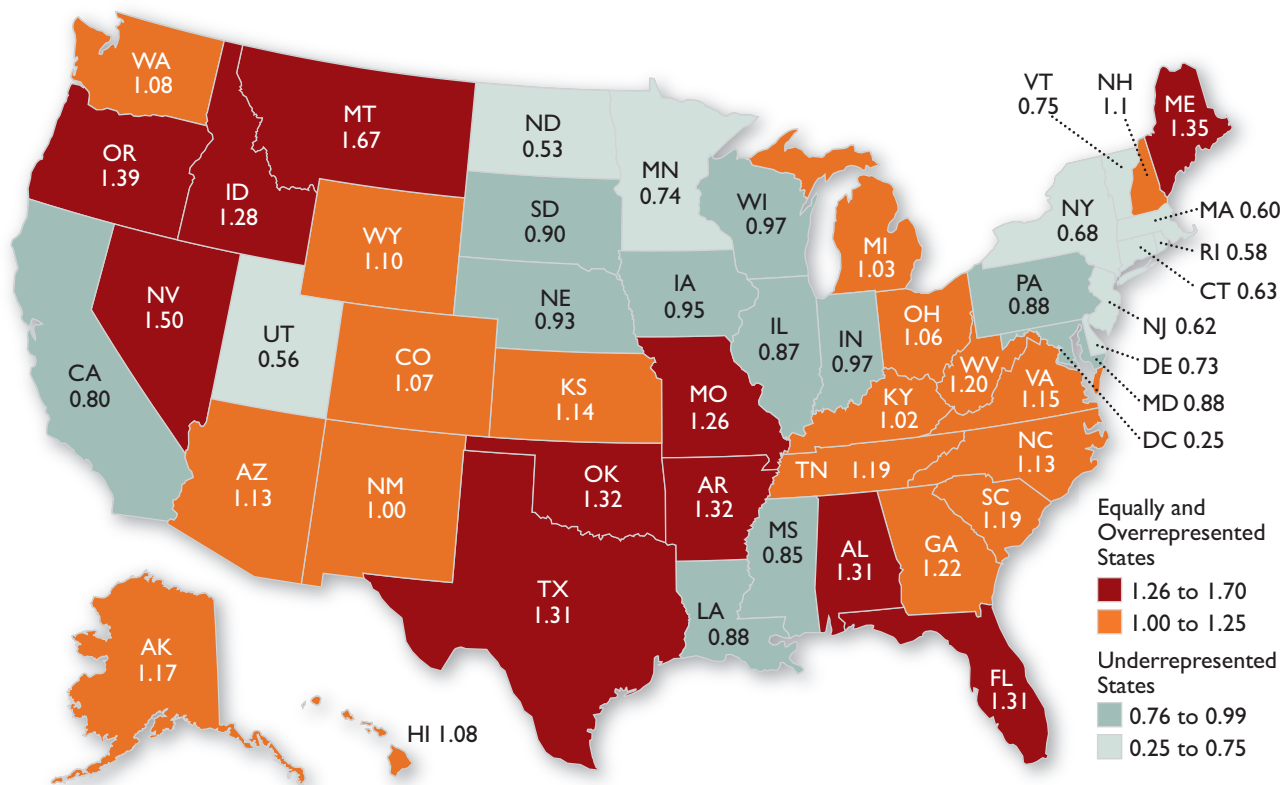
U.S. Census Region/ Division	% Total 2007 U.S. Recruits	% Total U.S. 18–24-Year-Old Males in 2006	Recruit/Population Ratio
Northeast	12.81	17.58	0.73
Middle Atlantic	9.51	13.10	0.73
New England	3.30	4.50	0.73
Midwest	21.56	22.02	0.98
East North Central	14.76	15.10	0.98
West North Central	6.80	6.90	0.99
South	42.97	36.23	1.19
East South Central	6.28	5.70	1.10
South Atlantic	21.62	18.50	1.17
West South Central	15.07	12.00	1.26
West	22.66	24.17	0.94
Mountain	7.70	7.20	1.07
Pacific	14.96	17.00	0.88

Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; Non-Prior Service Accessions, 2007, and Steven Ruggles, Matthew Sobek, Trent Alexander; Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander; Integrated Public Use Microdata Series: Version 4.0, University of Minnesota, Minnesota Population Center, 2008, at <http://usa.ipums.org/usa> (July 21, 2008).

10. Kane, “Who Bears the Burden?” and “Who Are the Recruits?”

Enlisted Representation Ratios for 2007

Below is a comparison of each state's 2007 proportion of the total U.S. military enlistments to its comparable population. Ratios greater than 1.0 indicate overrepresentation, and ratios less than 1.0 indicate underrepresentation.



States Ranked from Highest Recruit-to-Population Ratio to Lowest

State	% U.S. Pop.*	% Total Enlisted	Ratio	State	% U.S. Pop.*	% Total Enlisted	Ratio	State	% U.S. Pop.*	% Total Enlisted	Ratio
1 Montana	0.3%	0.50%	1.67	18 Kansas	1.0%	1.14%	1.14	35 Louisiana	1.6%	1.41%	0.88
2 Nevada	0.7	1.05	1.50	19 Arizona	2.0	2.26	1.13	36 Maryland	1.8	1.59	0.88
3 Oregon	1.1	1.53	1.39	20 North Carolina	3.0	3.40	1.13	37 Pennsylvania	4.0	3.53	0.88
4 Maine	0.4	0.54	1.35	21 New Hampshire	0.4	0.44	1.10	38 Illinois	4.2	3.64	0.87
5 Arkansas	0.9	1.19	1.32	22 Wyoming	0.2	0.22	1.10	39 Mississippi	1.0	0.85	0.85
6 Oklahoma	1.2	1.58	1.32	23 Hawaii	0.4	0.43	1.08	40 California	13.0	10.39	0.80
7 Alabama	1.5	1.96	1.31	24 Washington	2.1	2.26	1.08	41 Vermont	0.2	0.15	0.75
8 Florida	5.4	7.08	1.31	25 Colorado	1.6	1.71	1.07	42 Minnesota	1.7	1.25	0.74
9 Texas	8.3	10.89	1.31	26 Ohio	3.7	3.92	1.06	43 Delaware	0.2	0.22	0.73
10 Idaho	0.5	0.64	1.28	27 Michigan	3.3	3.41	1.03	44 New York	6.4	4.38	0.68
11 Missouri	1.9	2.39	1.26	28 Kentucky	1.3	1.33	1.02	45 Connecticut	1.1	0.69	0.63
12 Georgia	3.2	3.91	1.22	29 New Mexico	0.7	0.70	1.00	46 New Jersey	2.6	1.61	0.62
13 West Virginia	0.5	0.60	1.20	30 Indiana	2.1	2.04	0.97	47 Massachusetts	2.1	1.25	0.60
14 South Carolina	1.5	1.79	1.19	31 Wisconsin	1.8	1.75	0.97	48 Rhode Island	0.4	0.23	0.58
15 Tennessee	1.8	2.14	1.19	32 Iowa	1.0	0.95	0.95	49 Utah	1.1	0.62	0.56
16 Alaska	0.3	0.35	1.17	33 Nebraska	0.7	0.65	0.93	50 North Dakota	0.3	0.16	0.53
17 Virginia	2.6	2.98	1.15	34 South Dakota	0.3	0.27	0.90	51 DC	0.3	0.05	0.25

Note: The comparable population in this case is 18–24-year-old males in 2006.

Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; Non-Prior Service Accessions, 2007, and Steven Ruggles, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander, Integrated Public Use Microdata Series: Version 4.0, University of Minnesota, Minnesota Population Center, 2008, at <http://usa.ipums.org/usa> (July 21, 2008).

The Northeast is underrepresented in the enlisted population, while the Midwest and West are roughly proportionally represented. Map 2 shows the enlisted representation ratios for each state for 2007 enlistees with no prior military service. The figures for 2006 are in Table A1 in the Appendix.

THE OFFICER CORPS

The conventional wisdom, which mistakenly holds that Americans soldiers enlist because they are disadvantaged and have limited opportunities, does not extend to the officer corps. The stereotypical military officer is highly educated and comes from an affluent family. This stereotype is largely correct.

