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*An Analysis of Pay for  
Enlisted Personnel*

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*Prepared for the  
Office of the Secretary of Defense*

***National Defense Research Institute***

The research described in this report was sponsored by the Office of the Secretary of Defense. The research was conducted within the Forces and Resources Policy Center of RAND's National Defense Research Institute, a federally funded research and development center supported by the Office of the Secretary of Defense, the Joint Staff, the unified commands, and the defense agencies, Contract DASW01-01-C-0004.

ISBN: 0-8330-3012-4

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Published 2001 by RAND  
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138  
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## SUMMARY

A major purpose of the 9th Quadrennial Review of Military Compensation is to determine whether the structure and level of military compensation remains adequate to meet the manning requirements of the military. Changes in civilian labor market opportunities may call the adequacy of military compensation into question. To address these issues, this briefing examines the compensation of active duty enlisted personnel in relation to that of their civilian opportunities.

During the past 20 years, enrollment in college within the 12 months following graduation from high school has risen substantially. In 1980, the enrollment rate was 48 percent; by 1997, it had risen to 67 percent. The increase in enrollment has fundamentally changed the market for new recruits. Although the high school graduate market remains important, its role as a source of high-aptitude youth for the military has declined because those in the graduate market who score high on the Armed Forces Qualification Test (AFQT) are increasingly likely to enroll in college. This loss from the traditional recruiting market is potentially troubling because high-scoring youth perform better in military training and mission-essential tasks. Further, the growth in college enrollment has been accompanied by—and probably responded to—the increases in returns to a college education. Since the early 1980s, the wages of those with some college education have risen relative to the wages of high school graduates, and the wages of those with four or more years of college have risen even faster. Thus, the traditional recruiting market has declined in size, college enrollment has increased and attracted high-aptitude youth, and the rising returns derived from a college education, especially four or more years of college, make college an attractive career investment. These changes imply that the opportunity cost of entering the military has been rising. Furthermore, from the perspective of the military, a decline in the quality of recruits leads to a risk of decreased subsequent military capability.

The education levels of the enlisted force have also been changing. Increasingly, enlisted personnel take educational courses while in service. The coursework may facilitate promotion to higher ranks, and it may reflect an understanding of the value of education in expanding one's civilian opportunities after military service. In 1985, just over 20 percent of junior enlistees with one to four years of service had at least one year of college. By 1999, more than 50 percent had some college. Nearly all of

this change reflects education obtained during military service rather than an increase in the percentage of recruits having some college. Education levels have been rising in higher ranks as well. In 1999, more than 80 percent of enlisted personnel with 20 or more years of service had a year or more of college, and more than 20 percent of E-8s had a college degree. These changes imply that military service and education have become increasingly compatible for many personnel.

Despite the increase in education levels among enlisted personnel, there is reason to believe that the military is becoming less able to compete with civilian opportunities. Not only have college enrollment rates been rising, but the quality of recruits has been declining since 1992. In 1992, recruit quality reached an all-time high: 74 percent of non-prior-service recruits were high school graduates who scored in the upper half of the AFQT test score distribution. In 2000, 57 percent of recruits met these criteria. It should be emphasized that the quality of these recruits is no different from that of the 1987 recruit cohort, and 57 percent is certainly well above the 1979–1981 level of 30 to 35 percent. The concern is that recruit quality might continue to decline.

The structural changes in the recruiting market and the growing importance of higher education as a prerequisite to many civilian career paths may mean that the current structure of military compensation should be revised. This raises three questions: How well does military compensation compare with the civilian compensation of those with some college? How has this comparison changed over time, i.e., has military compensation fallen relative to civilian pay of those with some college? Will the military pay legislation of Fiscal Year 2000 (FY 00), already being implemented, address the concerns about the adequacy of military pay?

