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# The Cost of a Military Person-Year

A Method for Computing Savings  
from Force Reductions

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Carl J. Dahlman

Prepared for the Office of the Secretary of Defense

Approved for public release; distribution unlimited



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## Summary

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While it has long been established policy in DoD that military personnel should only be used for military-essential purposes, it has proven difficult to define a concrete boundary that delineates functions that can be performed by civilians in support of military organizations or activities from those that must be performed by military personnel. Often, a discussion of the potential conversion of a particular position or function will turn on the relative cost of a civilian versus a military billet. The presumption has long been that employing a civilian to fill a given position costs less than billeting a military person with similar capability.

This work documents our findings regarding estimating the economic cost of a military person-year and should help to inform the discussion of the relative cost of military and civilian personnel. It presents a new method for estimating the cost of a military person-year and reports the specific findings that emerge when this method is applied to officers and enlisted personnel by year of service (YOS).

Defining the cost of a military person-year for use in comparing with the cost of a civilian may seem like an easy task. However, in practice, a series of choices and computations have to be made that affect the final measures substantially. The cost of a civilian person-year is much simpler to define than that of a military one. The reasons for this can be traced to four basic differences between the two: (1) military compensation is quite complex, combining basic pay with cash and noncash allowances that are often hard to measure properly; (2) compared to civilian pay, military compensation is heavily weighted toward

postretirement benefits; (3) military careers are managed through a series of interrelated, sequential assignments, which are generally much shorter than civilian assignments; and (4) military personnel are subject to different work rules (e.g., 24/7 duty hours for the military).

Our research pursued one analytical issue: the cost allocation for accrual for benefits received after retirement. Under the current DoD system, the defense budget does not pay for retirement compensation or for the legislated medical benefits that accrue to Medicare eligibles under the TRICARE For Life (TFL) program. Benefits for qualified retirees are paid out of two trust funds held in the Department of the Treasury and are not considered costs of current military personnel. Instead, DoD pays an annual accrual charge into the trust funds. These accrual charges are carefully calculated actuarial payments that represent the best estimates of the present value of the future costs of current military personnel. Annual accrual charges are deposited in the trust funds, where they will grow, in an accounting sense, to pay the benefits claimed in future years by current military personnel after their retirement.

Under the current system of funding retirement benefits, DoD assesses a flat percentage to the basic monthly paycheck of all military personnel of 31.4 percent, which for fiscal year (FY) 2004 amounted to about \$10,500 on the mean basic pay of \$33,500. TFL accrual is accomplished on a per capita basis, as the benefits depend only on health status, not on pay. For FY 2004, the DoD accrual assessment for TFL was \$5,400 for each member of the military, and it grows at over 6 percent per year, according to officially projected medical inflation rates.

The problem with using the results of this approach when estimating the cost of a person-year is that this method does not take into account either systematic differences in retirement probabilities across the force or the rules for vesting in postretirement benefits. In fact, only a very small proportion (about 15 percent) of an entering cohort of enlisted personnel will ever reach retirement; for officers, the corresponding number is 48 percent. Yet, the current methods of estimating the cost of a person-year essentially treat a first-year enlisted person as having the same probability of reaching retirement eligibility

after 20 years of service as someone who has just completed YOS 19. The latter will reach retirement with a likelihood of almost 100 percent, compared to 15 percent for the former, yet the costs are assessed similarly. Likewise, the current DoD cost-allocation system assigns the same costs to a person who has already served 20 years, and therefore does not recognize or account for the fact that such a person is already vested with full benefits.

The method developed over the course of this study, on the other hand, allocates the costs of postretirement benefits in proportion to the likelihood of military personnel reaching vesting. Compared to past methods, our method yields three very significant differences. First, the annual cost of young cohorts (those not yet in the career force) is much lower than official estimates. Second, the cost of personnel with between 10 and 20 YOS (i.e., the cohorts that have a very high likelihood of reaching retirement) increases significantly over official estimates, as our method requires allocating the greatest share of accruing for postretirement benefits to these year-groups. Third, the costs of personnel who have already vested (at YOS 20) become much lower than in official estimates, because the only extra cost our system assigns to them results from relatively small increases in pay due to age and seniority beyond the vesting point. Under the standard method, these people are treated as not having vested at all in the system: clearly a serious error in cost assignment.

The implications for civilianization and force management decisions may be dramatic. First, past civilianization efforts have focused primarily on junior billets. However, if cost is a major factor in civilianization policies, our analysis suggests that the services should focus on civilianizing positions in the career force. In particular, this would entail focusing on positions in grades O-3 to O-5 for officers, and grades E-5 through E-7 for enlisted personnel (see the appendix for titles by grade and service). Second, since the cost of retaining senior personnel is, in reality, much less than officially imputed, the military services should consider whether it is possible to retain more personnel beyond YOS 20. Their annual pay and allowances may be higher, but they cost very little in terms of postretirement benefits; they have already earned most every benefit they would ever be entitled to.

Converting a position from military to civilian has implications for the personnel system. Military careers typically follow fairly precise paths, with the range of choices for each consecutive assignment becoming increasingly narrow as a person moves through the system. Thus, eliminating a military position may cause an emerging hurdle for career management. If a position on the institutional side typically held by an officer or noncommissioned officer (NCO) between two assignments to operational units is eliminated, then not only are there no savings but another billet must be found in which to put that officer or NCO. If the billet were to be a terminal billet, it may be possible to arrange a buyout for someone with less than 20 YOS by using the prior accrued contributions to the retirement system. However, this would do little to ameliorate the career management problem, because that billet should have been available for another personnel assignment at the next rotation cycle. Obviously, real savings occur only if the personnel system can adapt without creating substitute positions after a billet has been eliminated, and that may require long-term changes to current career management practices.

Considerations such as these may lead one to the hypothesis that past civilianizations probably have tended to focus excessively on either junior grades or positions typically filled by personnel already vested in the retirement system. Obviously, conversions of positions with few or no career personnel require less adjustment on the part of the personnel system having to adjust; they also cause less resentment among personnel who were planning on staying 20 years. Unfortunately, information on past conversions by grade is not available, so this hypothesis cannot be tested on actual data.

However, the cost analysis methodology we present here requires the military services not only to decide where to focus their civilianization efforts but also to apply the same principles to developing clear and implementable practices for force management. In the end, the cost of a military billet should play a very small role in any decision to civilianize a military position; these decisions should take place within the larger context of a broad human resources strategy. The issues are what the proper experience mix of the force is and what the cost of seniority ought to be. Under the current system, DoD loses over 40

percent of its senior NCOs and around 25 percent of its officers at YOS 20. Since these high exit rates are driven entirely by the compensation system's vesting requirements (providing 100 percent vesting after 20 YOS and no vesting before that time), it is clear that the experience mix is in no way determined by deliberate force shaping. Rather, the military services have learned to adapt to this rather unique retirement benefits system, which in addition to its vesting provisions has become ever more generous since its inception prior to World War II in the Navy and its adoption by the other services after the war.

The analysis presented here has major implications for force shaping and career management that go far beyond the context of civilianization efforts, whether focused on positions, organizations, or functions. Finally, we should note that the costs included in this work are somewhat incomplete. We have not included health care costs for retirees less than 65 years of age, due to lack of data. Also, although veterans' benefits should, in principle, be included in a complete accrual system, there is no legal provision for doing so; therefore, no methodology has been developed for making the relevant cost estimates.