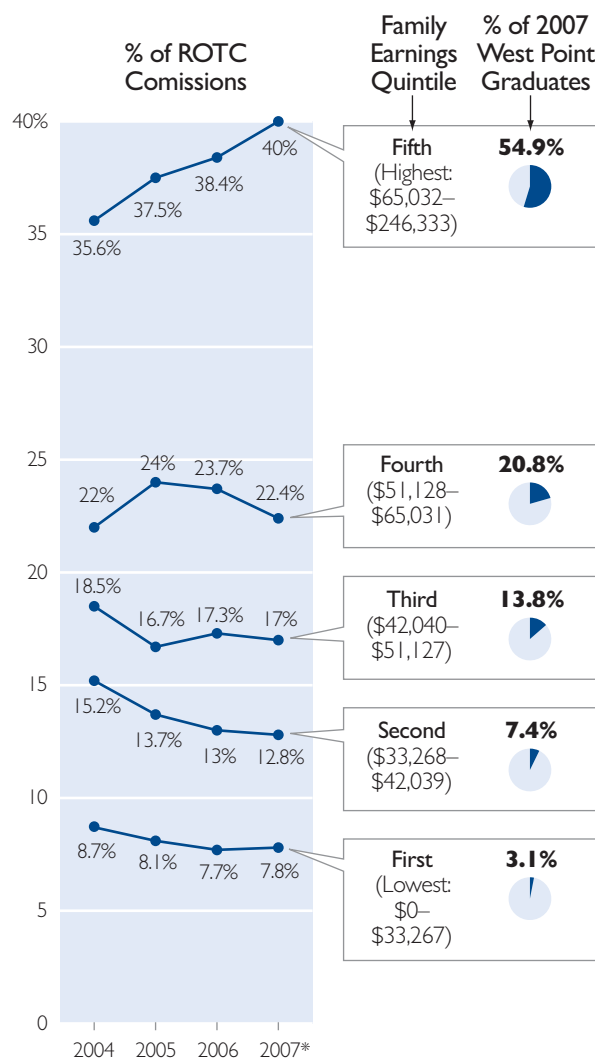
The Defense Manpower Data Center provided The Heritage Foundation with data on officers who were commissioned in the Army Reserve Officer Training Corps between 2004 and 2007 and cadets who were enrolled in the Army ROTC as of March 27, 2007. The military also provided information on the 2007 graduates of the U.S. Military Academy at West Point. Although these data do not represent all officers, they provide significant insight into the demographic characteristics of the officer corps: 39 percent of active-duty officers were commissioned through the ROTC,¹¹ and 25 percent of new army lieutenants graduated from West Point.¹²

Household Income. America’s officers come from relatively well-off neighborhoods. The same methodology used to assess the income of the enlisted personnel shows that the average candidate enrolled in the Army ROTC in March 2007 came from a neighborhood with a median household income of \$64,083 (in 2008 dollars)—well above the national figure of \$50,428. The discrepancy is even greater for West Point graduates, for whom the average graduate came from a neighborhood with a median income of \$75,367.

Only 7.8 percent of ROTC candidates in 2007 came from neighborhoods in the bottom household income quintile, while 40.0 percent come from neighborhoods in the top income quintile. Chart 5 shows the difference between the income distribu-

Household Incomes of the Officer Corps

Officers who come from neighborhoods in the top one-fifth of household incomes account for an increasing proportion of all ROTC commissions, and they comprise the majority of graduates from West Point. Candidates from lower-income areas make up progressively smaller proportions of commissions and West Point graduates.



* Includes enrolled cadets and commissioned officers.

Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; ROTC Commissions, 2004–2006, and 2007 ROTC Cadets and Commissions as of March 27, 2007, and U.S. Census Bureau, United States Census 2000.

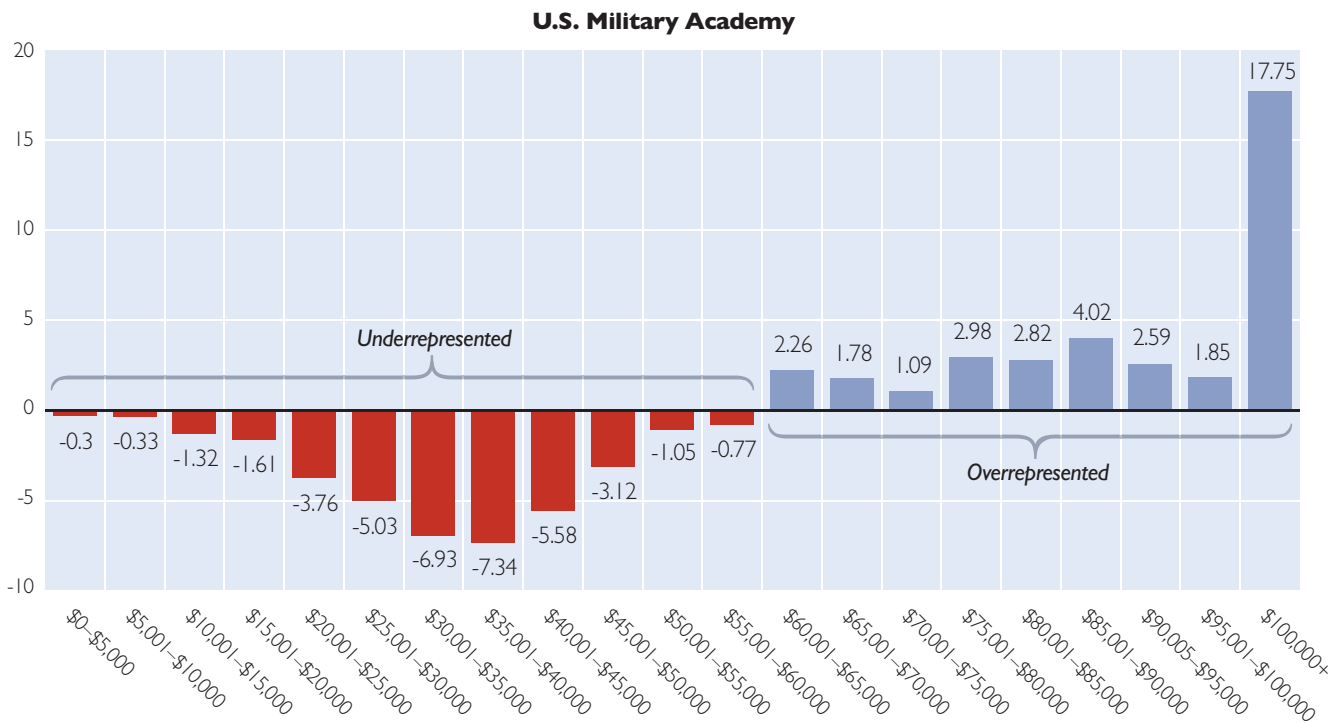
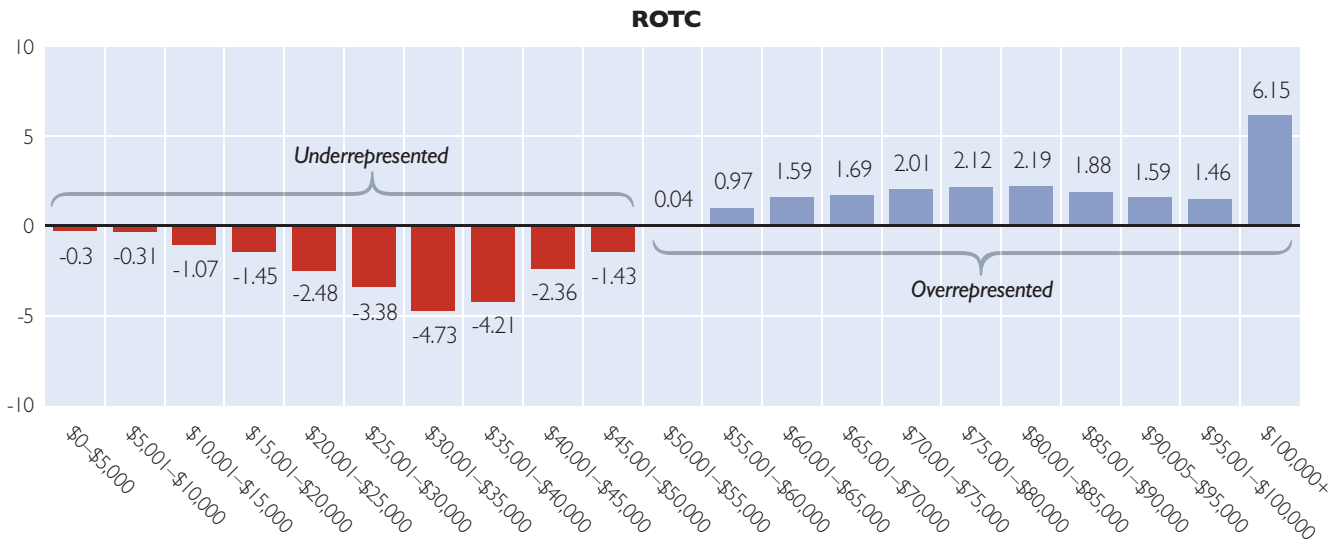
Chart 4 • CDA 08-05 heritage.org

