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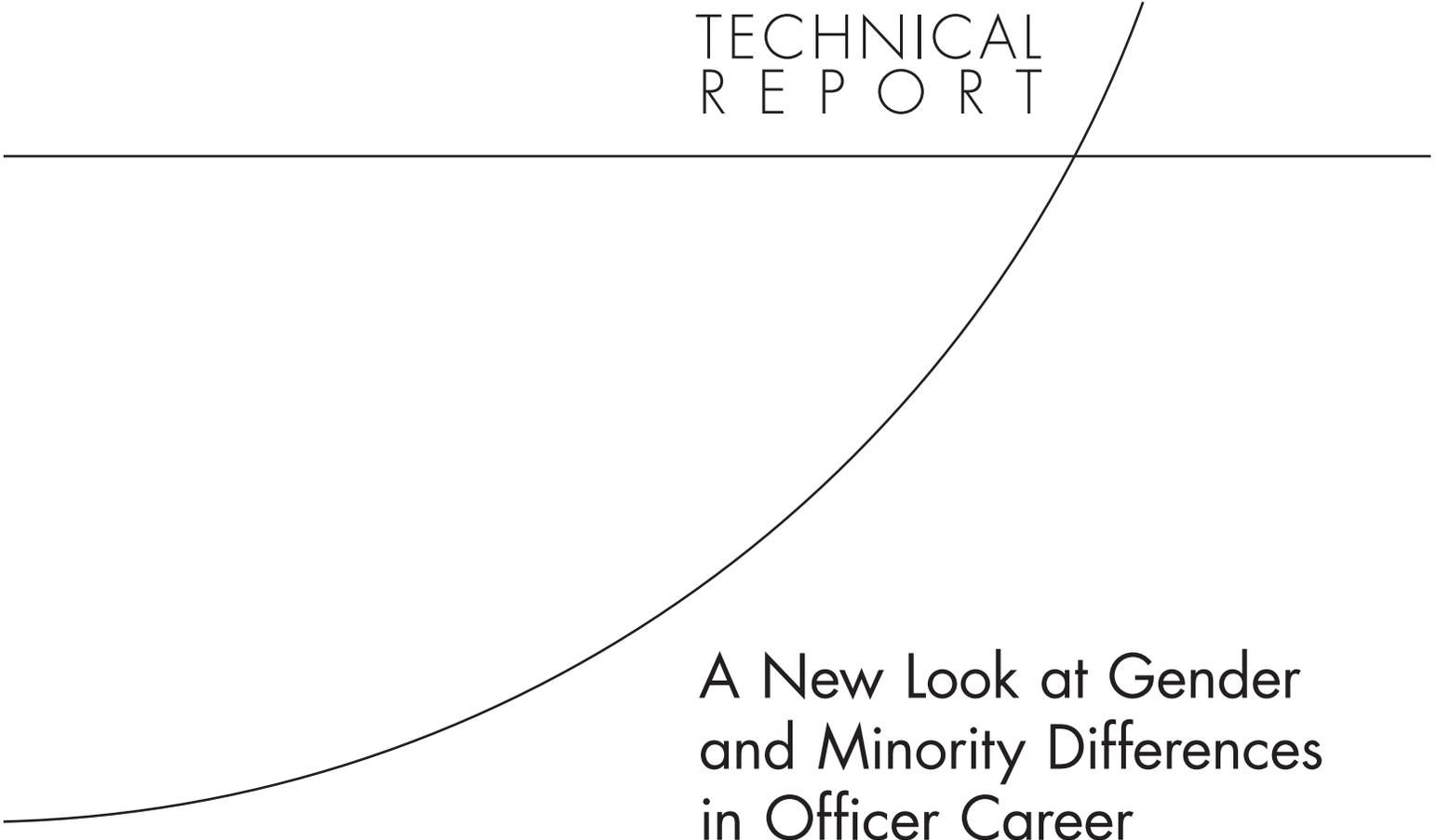
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TECHNICAL
R E P O R T



A New Look at Gender and Minority Differences in Officer Career Progression in the Military

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Prepared for the Office of the Secretary of Defense

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Summary

Although military accessions of women, blacks, Asians, Hispanics, and persons of other racial backgrounds have increased over time, the proportions of these groups in the senior officer corps remain relatively low. In fiscal year (FY) 2009, for example, these groups had a lower proportion of O1 to O3 officers than they had of accessions, a lower proportion of O4 to O6 officers than they had of O1 to O3 officers, and a lower proportion of general and flag officers than they had of O4 to O6 officers (Table S.1).