To compare military and civilian pay, military pay was measured as the sum of basic pay, basic allowance for housing, basic allowance for subsistence, and the tax advantage due to the allowances not being taxable. The total of these elements is called regular military compensation (RMC). RMC accounts for the bulk of current monetary compensation of military personnel. We compared RMC to civilian earnings by placing it on the civilian earnings distribution, not simply by looking at average civilian wages. RMC probably exaggerates the value of military pay for junior personnel because many of them live in barracks or in ship bunks and cannot take advantage of the housing allowance.

In FY 00, military pay appeared to compare fairly well with the civilian pay of high school graduates but not as well for those with some college. Over much of a typical military career, RMC approximately equaled the 70th percentile civilian wage of high school graduates. That is, at any

given age (or level of experience), about 30 civilians out of 100 had a higher wage, and about 70 had a lower wage. By comparison, RMC was only slightly above the 50th percentile civilian wage of those with some college, for most ages. However, among junior personnel RMC stood at respectively higher percentiles.

There are two major reasons for the fact that the military pay for high school graduates is above the 50th percentile (median wage) and above the average wage, which approximately equals the 60th percentile. (The average is greater than the median because the wage distribution has a long right tail.) First, the military is selective and prefers youth with higher aptitudes, excellent health, and no criminal records. Second, military duty requires the subordination of personal freedom to regimentation, military personnel are constantly on call, and military duty entails heightened risk of illness, injury, and death. Both the selectivity and the rigors of military service call for above-average pay, and pay at around the 70th percentile or above has historically been necessary to enable the military to recruit and retain the quantity and quality of personnel it requires. But RMC is nearer the 50th percentile of civilian pay for those with some college, and thus military compensation—and a military career—is relatively less attractive for this group. Therefore, as more and more high school graduates choose to enroll in college, the military compensation structure seems increasingly out of tune with the youth population it prefers to enlist. Moreover, given the rising levels of education within the military, the civilian opportunities of enlisted personnel must increasingly be judged against the career and earnings paths of those with some college, not just those with a high school education.

The military/civilian pay comparisons for FY 00, along with the rising importance of higher education both outside and within the military, suggest that the military compensation needs realignment. However, the situation is more complex. The FY 00 comparisons, made at a point in time, do not reveal how the value of a military career has been changing relative to that of civilian careers over time. Although one might expect that the value of a military career has been declining relative to that of a civilian career for individuals with some college, that is in fact not the case. We compared earning streams over a military career with civilian earnings streams for different education levels and occupation groups. Again, military pay was measured in terms of basic pay, housing allowance, subsistence allowance, and the tax advantage of the allowances. Civilian pay consisted of wage and salary income, including overtime pay.

The present value of civilian career earnings of high school graduates who enter the production/craft occupational area—the most common occupational area for male high school graduates—has been declining. The present value was slightly lower for the 1998 cohort than for the 1983 cohort, and it is projected to be still lower for the 2006 cohort. The present value of a production/craft career for a male with some college has been roughly constant over time and is higher than the present value for male high school graduates. The present value of a professional/technical career for a male with some college is still higher and has been rising over time. The relative decline in the value of high school careers is consistent with the rise in college enrollment. Nevertheless, the value of an enlisted career is higher and has risen faster than the value of the production/craft and professional/technical careers for persons with some college. By this measure, then, the military has been gaining ground. Yet, the military is finding it hard to maintain recruit quality and to retain personnel in many technical skill areas.

This leads to several hypotheses regarding the military's apparent loss of competitiveness:

*Stepping-stone hypothesis:* Obtaining some college is a stepping stone toward four or more years of college. Earnings have grown more rapidly for those with four or more years of college than for those with less college, and persons considering a two-year college may factor this into their decision to enroll. In addition, enrolled students who initially had no intention of getting more than a year or two of college may revise their education goals as they see what four-year graduates can earn. As evidence of this hypothesis, the percentage of persons working toward a four-year degree after completing a year or two of college has been rising.