11. U.S. Department of Defense, Office of the Undersecretary of Defense, Personnel, and Readiness, *2005 Population Representation in the Military Services*, Table B-40, at <http://www.defenselink.mil/prhome/poprep2005/download/download.html> (July 25, 2008).

12. U.S. Military Academy at West Point, “About the Academy,” at <http://www.usma.edu/about.asp> (July 25, 2008).

Income Differences Between Officers and the Civilian Population

Compared to the general U.S. population, a disproportionately high number of cadets in the ROTC and the U.S. Military Academy (USMA) come from high-income neighborhoods. Conversely, low-income neighborhoods are underrepresented in the ROTC and the USMA. In the charts below, the differences in proportions are in percentage points.



Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; ROTC Commissions, 2004–2006, and 2007 ROTC Cadets and Commissions as of March 27, 2007, and U.S. Census Bureau, United States Census 2000.

Chart 5 • CDA 08-05 heritage.org

tions of civilians and officers who were commissioned in the ROTC or graduated from West Point. Unsurprisingly, both groups of officers come from higher-income neighborhoods.

The greatest discrepancy between officer and civilian backgrounds occurs in neighborhoods with median earnings above \$100,000. While 3.4 percent of neighborhoods nationwide have median earnings above \$100,000, 9.5 percent of ROTC commissions and 21.1 percent of USMA graduates come from these high-income neighborhoods. Most of the men and women who risk their lives serving as U.S. military officers probably could have earned high salaries if they had chosen civilian careers.

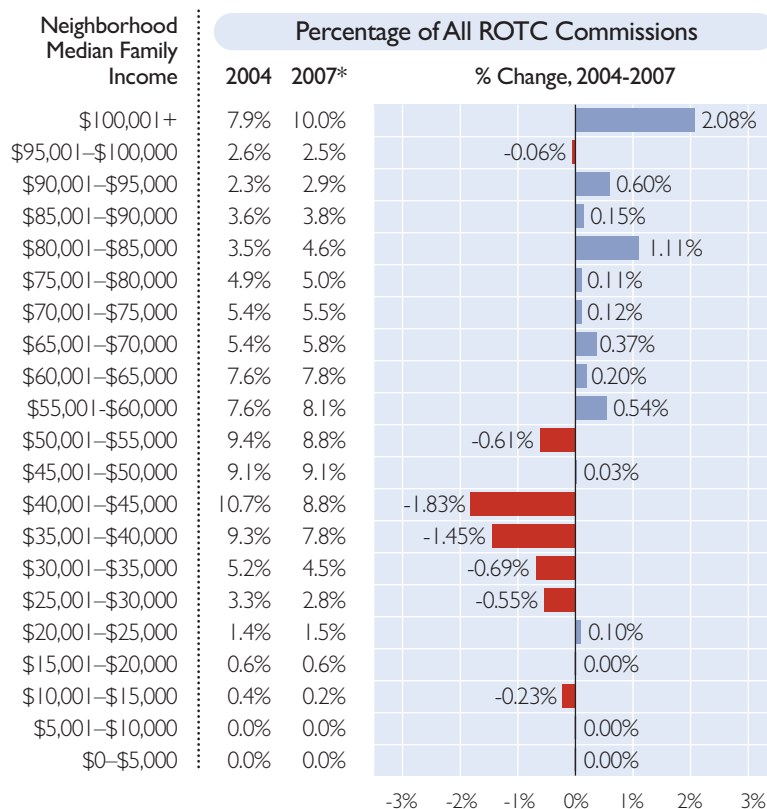
The vast majority of officers commissioned in 2004 entered the ROTC four years earlier in 2000, before the September 11 terrorist attacks. Those who were commissioned or who were enrolled in the ROTC in 2007 became officer candidates in wartime conditions knowing that they could be deployed to Iraq or Afghanistan. If the strain of the global war on terrorism has forced the military to lower its standards in the officer corps, then the quality of officers commissioned in the ROTC would have fallen since 2004.

The opposite has occurred. Chart 4 shows the income distribution of ROTC officers commissioned in 2004, 2005, and 2006 and those who enrolled or were commissioned in 2007. The median neighborhood income of candidates entering the ROTC has increased by an average of 4.9 percent since 9/11 and the start of the Iraq war.

Education. The military's rank structure ensures that the officer corps is highly educated. By definition, every West Point graduate or officer with an Army ROTC commission has earned a bachelor's degree. Overall, 94.9 percent of all officer corps

Rising Incomes of ROTC Commissions

Individuals who come from high-income neighborhoods account for an increasing share of ROTC commissions. Nearly every income bracket above \$55,000 saw an increase in ROTC commissions between 2004 and 2007, with the largest change coming in the highest income group.



Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; ROTC Commissions, 2004–2006, and 2007 ROTC Cadets and Commissions as of March 27, 2007, and U.S. Census Bureau, United States Census 2000.

Chart 6 • CDA 08-05 heritage.org

accessions have at least a four-year bachelor's degree.¹³ In contrast, 25.0 percent of Americans between the ages of 22 and 27 had at least a four-year bachelor's degree in 2006.¹⁴

Race. The officer corps' pattern of racial representation differs from the pattern in the enlisted force. The analysis of the Army ROTC data compared newly commissioned officers to the college-educated population 18–27 years old for 2004 to 2006. ROTC race representation and officer-to-population ratios can be found in Table 4.

13. U.S. Department of Defense, *2005 Population Representation in the Military Services*, Table B-34.

14. Heritage Foundation calculations using American Community Survey data for 2006.

Racial Composition of ROTC Commissions

Racial groups with recruit-to-population ratios greater than 1.0 are overrepresented, and groups with ratios less than 1.0 are underrepresented.

Race	2004			2005			2006			2007**		
	% ROTC Commissions	% U.S. Population*	Ratio	% ROTC Commissions	% U.S. Population*	Ratio	% ROTC Commissions	% U.S. Population*	Ratio	% ROTC Commissions	% U.S. Population*	Ratio
American Indian/Alaska	0.22	0.23	1.05	0.31	0.57	1.84	0.28	0.42	1.50	0.50	0.59	1.18
Asian/Pacific Islander	9.67	4.47	0.46	9.82	4.98	0.51	10.05	5.06	0.50	5.73	4.93	0.86
Black or African American	6.51	12.21	1.88	6.83	11.08	1.62	6.94	10.02	1.44	9.96	12.04	1.21
White	75.13	73.37	0.98	73.75	72.71	0.99	73.48	74.52	1.01	70.18	71.89	1.02
Other	1.68	2.84	1.69	1.48	2.82	1.91	1.5	2.37	1.58	1.89	2.58	1.37
Hispanic Indicator												
Not Hispanic	93.20	93.10	1.00	92.20	92.17	1.00	92.26	92.40	1.00	88.27	92.02	1.04
Hispanic	6.80	6.90	1.01	7.80	7.83	1.00	7.74	7.60	0.98	11.73	7.98	0.68

* Comparable populations. For 2004 through 2006, the comparable population is 18–27-year-old males of the same race with at least a college education. For 2007, the comparable population is 18–27-year-old males of the same race in 2006 with at least some college education.