The Military Leadership Diversity Commission has concluded that two contributors to the underrepresentation of women and racial and ethnic minorities among senior military leaders are their lower rates of promotion and retention relative to those for white males. This research explores the relative contribution of each of these factors.

RAND research conducted in the late 1990s found that women had lower promotion and retention rates than white men and that black men, in comparison with white men, had lower promotion but similar retention rates. Focus groups conducted for the earlier work found that women perceived themselves to have limited occupational roles and had concerns about harassment and family obligations. Black officers reported difficulty in forming peer and mentor relationships and were more likely to receive assignments, such as recruiting, that were not typical for their occupation.

Since then, several policies and events have affected military careers, including retention and promotion opportunities. The drawdown of the 1990s reduced retention and promotion opportunities. The September 2001 terrorist attacks against the United States and the subsequent military operations in Iraq and Afghanistan changed perceptions about military service

Table S.1
Active Component Officer Corps, by Gender, Race, and Ethnicity Status, FY 2009 (%)

Service	Accessions	O1 to O3	O4 to O6	General and Flag Officers	All Officers
Female	20.58	17.96	12.72	5.60	16.21
White	75.81	77.27	83.71	92.97	78.86
Black	9.19	8.90	8.13	5.82	8.74
Asian	4.93	4.01	2.53	0.44	3.74
Other, two or more, unknown	10.07	9.81	5.73	0.77	8.66
Hispanic	5.59	5.59	4.11	1.32	5.20

SOURCE: Department of Defense, 2011, Tables B-23, B-27, B-38, and B-39.

and had a negative effect on high-quality enlistments. (No similar information is available about officer accessions.) At the same time, military pay and benefits, which lagged those in the private sector in the 1990s, have increased relative to civilian pay in the past decade. The services have also undertaken several efforts to improve officer diversity.

Given these and other changes, the Under Secretary of Defense for Personnel and Readiness asked RAND to update its earlier research, with attention as well to the career progression of women in military occupations that are partially closed. By *partially closed*, we mean occupations that are deemed open to women but that have some positions for which assignment of women is restricted. This report summarizes our findings. Below we describe our data and methods, our results, and our conclusions.

Data and Methods

We use the Proxy-PERSTEMPO data file maintained by the Defense Manpower Data Center. The data include information on officer service, occupation, grade, months to current grade, source of commission, deployments, dates of entry and of commission, and such demographic variables as race, ethnicity, gender, marital status, and education.

We estimate differences in retention and promotion between white males (the reference group) and several other groups defined by race, Hispanic origin, and sex. The race groups were defined as white, black, and other minority; because of small sample sizes, we group Asians, Pacific Islanders, and others into the other minority category. We also examine how women have progressed as officers in ground-combat occupations that are closed to them at lower levels. We controlled for several variables—including service, source of commission, prior enlisted status, occupation group, deployment experience, marital status, and education—in our analyses to separate the effects of race, ethnicity, gender, and, for restricted occupations, occupation on career progression.

It is important to recognize that the analysis provides descriptions of how career progression differs by race, ethnicity, and gender and by whether an occupation is partially closed to women. The analysis does not attempt to explain why these differences occur. It also does not attempt to ascertain whether minority or female officers with identical characteristics as white male officers (our reference group) have different career progressions. This is because we do not control for every relevant factor that could affect differences in career progression between white males and the other groups we consider. These other factors include, for example, entry characteristics, such as aptitude, and performance and assignment opportunities once in service. Similarly, the analysis also does not attempt to ascertain whether opening occupations to women affects their career progression. Because the analyses are purely descriptive, readers should not interpret any of the findings as causal.

