TRENDS IN GENDER AND RACIAL EQUITY IN RETENTION AND PROMOTION OF MILITARY OFFICERS

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ABSTRACT

This paper builds on our earlier research to investigate the extent to which there is a pattern of increasing or decreasing gender and racial equity in retention and promotion rates over time. Regression analysis techniques are utilized to estimate the normalized year-to-year retention and promotion rates for individual cohorts. Results indicate no significant racial impacts on retention. The differential between the retention rates of men and women is small but statistically significant, with men having higher retention rates than women. Analysis of promotion rates shows that Blacks are promoted at slightly lower rates than Whites. After the fourth year, men have consistently higher promotion rates than women. We hypothesize that lack of internal organizational supports for family roles may lead to the differential in retention and promotion between men and women.

INTRODUCTION

All branches of the military have implemented specific affirmative action programs to increase minority and female representation among officers, in spite of resource constraints experienced in recent years (Department of the Army 1988; Department of the Navy 1988; see Segal 1989 for a history of attempts to eliminate ascriptive criteria as a basis for evaluating personnel). What yet remains unclear is the standard by which social representation should be decided -- the population in general, only comparable age cohorts in the population, the military population, or the military subdivided into officer and enlisted groupings. Conceivably examination of the degree of social representation could be applied at even finer levels of disaggregation, for example, individual occupational classifications or individuals entering a service group in a particular year. With respect to the enlisted force, concern seems to focus on overrepresentation of blacks compared to the general population (Butler 1988). For the officer corps, the standard seems to be the officers currently in the military.

Affirmative action programs implemented by the Army and Navy included procedures for branching of officers to achieve representative minority and female distribution across occupations, and guidance to ensure representative selection for women and minorities for service schools and for postgraduate education. Of course, organizational practices can either overtly or covertly counteract even the best affirmative action programs. In other words, systematic barriers to the entry of minority and women officers into the military may exist in the various accession sources. Additionally, for promotions at the officer level, a photograph is used as part of the assessment. If race/ethnic minorities, or women do not fit the expected image of high ranking officers, this could bias chances of promotion.

For women, family constraints may impinge on women's choices, regardless of concerted attempts to prevent gender from negatively impacting women's military careers. Segal (1988) discusses the "greedy" nature of family/household responsibilities and the equally "greedy" nature of military career demands. When demands of both are incompatible, it may be that socialization of women to meet family demands over career push them out of the military. Since career demands increase as rank increases, this would mean women would be less likely than men to attain higher ranks. Most recently the necessity of downsizing (Kozlowski, Chao, Smith, Hedlund 1993) may have placed what may be competing demands with equal opportunity and affirmative action initiatives on the military organization. These competing requirements may show up in women's lower retention rates.

This study updates our earlier research (Stewart, Firestone 1992) which examined the extent to which differences exist across race/ethnicity, sex and service group in rates of retention and promotion of military officers. The addition of two years of new data to the original data analyzed expands the cross-sectional data base to three points in time, allowing for more reliable predictors. Each additional year permits more robust analyses, particularly with respect to the examination of the aggregate impact of retirement decisions on the demographic profile of the officer corps. Our original research reported that in the early years, retention rate for women officers approximated that for men; however, after the initial service

Table 1: Adjusted Retention Rates by Cohort and Gender All Branches Combined

Accession Date	9/1989		9/1992		9/1993	
Cohort	Male	Female	Male	Female	Male	Female
1979	0.533	0.338	0.357	0.245		
1980	0.513	0.469	0.384	0.34		
1981	0.55	0.487	0.393	0.348		
1982	0.605	0.517	0.425	0.383		
1983	0.618	0.603	0.45	0.417	0.375	0.336
1984	0.727	0.673	0.478	0.467	0.399	0.426
1985	0.853	0.771	0.548	0.487	0.451	0.431
1986	0.93	0.933	0.608	0.496	0.527	0.45
1987	0.956	0.962	0.682	0.591	0.603	0.497
1988	0.983	0.988	0.709	0.651	0.631	0.576
1989			0.826	0.772	0.635	0.643
1990			0.901	0.916	0.817	0.795
1991			0.966	0.95	0.917	0.898
1992					0.963	0.955

obligation was met, the retention rate of women fell significantly below that for men (Stewart, Firestone 1992). Additionally, race-specific effects were relatively limited, service specific, and to some extent cohort specific. Finally, retention rates for the Air Force were consistently higher than in the Army or Navy.

OBJECTIVES

Building on our original research, this study examines the extent to which there is a pattern of increasing or decreasing gender and racial equity in retention and promotion rates as the number of years since accession for each cohort increases.

DATA AND VARIABLE CONSTRUCTION

The data analyzed in this research were taken from a special Department of Defense tabulation of original accessions and retention of commissioned officers by service group, race, and sex for cohorts at three different points in time: September 1989 (original data), September 1992 and September 1993. The numbers of retainees by grade and the overall retention rate were also provided by cohort. The original tabulations were provided by the Defense Manpower Data Center (DMDC).

Warrant officers and officers of unknown rank were subtracted from the number of original accessions and retainees. This algorithm permitted parallel treatment of each service group given the absence of the rank of warrant officer in the Air Force. The procedure introduced some imprecision because the numbers of original warrant officer accessions were not available. Subtraction of retained warrant officers (and officers of unknown rank) from the original accessions implied de facto a retention rate of 100 percent for these categories of all cohorts. The degree of imprecision introduced is limited by the relatively small number of warrant officers. The small numbers of Native Americans necessitated their exclusion in the analysis, as were individuals classified as "unknown." These exclusions introduced no bias because accession and retention information are tabulated separately for each race/ethnic group. Significant differences in the typical timing of promotion from rank to rank between the Marines and other service groups also required the exclusion of Marine cohorts from the analysis.