** Includes those enrolled and commissioned. Ratios for 2007 were calculated using estimated population data from 2006.

Sources: U.S. Department of Defense, Defense Manpower Data Center; ROTC Commissions, 2004–2006, and 2007 ROTC Cadets and Commissions as of March 27, 2007, and Steven Ruggles, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander; Integrated Public Use Microdata Series: Version 4.0, University of Minnesota, Minnesota Population Center, 2008, at <http://usa.ipums.org/usa> (July 21, 2008).

Table 4 • CDA 08–05  heritage.org

When compared to the relevant population group, whites are roughly proportionally represented in the ROTC in all four years, similar to what was observed in the enlisted military population. Blacks are overrepresented in all four years, but this overrepresentation decreases in each successive year.

The percentage of Hispanics completing college is roughly equal to the proportion participating in the ROTC, indicating proportional representation of this demographic group. This is true of all years, except 2007 when Hispanics are largely underrepresented in ROTC programs, with a cadet-to-population ratio of just 0.68. However, the 2007 ROTC numbers should be interpreted cautiously because they include all current ROTC participants and ROTC cadets who were commissioned in 2007. These figures may be misleading because they do not account for attrition among current cadets, and future analysis may find that Hispanic representation in the ROTC in 2007 was proportional when compared to Hispanics in the general population

with college degrees. This caveat should be applied to all 2007 ROTC findings.

The proportion of Asians in the ROTC population is smaller than in the comparison group, indicating that fewer Asians are participating in the ROTC than are attending and completing college. The percentage of American Indian and Alaskan natives who participate in the ROTC is small, but it more than doubled between 2004 and 2005, moving from being proportionally represented in 2004 to being overrepresented since 2005.

The data on cadets attending West Point do not include information on race, so race was imputed using census tract demographic information for each cadet’s home of record. The race representation at the census tract level was computed using Census 2000 data for the population 18 and older. Chart 7 reports the race results for the census tracts with at least one USMA cadet along with the overall observed percentage of adults ages 18 and older by race category. Based on census tract information from the decennial census, white and Asian demographic groups are overrepresented in the military

academy population, and all other race groups are underrepresented.

Region. The regional distribution of newly commissioned officers is similar to the distribution of enlisted recruits. As among enlisted recruits, the South accounts for 42.5 percent of new Army ROTC commissioned officers in 2006—almost 10 percent above the South’s proportional share. West Point cadets from the South account for 36.7 percent of all 2007 graduates, which is also disproportionately high. (See Table 5.)

Similar to the enlisted troops, ROTC cadets are underrepresented in the Northeast. However, the representation of USMA graduates in this region is proportional. The West is underrepresented in the ROTC and USMA. The regional representation of the ROTC is smaller than the comparable population in 2004, but it grows through 2006, when the West is proportionally represented. The 2007 data suggest an underrepresentation, but this should be interpreted cautiously for the reasons mentioned previously. The Midwest is also proportionally underrepresented among West Point graduates.

Maps 3 and 4 show the representation ratios for each state for 2007 ROTC cadets and USMA graduates. Table A1 in the Appendix shows the representation figures for ROTC cadets in 2004–2006 for each state.

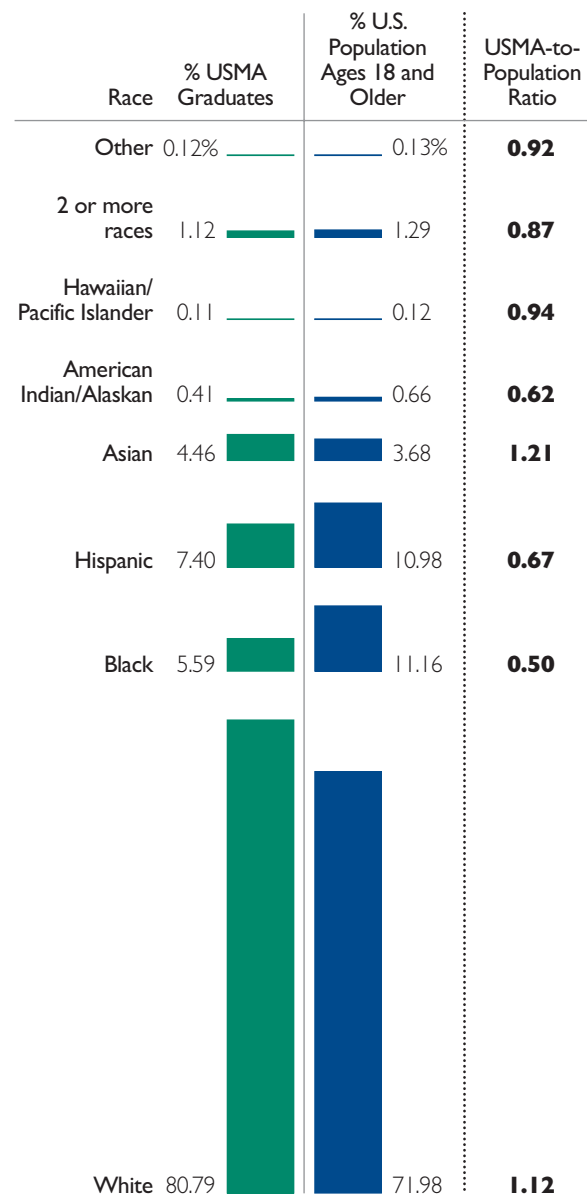
CONCLUSION

The men and women who serve in America’s all-volunteer military do not come disproportionately from disadvantaged backgrounds. Instead, the opposite is true. Both active-duty enlisted troops and officers come disproportionately from high-income neighborhoods—a trend that has increased since 9/11.

America’s troops are highly educated. Enlisted recruits have above-average intelligence and are far more likely than their civilian peers to have a high school degree. Nearly all of the officer corps has at least a four-year college education—far greater than the rate in the civilian population. The racial composition of the military is similar to that of the civilian population, although whites

Racial Composition at West Point

This chart compares the racial makeup of 2007 U.S. Military Academy graduates to the U.S. population ages 18 and older. USMA-to-population ratios greater than 1.0 indicate overrepresentation, and ratios less than 1.0 indicate underrepresentation.



Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; U.S. Military Academy Officer Accessions, 2007, and U.S. Census Bureau, United States Census 2000.

Chart 7 • CDA 08-05 heritage.org

ROTC and USMA Officer Representation by Geographic Region

Officer-to-population ratios greater than 1.0 indicate overrepresentation, and ratios less than 1.0 indicate underrepresentation.

U.S. Census Region and Division	ROTC Commissions								USMA	
	2004		2005		2006		2007*		2007**	
	Recruit Percent	Recruit/Population Ratio	Recruit Percent	Recruit/Population Ratio	Recruit Percent	Recruit/Population Ratio	Recruit Percent	Recruit/Population Ratio	Recruit Percent	Recruit/Population Ratio
Northeast	18.04%	0.77	17.88%	0.76	17.74%	0.75	16.97%	0.90	24.30%	1.03
Middle Atlantic	13.51	0.81	13.22	0.75	12.68	0.72	12.46	0.89	18.36	1.05
New England	4.53	0.68	4.66	0.78	5.06	0.84	4.51	0.92	5.94	0.99
Midwest	21.93	0.92	22.90	0.97	22.57	1.00	20.74	0.89	20.30	0.90
East North Central	13.93	0.85	14.68	0.90	15.05	0.97	13.84	0.88	15.01	0.97
West North Central	8.00	1.07	8.22	1.11	7.52	1.06	6.89	0.91	5.29	0.75
South	41.92	1.33	41.90	1.33	42.50	1.32	46.42	1.39	36.72	1.14
East South Central	7.82	1.63	7.76	1.85	8.83	1.92	8.08	1.55	4.64	1.01
South Atlantic	23.96	1.40	22.88	1.28	22.77	1.24	26.37	1.52	19.44	1.06
West South Central	10.13	1.07	11.27	1.21	10.90	1.18	11.98	1.10	12.63	1.37
West	18.11	0.85	17.32	0.82	17.19	0.79	15.87	0.65	18.68	0.86
Mountain	7.15	1.32	6.66	1.15	7.35	1.13	6.70	0.89	6.37	0.98
Pacific	10.96	0.69	10.66	0.69	9.84	0.65	9.17	0.54	12.31	0.82

* Includes those enrolled and commissioned. Ratios for 2007 were calculated using estimated population data from 2006.