*Value of civilian experience hypothesis:* In an era of relatively fast technical change in certain occupations, such as those using information technology, the value of on-the-job experience may have risen relative to the value of military skills and experience. Civilian job experience may increasingly be seen by youth as a gateway to higher-quality career opportunities, although not necessarily to higher-paying jobs. By this hypothesis, the military may need to review, and perhaps restructure, its career paths to make them comparable to civilian opportunities. If career restructuring is infeasible or detracts from military readiness, then higher military compensation may be needed.

*Cyclical factors hypothesis:* The economic boom of the 1990s may have caused today's recruiting and retention difficulties as civilian pay rose relative to military pay and unemployment hit a 30-year low. The decline in military pay relative to civilian pay, the decrease in the unemployment

rate, and the increase in college enrollment actually can account for most of the decline in recruit quality between 1992 and 1999.

Will the FY 00 pay legislation improve recruiting and retention and thereby address questions of military pay inadequacy? The FY 00 pay legislation mandated increases in basic pay half a percentage point higher than the growth in the Employment Cost Index for years 2000 to 2006. It also mandated modest structural changes in the enlisted and officer basic pay tables that took effect July 1, 2000. In addition, it increased authorizations for bonuses, created (but did not fund) a thrift savings program, and redressed an inequity in the retirement benefit structure affecting personnel entering service since August 1986.

The FY 00 pay legislation was a major step forward in restoring military pay to competitive levels. However, because it is being implemented over six years, its effects will take time to materialize. Depending on the scenario chosen, the ECI + 0.5 percent pay increases can be expected to improve recruit quality to the levels prevailing in the early 1990s by the time they are fully implemented in 2006. But in the intervening years, recruit quality may be at the levels seen in recent years. If so, the string of comparatively low-quality cohorts will be extended and could result in a force with less capability than would be the case if recruiting improvements were achieved sooner.

Improvements in retention are also expected. In the absence of the FY 00 pay legislation, the Air Force and Navy would experience marked declines in continuation rates among members in their mid-careers, necessitating an increase in accession requirements. As the FY 00 pay actions are phased in over the next five years, they should improve overall retention in all services and offset the declines experienced since the early 1990s. However, shortages may persist in critical occupation areas.

The FY 00 legislation raised pay and addressed technical anomalies within the pay table. But it did not address the structural changes in the civilian labor market opportunities available to the type of individuals the military will continue to seek to recruit and retain in its enlisted force, namely high-aptitude high school graduates who seek or who have a college education.

The long-term changes in the civilian labor market and their implications for military capability argue for an additional pay action for military personnel. But what type of pay adjustment is needed? The usual type of pay increase for military personnel is an across-the-board raise that gives the same percentage increase to everyone in uniform. However, research suggests a number of advantages to a different pay raise approach, one

that would target or graduate the pay raise to give larger raises to those in higher grades. First, a graduated pay raise would target resources to areas where the educational and skill content of the enlisted force is greatest and where relative pay growth has been lagging. Second, a graduated pay raise would be more cost effective because this is generally a less costly approach to achieving retention targets than are across-the-board pay raises. Third, a graduated pay raise would build on the FY 00 pay legislation, enhance the rewards of promotion to higher grades, and increase the incentives in the pay system to work hard and effectively. Finally, such a raise would move military compensation in a direction that increases its effectiveness as a force management tool. A recent Defense Science Board report recommended several fundamental changes in the military compensation system to improve its effectiveness. Among them was a recommendation to restructure the military pay system to emphasize pay for performance. A graduated pay raise would be consistent with that recommendation.

Although the research summarized in this briefing focuses on enlisted pay, it is important to recognize that improving the competitiveness of enlisted careers will also entail other policy changes, particularly in recruiting and personnel management. In addition to pay increases, the military must also consider how to compete for high-aptitude college-bound recruits through the use of new and innovative recruiting policies as well as through revamping past policies. The military also needs to consider how to develop and use personnel who are seeking or who have postsecondary education. Such changes in personnel management and recruiting, together with a pay action, will help position the services better vis-à-vis the civilian labor market and will improve their ability to meet their current and future personnel requirements.