
Preface

Military compensation is delivered through a complex system of over 40 different pays and allowances and many supplemental benefits. Since World War II, at least 12 major study groups have evaluated the military compensation system. Often they had divergent views on whether or how it should be changed.

We made this study to identify the key issues which are frequently debated and to summarize differing viewpoints expressed for and against particular issues.

The document is extensively footnoted and contains a comprehensive bibliography which should prove particularly useful to those wishing to continue their research of compensation issues, as well as to others responsible for administering and evaluating the military compensation system.

We organized our study into five chapters. Chapter 1 describes the contrasting views (the institutional versus the marketplace approach) for setting military compensation. Chapter 2 discusses the need for a framework (of principles and standards) for guiding the military compensation setting process. Chapter 3 presents issues involving the structure of the compensation system; that is, those factors used to make distinctions in compensation among military personnel (such as occupation and dependents). Chapter 4 deals with issues (such as the X-factor and retirement) in the composition of the total compensation package. Chapter 5 discusses issues in administering the system, particularly adjusting military compensation.

Should you have any questions or need additional information, please contact Mr. Carl Aubrey, who prepared this study (913-236-3729), Dr. John Harper, who is the Group Director for Military Compensation Studies (202-275-3990), or Mr. Martin M Ferber, who is Associate Director for Manpower, Reserve Affairs and Logistics (202-275-5140).



Frank C. Conahan
Director,
National Security and
International Affairs Division

Contents

Chapter 1		6
Contrasting Views on Approaches to Military Compensation	Institutional Character of Military Service	7
	Military Compensation System	9
	The Institutional Versus the Market Approach to Military Compensation	13
	Objective, Scope, and Methodology	18
<hr/>		
Chapter 2		20
Framework for Setting Military Compensation	Importance of Pay Principles	20
	Development of Principles	25
	Standards for Implementing and Measuring Whether Principles Are Being Met	34
<hr/>		
Chapter 3		40
The Structure of the Military Compensation Package	Pay Differentials by Grade or Occupation	40
	Compensation Differences Between Married and Single Personnel	45
	Basic Pay Differentials Based on Time in Grade or Time in Service	49
<hr/>		
Chapter 4		52
Composition of the Compensation Package	Focus on Total Military Compensation	52
	Pay for the X-Factor	53
	Educational Benefits As a Part of the Compensation Package	56
	Housing and Food Allowances As Taxable Income	61
	Salary System	64
	Retirement	66
<hr/>		
Chapter 5		76
Administration of the Military Compensation System	Permanent Independent Compensation Board	76
	Annually Updating Military Pay	78

Appendixes	Appendix I: Literature Search	84
	Appendix II: List of Major Studies of Military Compensation	85
	Appendix III: Bibliography	86

Tables	Table 1.1: Estimated Cost of Military Personnel for Fiscal Year 1985	10
	Table 4.1: Comparison of the Current Military Retirement System Benefits With Proposals of the Fifth QRMC and the Grace Commission	72
	Table 4.2: Comparison of the Impact of the Fifth QRMC and Grace Commission Proposals on Retirement Costs and Force Management	73

Figures	Figure 2.1: Annual Compensation Required to Attract the Quality and Quantity of People Needed for Different Jobs	30
----------------	--	----

Abbreviations

ARPA	Advanced Research Projects Agency
AVF	All Volunteer Force
BAS	Basic Allowance for Subsistence
CBO	Congressional Budget Office
CNA	Center for Naval Analyses
CNR	Center for Naval Research
COLA	Cost of Living Adjustment
DIALOG	Lockheed Corporation Information Bank
DMC	Defense Manpower Commission
DOD	Department of Defense
ECI	Employment Cost Index
FPCD	Federal Personnel and Compensation Division
GAO	General Accounting Office
GGD	General Government Division
GPO	Government Printing Office
GRC	General Research Corporation
MRA&L	Manpower, Reserve Affairs and Logistics
NSIAD	National Security and International Affairs Division
OCG	Office of the Comptroller General
PEMD	Program Evaluation and Methodology Division
PLRD	Procurement, Logistics and Readiness Division
QRMC	Quadrennial Review of Military Compensation
RCS	Report Control Symbol, Department of Defense Data Manual (A)
RMC	Regular Military Compensation

Contrasting Views on Approaches to Military Compensation

The purpose of the military compensation system is to attract, retain, and motivate the number and quality of personnel needed to maintain the desired level of national security. Accomplishment of this objective is a challenging task due to the heterogeneity of the military force and the differences between military service and civilian employment. In fiscal year 1985, the government spent over \$82 billion for pay and benefits of about 2.1 million military personnel.

Currently, military compensation is premised primarily on institutional considerations. That is, it is governed greatly by traditional military-oriented social and cultural values. There is another school of thought which would premise it more on market considerations and less on traditional military-oriented values. Depending upon the extent to which viewpoint predominates in the compensation decision-making process, significant differences could occur not only in the military pay structure but also in overall compensation levels. As the Congress and the Administration strive to cope with extraordinary budget deficits, the differences between these two viewpoints are becoming increasingly important.