** Ratios for 2007 were calculated using estimated population data from 2006.

Note: Ratios were calculated by comparing a region's proportion of the U.S.'s total recruits to that region's comparable population. For ROTC commissions in 2004–2006, the comparable population is 18–27-year-old males with at least a college education. For ROTC commissions and currently enrolled cadets in 2007 the comparable population is 18–27-year-old males with at least some college education in 2006. For U.S. Military Academy graduates, the comparable population is 18–27-year-old males in 2006 with at least a college education.

Sources: U.S. Department of Defense, Defense Manpower Data Center; ROTC Commissions, 2004–2006, and 2007 ROTC Cadets and Commissions as of March 27, 2007, and Steven Ruggles, Matthew Sobek, Trent Alexander; Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander; Integrated Public Use Microdata Series: Version 4.0, University of Minnesota, Minnesota Population Center, 2008, at <http://usa.ipums.org/usa> (July 21, 2008).

Table 5 • CDA 08–05  heritage.org

and blacks are slightly overrepresented among enlisted recruits.

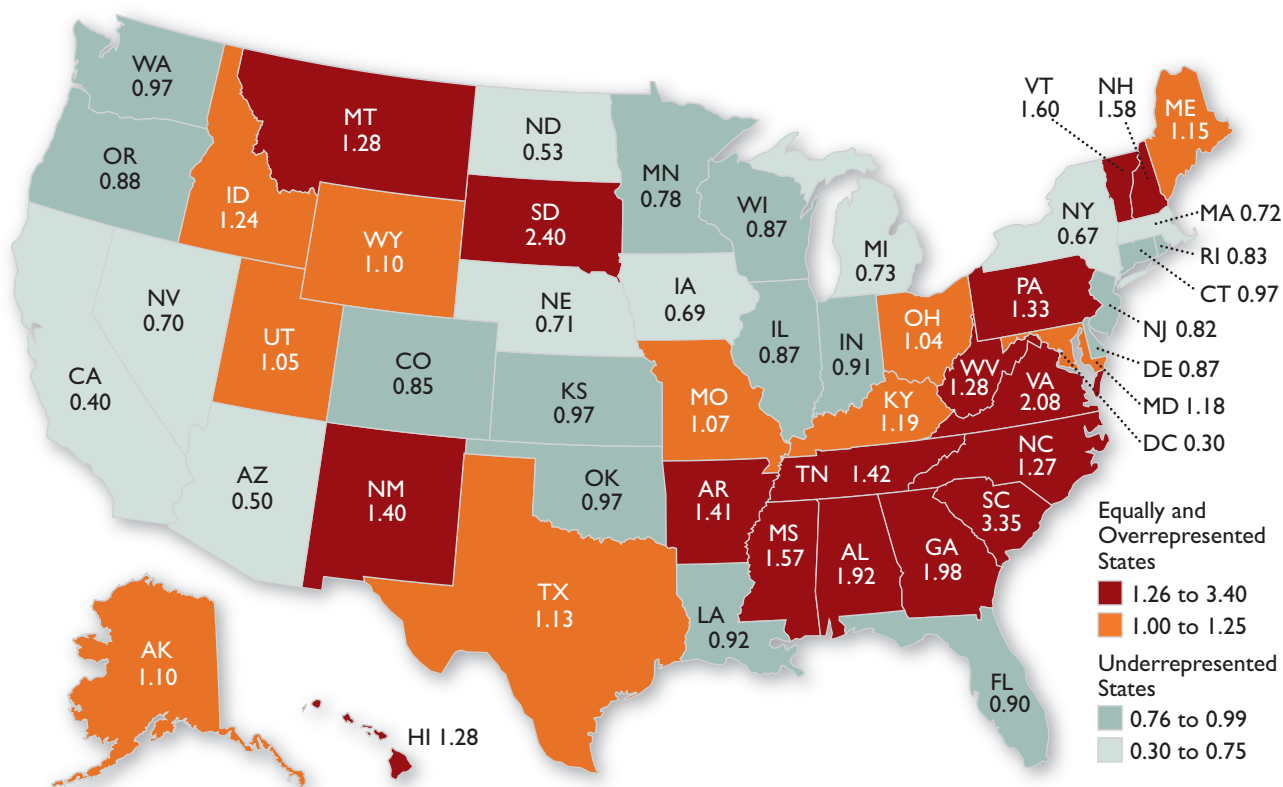
The popular impression that many soldiers join the military because they lack better opportunities is wrong. In all likelihood, our soldiers would have had many lucrative career opportunities in the private sector. The officers and enlisted men and

women of the armed forces have made sacrifices to serve in the U.S. military.

—Shanea J. Watkins, Ph.D., is Policy Analyst in Empirical Studies and James Sherk is Bradley Fellow in Labor Policy in the Center for Data Analysis at The Heritage Foundation.

ROTC Representation Ratios for 2007

Below is a comparison of each state's 2007 proportion of all new ROTC commissions and current ROTC enrollees to its comparable population. Ratios greater than 1.0 indicate overrepresentation; ratios less than 1.0 indicate underrepresentation.