Minority and Gender Differences in Career Progression

Among male officers, blacks, Hispanics, and other minorities are generally less likely than white males to be promoted (Table S.2). These differences appear to be somewhat greater at higher levels, e.g., from O4 to O5. Nevertheless, retention rates for minority male officers, given promotion to a specified level, are somewhat greater than for white males, especially at

Table S.2
Estimated Percentage Point Differences in the Likelihood of Reaching Promotion and Retention
Milestones for Male Officers

Milestone	Percentage of White Male Officers Retained/Promoted	Percentage Point Difference: Minority Male Officers – White Male Officers		
		Black Males	Hispanic Males	Other Minority Males
Promotion				
O1 to O2	98.5	-1.1***	-0.5***	-0.1
O2 to O3	91.2	-1.2***	-0.4	0.1
O3 to O4	76.0	-2.6***	-1.9**	-0.4
O4 to O5	74.6	-4.3***	-4.6***	-3.8***
O5 to O6	46.9	-2.5	-7.7***	-4.1*
Retention as				
O1	99.8	0.1***	0.0	0.0
O2	99.3	0.0	-0.1	0.0
O3	70.1	4.8***	2.4***	5.4***
O4	87.9	1.7***	1.9**	4.4***
O5	81.4	2.5**	2.7	3.0**

NOTE: *** = statistically significant from zero at the 1 percent level; ** = statistically significant from zero at the 5 percent level; * = statistically significant from zero at the 10 percent level.

levels O3 and above. These results are consistent with earlier RAND research that found that black males were less likely to be promoted but more likely to be retained if promoted.

Overall, female officers are also less likely to be promoted than white males are (Table S.3). More specifically, female officers are less likely to be promoted to O2, O3, and O4 than white males are, with the exception that black women are about as likely to be promoted to O3 as white men are. Retention rates for female officers at O3 are also generally lower than those for males, with the exception that black women at O3 have a higher retention rate than white men. All women have lower retention rates than white men at O5, but, given retention, non-black women have higher promotion rates to O6 than men do. Across all grades, these results are roughly consistent with earlier RAND research that found lower retention and promotion rates for white women.

The combined effects of retention and promotion have varying effects on the likelihood of cohorts, as defined by race, sex, and Hispanic origin, reaching certain promotion and retention milestones (Table S.4). On net, white and Hispanic males have nearly identical likelihoods of reaching O4, while black and other minority men are more likely to reach O4. The lower likelihoods that black and Hispanic males have of promotion at each level through O4 are offset by their higher rates of retention. For Hispanic men, the effects are exactly offsetting. For black men, the retention effect more than offsets the promotion effect, so black men are more likely to reach O4. The results for black men differ from the earlier RAND research, which found that the effects were fully offsetting for black men, leaving black and white men equally likely to reach the rank of O4. With respect to their later careers, among O4 officers, black and Hispanic men are less likely to achieve O6 than white men are, with lower promotion rates more than offsetting higher retention rates. Other minority men have a higher likelihood of reaching

Table S.3
Estimated Percentage Point Differences in the Likelihood of Reaching Promotion and Retention Milestones for Female Officers

Milestone	Percentage of White Male Officers Retained/Promoted	Percentage Point Difference: Minority Female Officers – White Male Officers			
		White Females	Black Females	Hispanic Females	Other Minority Females
Promotion					
O1 to O2	98.5	-0.8***	-1.5***	-1.8***	-0.9***
O2 to O3	91.2	-2.5***	-0.2	-1.8**	-1.7***
O3 to O4	76.0	-3.2***	-3.9***	-1.8	-3.7**
O4 to O5	74.6	0.6	-6.8***	-6.4	-3.3
O5 to O6	46.9	3.4**	-7.7**	13.1	16.6**
Retention as					
O1	99.8	0.0	-0.1	-0.3***	-0.2***
O2	99.3	-0.4***	-0.2*	0.2	-0.2
O3	70.1	-10.9***	4.2***	-4.7**	-3.7**
O4	87.9	-3.5***	-0.5	2.5	-0.4
O5	81.4	-10.9***	-5.7**	-9.6	-8.8*

NOTE: *** = statistically significant from zero at the 1 percent level; ** = statistically significant from zero at the 5 percent level; * = statistically significant from zero at the 10 percent level.