Four independent measures were developed from the modified data for each race/ethnic-sex cohort: 1) the retention rate, 2) the proportion of retainees promoted to grade 03 or higher, and 3) the proportion of retainees promoted to grade 04 or higher, and 4) the proportion of retainees promoted to grade 05 or higher. The computation of each measure was straight forward, defined simply as the number of individuals fitting each classification divided by the number of original accessions (adjusted). The adjusted retention rates by cohort and gender for all branches combined are presented in Table 1. Note that the divergence between retention rates for males and females generally increases for individual cohorts over time.

METHODS

Estimates of the normalized year-to-year retention and promotion rates for individual cohorts are constructed using multiple regression techniques. This approach is used to determine whether observed differences in retention and promotion rates are statistically significant. The model used to generate the estimates is a modification of those employed in Stewart and Firestone (1992) that includes controls for race, branch and cohort. There are three principal differences between the methods used in the present investigation and those employed in the earlier analysis. The first change is the weighting of observations based on the size of the original acceding cohort as opposed to the unweighted scheme used in the original study. This procedure controls for large percentages that result in cases where the cohort size is small. The second modification is that direct comparisons between the retention and promotion rates of men and women are generated directly by estimating the model using data for both men and women. In the earlier study retention and promotion patterns for men and women were analyzed separately.

The third modification reflects the availability of three data sets rather than the single source in the earlier study. The original analysis included dummy variables for each cohort-year. The coefficients of those dummy variables provided not only an estimate of differences in retention and promotion among cohorts, but also the year-to-year distribution of retention rates as time since accession increases. In the present investigation it is not possible to use this technique alone to infer information about year-to-year changes in retention rates because there are multiple observations for all cohorts at different periods of time. As a consequence, it was necessary to create a different type of set of dummy variables that equilibrated years since accession across the three samples. Using the cohort of officers acceding in 1988 as an example, the information reported in 1989 would reflect this cohort's experience one year after accession. This experience should be directly comparable to the experience of the cohort of officers acceding in 1992 reported in 1993 (sample 3). In 1993, the information reported for the cohort acceding in 1988 reflects the experience of this cohort five years after accession. This experience should be comparable to the information provided for the cohort acceding in 1984 as reported in 1989.

Table 2: Mean Difference in Retention Rates Between Men and Women

Years Since Accession	Difference Male Ret. Rate - Female Ret. Rate
1	0.002
2	0.006
3	0.016
4	0.081
5	0.113
6	0.171
7	0.116

RESULTS

Retention Rates

The analysis of the combined samples indicates that Blacks have a slightly higher retention rate overall than other racial groups (+.010). This result reflects higher probabilities of retention of Black women officers identified in separate analysis of samples 1 and 2. No other differences in retention rates among racial groups were uncovered.

Table 2 contains the results of the comparison of retention rates by gender. The differential between the retention rates of men and women increases to slightly over .17, seven years after accession and then declines to approximately .10 after thirteen years. Female Navy officers have a retention rate approximately .10 higher than other women officers. Male Army officers are retained at a rate approximately .07 lower than men in other branches. These gender specific differentials are layered on top of an existing pattern of structural retention differentials across branches. Retention rates for Naval officers are .028 below that of Army officers. Retention rates for Air Force officers are .037 higher than Army officers.

Promotion Rates

No differences in promotion rates to rank 03 were found. Women have slightly higher promotion rates up to four years after accession. After the fourth year, men have higher promotion rates with the differential generally tracking with the differential in retention rates. Female Naval officers have a promotion rate approximately .10 higher than women in other branches. Male Army

officers have lower promotion rates than their counterparts in the Navy and Air Force. The promotion rate for Blacks to rank 04 is slightly lower than for Whites (-.013) while the rate for Asians is slightly higher (.003) than for Whites. The differential between the promotion rates of men and women cluster around .01 irrespective of years since accession.

Similar patterns are observed when promotion to ranks 05 are analyzed. Again Blacks are promoted at slightly lower rates (-.003) and Asians are promoted at slightly higher rates (.006) than Whites.

CONCLUSION

Our analyses suggest that the militaries EO and AA initiatives are operating with respect to race/ethnic minorities with the exception of promotions to major. In the latter category Blacks are significantly less likely to be promoted than other groups. Interestingly, when the three data points are analyzed separately, Black women in the first two cohorts (1989 and 1992) have higher retention rates than other groups. With respect to women, our findings indicate that perhaps downsizing may have dampened the effectiveness of EO/AA efforts. Peck (1994) found that military education and WWII commission cohort significantly enhanced the possibility of promotion, especially to field grade ranks (05) in the Army. Women are far less likely to attend military academies, and of course are not able to be part of the WWII commission cohort. With two such important strikes against them, other organizational factors may "push" them out of the military. For example, lack of adequate support for family responsibilities has been a major complaint of women (Segal 1988) in the military. Family responsibilities are probably most strongly felt by women as they move from the rank of captain to major. The lack of institutional support for roles as wives and mothers, along with recognition that they do not have either the WWII or the "academy" advantage (Janowitz 1960; Segal 1967) may offset the attempts of EO/AA efforts to retain and promote women officers.

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