States Ranked from Highest Recruit-to-Population Ratio to Lowest

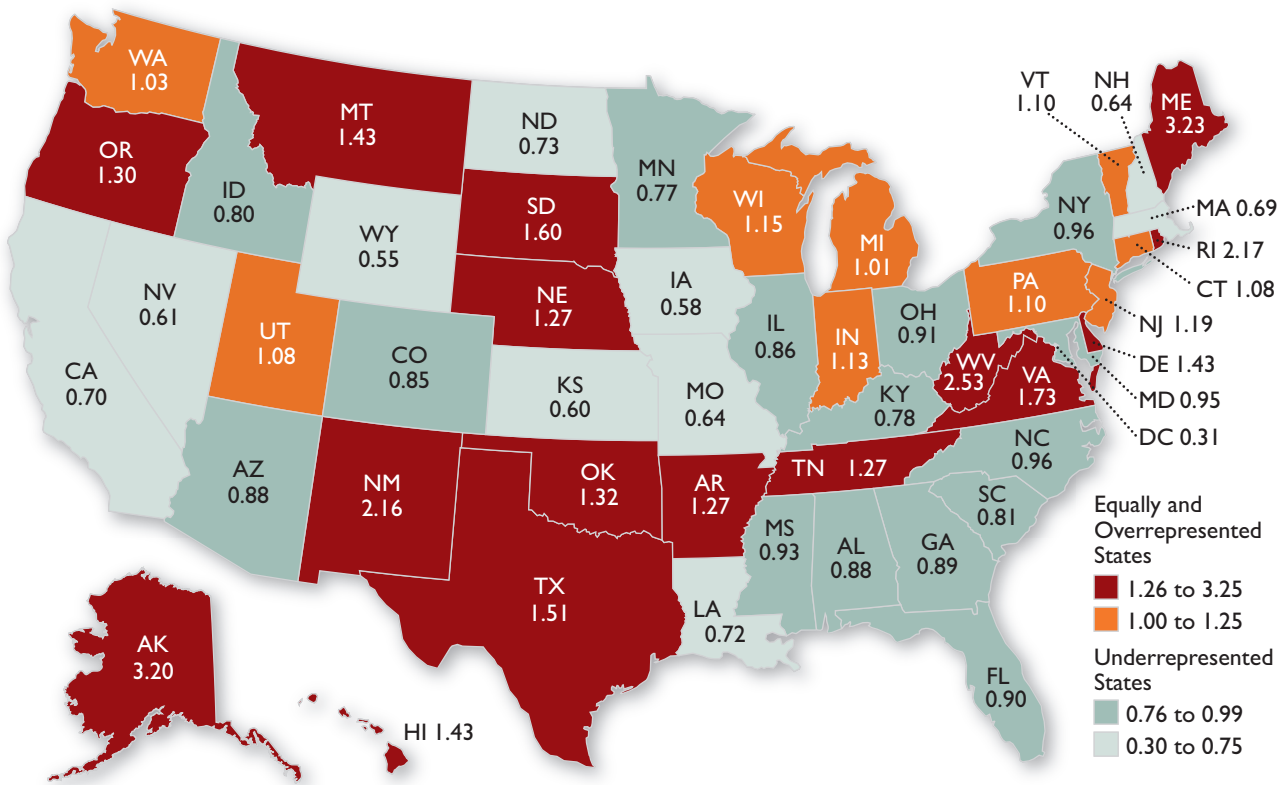
State	% U.S. Pop.*	% Total ROTC	Ratio	State	% U.S. Pop.*	% Total ROTC	Ratio	State	% U.S. Pop.*	% Total ROTC	Ratio
1 South Carolina	1.3%	4.35%	3.35	18 Kentucky	1.3%	1.55%	1.19	35 Illinois	4.6%	3.99%	0.87
2 South Dakota	0.3	0.72	2.40	19 Maryland	1.9	2.24	1.18	36 Wisconsin	1.8	1.56	0.87
3 Virginia	2.6	5.41	2.08	20 Maine	0.4	0.46	1.15	37 Delaware	0.3	0.26	0.87
4 Georgia	2.8	5.53	1.98	21 Texas	7.6	8.56	1.13	38 Colorado	1.7	1.45	0.85
5 Alabama	1.4	2.69	1.92	22 Alaska	0.3	0.33	1.10	39 Rhode Island	0.4	0.33	0.83
6 Vermont	0.2	0.32	1.60	23 Wyoming	0.2	0.22	1.10	40 New Jersey	2.8	2.30	0.82
7 New Hampshire	0.4	0.63	1.58	24 Missouri	1.8	1.92	1.07	41 Minnesota	2.0	1.56	0.78
8 Mississippi	0.9	1.41	1.57	25 Utah	1.3	1.37	1.05	42 Michigan	3.5	2.54	0.73
9 Tennessee	1.7	2.42	1.42	26 Ohio	3.7	3.83	1.04	43 Massachusetts	2.4	1.72	0.72
10 Arkansas	0.8	1.13	1.41	27 Washington	2.3	2.24	0.97	44 Nebraska	0.8	0.57	0.71
11 New Mexico	0.7	0.98	1.40	28 Connecticut	1.1	1.07	0.97	45 Nevada	0.7	0.49	0.70
12 Pennsylvania	4.1	5.47	1.33	29 Kansas	1.1	1.07	0.97	46 Iowa	1.2	0.83	0.69
13 West Virginia	0.5	0.64	1.28	30 Oklahoma	1.1	1.07	0.97	47 New York	7.0	4.69	0.67
14 Hawaii	0.4	0.51	1.28	31 Louisiana	1.3	1.20	0.92	48 North Dakota	0.4	0.21	0.53
15 Montana	0.4	0.51	1.28	32 Indiana	2.1	1.91	0.91	49 Arizona	2.1	1.05	0.50
16 North Carolina	2.7	3.42	1.27	33 Florida	4.9	4.42	0.90	50 California	12.7	5.04	0.40
17 Idaho	0.5	0.62	1.24	34 Oregon	1.2	1.05	0.88	51 DC	0.3	0.09	0.30

Note: The comparable population in this case is 18–27-year-old males in 2006 with at least some college education.

Source: Sources: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; 2007 ROTC Cadets and Commissions as of March 27, 2007, and Steven Ruggles, Matthew Sobek, Trent Alexander; Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander; Integrated Public Use Microdata Series: Version 4.0, University of Minnesota, Minnesota Population Center; 2008, at <http://usa.ipums.org/usa> (July 21, 2008).

U.S. Military Academy Representation Ratios for 2007

Below is a comparison of each state's proportion of 2007 USMA graduates to its comparable population. Ratios greater than 1.0 indicate overrepresentation, and ratios less than 1.0 indicate underrepresentation.



States Ranked from Highest Recruit-to-Population Ratio to Lowest

State	% U.S. Pop.*	% Total Enlisted	Ratio	State	% U.S. Pop.*	% Total Enlisted	Ratio	State	% U.S. Pop.*	% Total Enlisted	Ratio			
1	Maine	0.3%	0.97%	3.23	18	Wisconsin	1.6%	1.84%	1.15	35	Illinois	4.9%	4.21%	0.86
2	Alaska	0.1	0.32	3.20	19	Indiana	2.1	2.38	1.13	36	Colorado	1.9	1.62	0.85
3	West Virginia	0.3	0.76	2.53	20	Pennsylvania	4.8	5.29	1.10	37	South Carolina	1.2	0.97	0.81
4	Rhode Island	0.3	0.65	2.17	21	Vermont	0.2	0.22	1.10	38	Idaho	0.4	0.32	0.80
5	New Mexico	0.5	1.08	2.16	22	Connecticut	1.4	1.51	1.08	39	Kentucky	1.1	0.86	0.78
6	Virginia	3.0	5.18	1.73	23	Utah	0.9	0.97	1.08	40	Minnesota	2.1	1.62	0.77
7	South Dakota	0.2	0.32	1.60	24	Washington	2.1	2.16	1.03	41	North Dakota	0.3	0.22	0.73
8	Texas	6.5	9.83	1.51	25	Michigan	3.0	3.02	1.01	42	Louisiana	1.2	0.86	0.72
9	Delaware	0.3	0.43	1.43	26	North Carolina	2.8	2.70	0.96	43	California	11.6	8.10	0.70
10	Hawaii	0.3	0.43	1.43	27	New York	8.8	8.42	0.96	44	Massachusetts	3.3	2.27	0.69
11	Montana	0.3	0.43	1.43	28	Maryland	2.4	2.27	0.95	45	New Hampshire	0.5	0.32	0.64
12	Oklahoma	0.9	1.19	1.32	29	Mississippi	0.7	0.65	0.93	46	Missouri	1.7	1.08	0.64
13	Oregon	1.0	1.30	1.30	30	Ohio	3.9	3.56	0.91	47	Nevada	0.7	0.43	0.61
14	Tennessee	1.7	2.16	1.27	31	Florida	4.9	4.43	0.90	48	Kansas	0.9	0.54	0.60
15	Arkansas	0.6	0.76	1.27	32	Georgia	2.8	2.48	0.89	49	Iowa	1.3	0.76	0.58
16	Nebraska	0.6	0.76	1.27	33	Alabama	1.1	0.97	0.88	50	Wyoming	0.2	0.11	0.55
17	New Jersey	3.9	4.64	1.19	34	Arizona	1.6	1.40	0.88	51	DC	0.7	0.22	0.31

Note: The comparable population in this case is 18–27-year-old males in 2006 with at least a college education.

Source: Heritage Foundation calculations based on data from U.S. Department of Defense, Defense Manpower Data Center; U.S. Military Academy Officer Accessions, 2007, and Steven Ruggles, Matthew Sobek, Trent Alexander; Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander; Integrated Public Use Microdata Series: Version 4.0, University of Minnesota, Minnesota Population Center, 2008, at <http://usa.ipums.org/usa> (July 21, 2008).

TECHNICAL APPENDIX

This paper uses data on enlisted personnel and officers and cadets in the Army Reserve Officers Training Corps (ROTC) and United States Military Academy (USMA) at West Point. The data were provided by the Defense Manpower Data Center at the request of The Heritage Foundation. The troop data included the full home-of-record address for each recruit, which was used to merge the data with demographic data at the census tract level from the Census Bureau. Analysis of the data on enlisted personnel focuses on the demographic characteristics of troops who reported no previous military service (non-prior service accessions).

The analysis presented here updates a previous Heritage Foundation paper with data on U.S. enlisted recruits during 2006 and 2007.¹⁵ In addition, it presents some new analysis on military officers based on data from 2004–2007 Army ROTC programs and 2007 data on officer commissions from the USMA (West Point).

Populations were compared using data from Census 2000; the 2006 American Community Survey (ACS); and the Integrated Public Use Microdata Series (IPUMS).¹⁶ All analyses at the census tract level used data from the 2000 Census because these are the most recent census tract data available. Statistics reported at the national or state level used 2006 ACS data or IPUMS data. Since the majority of new enlisted recruits are between the ages of 18 and 24,¹⁷ comparisons to the general population using Census, ACS, or IPUMS data were made using this age group when possible.