Table S.4
Likelihood of an Entry Cohort Reaching Promotion and Retention Milestones

	Percentage of Entering Officer Cohort Reaching:	
	O1 to O4 Promotion	O4 to O6 Promotion
Male officers		
White	45.4	23.6
Black	47.2***	19.5***
Hispanic	45.9	20.1
Other	48.4***	21.0
Female officers		
White	30.8***	18.8***
Black	45.3	15.6***
Hispanic	36.4***	23.1
Other	37.2***	26.8

NOTE: *** = statistically significant from white male officers at the 1 percent level; ** = statistically significant from white male officers at the 5 percent level; * = statistically significant from white male officers at the 10 percent level.

O4 than white men have, but, once reaching O4, a slightly lower likelihood of reaching O6. However, only the result for black men is precisely estimated.

On net, female entrants are less likely to achieve O4 than their male counterparts, with the exception of black women. The lower likelihoods of achieving O4 stem from lower rates of both retention and promotion. Once they have achieved O4, white, black, and Hispanic female officers are less likely to achieve O6 than white males are, though only the differences for white and black women are statistically different from zero. Black women have an especially low likelihood of achieving O6, particularly because of their lower rates of retention at O5 and lower rates of promotion from O5 to O6. Other minority women, once they have achieved O4, are more likely to achieve promotion to O6 than any other group, including white males, particularly because of their higher rates of promotion from O5 to O6, though the difference from white males is not statistically different from zero.

Female Officer Career Progression in Restricted Occupations

To test whether occupational restrictions on female officers could account for any differences in their rates of retention and promotion, we compared career progress for women in occupations partially closed to them with that in occupations fully open to them, and netted out the differences for men in those same occupations. In general, we find no statistically significant difference in the likelihood of reaching O6, for women who have reached O4 (see Table S.5).

Table S.5
Percentage of Officers Reaching O6 in Open Versus Partially Closed Occupations, Conditional on Reaching O4

	Male Officers	Female Officers	Difference for Female Versus Male Officers
Open	22.9	18.9***	
Partially closed	24.6	19.2	
Net effect	1.7	0.3	-1.4

NOTE: *** Statistically significant from male officers at the 1 percent level; ** Statistically significant from male officers at the 5 percent level; * Statistically significant from male officers at the 10 percent level.

Unanswered Questions

Our work describes differences in officer career progression by race, sex, and Hispanic origin, as well as by whether occupations are partially closed to women. Our work updates and confirms some earlier findings. Nevertheless, there are some questions it does not answer.

First, it does not indicate whether recent officer cohorts will experience the same career progression as described here. This is because our data on career progression, especially in the more senior grades, are drawn from older cohorts who have had time to achieve high rank.

Second, our analysis does not indicate how lifting or reducing career restrictions on service by women affected their career progression. This is because the career progression in occupations open or partially closed to women may differ in important ways from that in fully closed ones. Model estimation and simulation of career progression under alternative policies that lift restrictions on service by women could shed some light here.

Third, our control variables do not control for myriad other possible contributors to differences in career progression by race, sex, and Hispanic origin, as indicated earlier. Some variables for which we do not control are ability and proficiencies, differences in performance and opportunities for command experience, access to mentors and peer networks, occupational choices more specific than those we analyze, and promotion selection criteria. Insofar as these vary by race, sex, and Hispanic origin, they could explain some of the differences we find in career progression.