Recruit Data

The recruitment data from the U.S. Department of Defense consist of three sets of data: recent enlisted accessions, commissioned officers from and current participants in the Army ROTC, and recent graduates from West Point. The enlisted data cover two years of recruits: non-prior service enlisted accessions from October 2005–September 2006 (2006 data) and from October 2006–September 2007 (2007 data). The 2006 data cover 166,299

recruits, and the 2007 data cover 158,069 recruits. Each recruit record includes full address information, race, Hispanic ethnicity, and educational codes. The data include accessions for the Army, Navy, Marine Corps, and Air Force.

The analysis presented in this paper considers only the demographic characteristics of the active-duty component of the military. Data on the Reserve and National Guard recruits were not included.

The Army ROTC data cover four years of ROTC cadets, including officers commissioned in 2004, 2005, and 2006 and those commissioned as of March 27, 2007. The data also include information on all cadets participating in the ROTC in 2007. The data on 2007 commissioned officers and current ROTC participants were combined into one group for purposes of analysis. There were 4,408 officer accessions in 2004, 4,178 in 2005, and 4,050 in 2006. As of March 2007, there were 675 officer accessions, and 25,789 cadets were participating in the ROTC, bringing the ROTC population size for 2007 data to 26,464 cadets. Similar to the enlisted data, the ROTC data included each cadet's full address, race, and Hispanic ethnicity.

The USMA data cover officer commissions from West Point in 2007. In 2007, 1,011 officers were commissioned from West Point, and the data include each cadet's home-of-record address.

Race Data

Census race categories allow for any combination of six races (American Indian or Alaskan Native, Asian, Native Hawaiian or Pacific Islander, black or African-American, white, and other). The data on enlisted personnel include race categories that reflected census coding. The ROTC data included one category for Asian. The census categories for Asian and Hawaiian and Pacific Islander were combined in order to compare the ROTC Asian category to the general population.

The enlisted, ROTC, and census data also include Hispanic ethnicity indicators, and the race catego-

15. Kane, "Who are the Recruits?"

16. With the exception of the ROTC race analyses, which use data from the 2004, 2005, and 2006 American Community Surveys.

17. The Office of the Under Secretary of Defense for Personnel and Readiness reports that 87 percent of new recruits are between these ages. U.S. Department of Defense, Office of the Under Secretary of Defense, Personnel and Readiness, *2006 Population Representation in the Military Services*, at http://www.defenselink.mil/prhome/PopRep_FY06/download.html (June 10, 2008).

ries analyzed in this paper identify Hispanics as a distinct race group. Therefore, in this categorization, all other races (e.g., white, black, and Asian) are represented as non-Hispanic race.

Invalid Recruit Addresses

Address information in each file was used to match each recruit to his or her census tract using ArcGIS spatial match procedures. In some cases, the provided address could not be matched to a specific census tract because it could not be located in the address locator database supplied by Environmental Systems Research Institute (ESRI). This occurred most often when the address was a post office box or general delivery location.

These unmatched records were rematched by Zip code and randomly assigned to a census tract based on the five-digit Zip. Any remaining unmatched records were excluded from the analysis. Troops with home addresses outside of the 50 states and the District of Columbia were excluded from the analysis.

Census Data

The census data methodology used in this paper is similar to the methodology used in previous Heritage Foundation reports on troop demographics.¹⁸ Data were taken from the United States Census 2000, Summary File 1 and Summary File 3, and the United States Census 2004, 2005, and 2006 ACS. The data from Summary File 1 are collected for the whole population, and Summary File 3 and the 2004 ACS contain estimates from sample data.

Income analysis for all recruit years used data from Census 2000, Summary File 3, Table P53 (Median Household Income). More recent data by census tract are not publicly available.

Educational analysis for the recruit cohorts used data for the population ages 18–24 from the 2006 ACS Summary File 3, Table PCT25 (Sex by Age by Educational Attainment for the Population 18 Years and Over), and used the age breakdown in this table to focus on the population ages 18–24.

Race analysis for the 2004 and 2005 recruit cohorts used data based on the authors' calculations based on data from the 2004 through 2006 IPUMS data to assess proportionality on a national level, not by census tract.

The regional analysis used data based on the authors' calculations from the 2004 through 2006 IPUMS data to assess proportionality at the state and region levels.

The population count for ages 18–24 refers to the estimate of 27,067,510 for Census 2000. The more recent sample data in 2006 ACS give a sample-based estimate of 29,700,518 for the population ages 18–24. Summary File 1, which is representative of the whole population for Census 2000, reports the total population 18 years and over as 209,128,094. The 2006 ACS race reports a sample-based population estimate of 225,633,342.

Income Analysis

The recruit data did not include any information on recruits' incomes. The average household income calculations performed in this paper were done by assigning each recruit the median household income value in 1999 for his or her census tract. These dollar values were adjusted for inflation and expressed in 2008 dollars. The income analysis was weighted by the total population ages 18–24 in each census tract to adjust for uneven population distribution among census tracts.

Educational Analysis

The educational analysis compared educational attainment of non–prior service enlisted recruits to educational attainment data of the U.S. male population ages 18–24 from the 2006 ACS, Table B15001. Due to inconsistencies in the coding of the education data supplied by the Defense Manpower Data Center, and in order to match more closely the official Department of Defense education statistics on the non–prior service enlisted recruit population, some educational categories were removed from consideration in the educational analysis.

Race Analysis

The race analysis for the enlisted troops compared the race distribution of these troops to the race distribution of males 18–24 years old in the general population, calculated using the 2006 IPUMS data. Similarly, the ROTC race distributions were compared to race distributions of males 18–27 years old with at least a college education in the general population, using the 2004, 2005, and 2006 IPUMS data. The 2007 ROTC

18. Kane, "Who Bears the Burden?" and "Who Are the Recruits?"

data included information on currently enrolled cadets as well as recent accessions and was compared to males 18–27 years old with at least some college education using the 2006 IPUMS data. The 2006 data are the most recent available and were used as the point of comparison for both the 2007 enlisted and ROTC data.

Race information for the USMA officer commissions was not available. Race analysis for this group was conducted by using the race characteristics of the census tracts where the cadets lived. Once race was established using census tract information, this group was compared to the total population 18 and older using Table P6 from Census 2000 Summary File 1.

Regional Analysis

The census region, census division, and state comparisons in this paper used the authors' calculations of state population data from the 2004

through 2006 IPUMS. The IPUMS population varied depending on the military population being considered.

The population comparison for the 2006 and 2007 enlisted active-duty military was done using calculations from the 2006 IPUMS data for the male population ages 18 to 24.

The 2004–2006 IPUMS data for males ages 18 to 27 with at least a bachelor's degree were used for the comparisons of ROTC proportionality for 2004 through 2006. The 2006 IPUMS data for males ages 18–27 with at least some college education were used as the relevant comparison population for the 2007 ROTC data because these data included graduates and currently enrolled ROTC participants.

The 2007 USMA population was compared to calculated population numbers from the 2006 IPUMS for males 18–27 years old with at least a college education.

State Populations with Enlisted, ROTC and USMA Ratios

State	Enlisted Recruits				ROTC Commissions				USMA Graduates					
	2006		2007		2004		2005		2006		2007*		2007**	
	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio
Alabama	1.97	1.31	1.96	1.31	2.29	1.76	2.22	2.02	3.10	2.82	2.69	1.92	0.97	0.88
Alaska	0.34	1.13	0.35	1.17	0.28	2.80	0.51	5.10	0.20	2.00	0.33	1.10	0.32	3.20
Arizona	2.18	1.09	2.26	1.13	0.99	0.76	1.07	0.71	1.23	0.77	1.05	0.50	1.40	0.88
Arkansas	1.16	1.29	1.19	1.32	1.36	1.94	1.34	1.91	0.96	1.60	1.13	1.41	0.76	1.27
California	10.23	0.79	10.39	0.80	5.32	0.44	5.12	0.43	4.93	0.43	5.04	0.40	8.10	0.70
Colorado	1.74	1.09	1.71	1.07	1.23	0.72	0.85	0.45	1.43	0.75	1.45	0.85	1.62	0.85
Connecticut	0.70	0.64	0.69	0.63	0.97	0.65	1.00	0.71	1.28	0.91	1.07	0.97	1.51	1.08
Delaware	0.23	0.77	0.22	0.73	0.28	1.40	0.24	0.80	0.20	0.67	0.26	0.87	0.43	1.43
DC	0.06	0.30	0.05	0.25	0.21	0.35	0.12	0.24	0.05	0.07	0.09	0.30	0.22	0.31
Florida	6.51	1.21	7.08	1.31	5.69	1.35	5.46	1.21	4.50	0.92	4.42	0.90	4.43	0.90
Georgia	3.62	1.13	3.91	1.22	4.12	1.65	4.00	1.38	3.70	1.32	5.53	1.98	2.48	0.89
Hawaii	0.51	1.28	0.43	1.08	0.88	1.76	0.80	2.00	0.68	2.27	0.51	1.28	0.43	1.43
Idaho	0.61	1.22	0.64	1.28	1.02	2.55	1.00	3.33	0.91	2.28	0.62	1.24	0.32	0.80
Illinois	3.78	0.90	3.64	0.87	4.07	0.78	4.22	0.78	4.28	0.87	3.99	0.87	4.21	0.86
Indiana	2.37	1.13	2.04	0.97	1.76	0.84	2.15	1.13	1.84	0.88	1.91	0.91	2.38	1.13
Iowa	0.98	0.98	0.95	0.95	1.25	0.89	1.29	1.17	1.33	1.02	0.83	0.69	0.76	0.58
Kansas	1.07	1.07	1.14	1.14	1.23	1.37	1.24	1.38	1.33	1.48	1.07	0.97	0.54	0.60
Kentucky	1.26	0.97	1.33	1.02	1.69	1.54	1.56	1.73	1.79	1.63	1.55	1.19	0.86	0.78
Louisiana	1.41	0.88	1.41	0.88	1.46	1.12	1.12	1.02	1.18	0.98	1.20	0.92	0.86	0.72
Maine	0.55	1.38	0.54	1.35	0.51	1.70	0.56	1.87	0.63	2.10	0.46	1.15	0.97	3.23
Maryland	1.72	0.96	1.59	0.88	2.31	1.16	2.56	1.16	3.25	1.35	2.24	1.18	2.27	0.95
Massachusetts	1.30	0.62	1.25	0.60	1.53	0.40	1.68	0.51	1.69	0.51	1.72	0.72	2.27	0.69
Michigan	3.50	1.06	3.41	1.03	2.04	0.73	2.24	0.68	2.29	0.76	2.54	0.73	3.02	1.01
Minnesota	1.23	0.72	1.25	0.74	1.76	0.84	1.83	0.83	1.53	0.73	1.56	0.78	1.62	0.77
Mississippi	0.83	0.83	0.85	0.85	1.55	2.21	1.32	2.20	1.43	2.04	1.41	1.57	0.65	0.93
Missouri	2.29	1.21	2.39	1.26	1.99	1.00	2.27	1.14	1.86	1.09	1.92	1.07	1.08	0.64
Montana	0.53	1.77	0.50	1.67	0.86	2.87	0.68	2.27	0.68	2.27	0.51	1.28	0.43	1.43
New Hampshire	0.70	1.00	0.65	0.93	0.79	1.50	0.71	1.10	0.53	1.13	0.63	0.71	0.32	1.27
Nebraska	0.88	1.26	1.05	1.50	0.90	1.50	0.66	1.26	0.68	0.79	0.57	0.70	0.76	0.61
Nevada	0.47	1.18	0.44	1.10	0.60	2.63	0.63	1.78	0.55	1.06	0.49	1.58	0.43	0.64
New Jersey	1.57	0.60	1.61	0.62	2.29	0.69	2.80	0.74	2.04	0.52	2.30	0.82	4.64	1.19
New Mexico	0.74	1.06	0.70	1.00	0.51	1.28	0.59	1.97	0.73	1.46	0.98	1.40	1.08	2.16
New York	4.51	0.70	4.38	0.68	5.85	0.66	5.32	0.57	5.01	0.57	4.69	0.67	8.42	0.96
North Carolina	3.31	1.10	3.40	1.13	2.91	1.16	3.17	1.13	3.12	1.11	3.42	1.27	2.70	0.96
North Dakota	0.16	0.53	0.16	0.53	0.21	0.70	0.29	1.45	0.33	1.10	0.21	0.53	0.22	0.73

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State Populations with Enlisted, ROTC and USMA Ratios (continued)

State	Enlisted Recruits			ROTC Commissions						USMA Graduates			
	2006		2007	2004		2005		2006		2007*		2007**	
	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio	% U.S. Recruits	Recruit-to-Population Ratio
Ohio	4.11	1.11	3.92	4.21	1.03	4.27	1.15	4.91	1.26	3.83	1.04	3.56	0.91
Oklahoma	1.67	1.39	1.58	0.99	0.99	1.02	1.02	1.31	1.46	1.07	0.97	1.19	1.32
Oregon	1.46	1.33	1.53	1.50	1.36	1.00	0.91	1.01	1.01	1.05	0.88	1.30	1.30
Pennsylvania	3.57	0.89	3.53	5.37	1.22	5.10	1.11	5.64	1.18	5.47	1.33	5.29	1.10
Rhode Island	0.23	0.58	0.23	0.49	0.98	0.32	0.64	0.48	1.60	0.33	0.83	0.65	2.17
South Carolina	1.81	1.21	1.79	2.22	1.85	1.98	1.52	2.04	1.70	4.35	3.35	0.97	0.81
South Dakota	0.31	1.03	0.27	0.67	3.35	0.63	2.10	0.45	2.25	0.72	2.40	0.32	1.60
Tennessee	2.04	1.13	2.14	2.29	1.35	2.66	1.56	2.52	1.48	2.42	1.42	2.16	1.27
Texas	11.15	1.34	10.89	6.32	0.97	7.78	1.22	7.45	1.15	8.56	1.13	9.83	1.51
Utah	0.65	0.59	0.62	1.64	1.64	1.51	1.89	1.56	1.73	1.37	1.05	0.97	1.08
Vermont	0.14	0.70	0.15	0.25	1.25	0.39	3.90	0.45	2.25	0.32	1.60	0.22	1.10
Virginia	2.89	1.11	2.98	5.88	1.78	5.00	1.79	5.51	1.84	5.41	2.08	5.18	1.73
Washington	2.30	1.10	2.26	2.98	1.35	3.22	1.53	3.02	1.44	2.24	0.97	2.16	1.03
West Virginia	0.60	1.20	0.60	0.35	0.70	0.34	0.68	0.40	1.33	0.64	1.28	0.76	2.53
Wisconsin	1.86	1.03	1.75	1.85	0.88	1.80	0.90	1.74	1.09	1.56	0.87	1.84	1.15
Wyoming	0.20	1.00	0.22	0.30	3.00	0.32	3.20	0.25	1.25	0.22	1.10	0.11	0.55

* Includes those enrolled and commissioned. Ratios for 2007 were calculated using estimated population data from 2006.

** Ratios for 2007 were calculated using estimated population data from 2006.

Note: Ratios were calculated by comparing a region's proportion of the U.S.'s total recruits to that region's comparable population. For enlisted recruits, the comparable population is 18–24-year-old males. For ROTC commissions in 2004–2006, the comparable population is 18–27-year-old males with at least a college education. For ROTC commissions and currently enrolled cadets in 2007 the comparable population is 18–27-year-old males with at least some college education in 2006. For U.S. Military Academy graduates, the comparable population is 18–27-year-old males in 2006 with at least a college education.

Sources: U.S. Department of Defense, Defense Manpower Data Center, Non-Prior Service Accessions, 2006–2007, ROTC Commissions, 2004–2006, and 2007 ROTC Cadets and Commissions as of March 27, 2007, and Steven Ruggies, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Romander, Integrated Public Use Microdata Series: Version 4.0, University of Minnesota, Minnesota Population Center, 2008, at <http://usa.ipums.org/usa> (July 21, 2008).

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