The technology applied today to weaponry and tactics requires that the military services recruit and retain high quality personnel. To assure that these requirements are met, and to compete with pay increases in the private sector, military and civilian defense leaders have successfully advocated higher pay for military personnel. Given the continuing increases in private-sector pay in recent years, the question has not been whether military pay would increase. Rather, the debate has focused on how much it should increase, how such increase should be distributed, and whether changes could be made in the compensation system to make it more efficient¹ without degrading the military services' ability to satisfy their personnel requirements.

Over the past three and a half decades, at least 12 presidentially or congressionally commissioned study groups—beginning with the Hook Commission in 1948 and continuing through the Department of Defense's (DOD's) recently completed Fifth Quadrennial Review of Military Compensation (QRMC)—and several other groups have evaluated the military compensation system or included compensation as a major

¹"Efficiency" in this context means selecting that alternative which would maximize the effectiveness (that is, attracting, retaining, and motivating military personnel) when the cost of each alternative is equal or would minimize cost when the effectiveness of each alternative is equal.

part of their studies.² Many of these studies recommended major changes to the system, generally with the objective of making it more understandable and/or cost-effective, although experts disagreed about whether the major recommendations would have achieved these objectives. While the studies did result in some pay system modifications, which added to the system's flexibility, few fundamental or conceptual changes were made. Those experts concerned with military personnel and compensation issues both applauded and denounced the fact that fundamental "reform" did not occur.

Since DOD switched from conscription to an all-volunteer force in 1973, the armed forces have almost entirely depended upon conditions of the labor marketplace to meet its personnel needs. For the most part, those needs were met, notwithstanding the fact that the military's closed personnel system³ was not designed to respond to labor market changes. Whether this was accomplished as economically as possible is unknown. However, those that advocate redirecting military compensation policy to emphasize market considerations would argue that the same results could probably have been achieved at significantly less cost.

Institutional Character of Military Service

Understanding the nature of the service expected of military personnel is important for developing a compensation system that is a useful tool for efficiently meeting military personnel requirements. Therefore, our study begins with a brief discussion about the institutional nature of military service.

An institution is a well-established and structured pattern of behavior or relationships that is accepted as a fundamental part of the culture. Its purpose transcends individual self-interest in favor of a higher good. Members of an institution are often viewed as following a calling.⁴ Similarly, military leaders point out, individuals joining a military service take an oath of office to the nation and accept a "way of life" rather

²See app. II for a listing of major studies related to military compensation.

³A closed personnel system is one in which people come into the system at the entry level and are promoted as they gain experience. Few lateral entries at higher levels are allowed. The military frequently refers to this as a "grow-your-own" personnel system.

⁴Charles C. Moskos, Jr., Institution Versus Occupation: Contrasting Models of Military Organization (Washington, D.C.: Air Force Office of Scientific Research, Feb. 16, 1981), pp. 3-4; Martin Birkin and Irene Kyriakopoulos, Paying the Modern Military (Washington, D.C.: Brookings Institution, 1981), pp. 20-23.

than simply accepting a job. To encourage commitment, the military places a high value on the welfare of its members.⁵

Military service has many institutional aspects. The basic purpose of military forces—to engage in combat when called upon—requires that an individual respond immediately and without question to an order to put his/her life on the line. This principle of obedience permeates the entire military establishment, placing the individual wholly at the disposal of the organization.⁶

Unlike their civilian counterparts, military personnel are required to enter into a contract of unlimited liability with their employer. They cannot unilaterally terminate their employment at any time they choose during their period of service. They must place the needs of the military above the needs of their families. They are subject to being transferred and working in any environment where the military decides they are needed; this may entail prolonged family separation. They are often called upon to work more than a 40-hour week for which they receive no overtime pay. Their actions are regulated by the Uniform Code of Military Justice under which they can be prosecuted for crimes unique to the military, such as disobedience and absence without permission. And in time of war, they may face prolonged danger and may forfeit their lives.⁷ The “relatively complete one-way control over a ‘workforce,’ . . . to use it in any way that is judged to serve the national interest, is what makes this ‘workforce’ a military force.”⁸

⁵DOD, Fifth Quadrennial Review of Military Compensation: Executive Summary (Washington, D.C.: Jan. 1984), p. I-3; Letter, Chief of Naval Operations (Department of the Navy) to Chairman, Committee on Armed Services, U.S. Senate, concerning the importance of adequate military compensation, May 14, 1981, p. 1; Chief of Staff, U.S. Army—White Paper 1983: The Army Family (Washington, D.C.: Department of the Army, Aug. 15, 1983), pp. 1, 2, 12, and 13.

⁶Parker, Warden, et al. v. Levy, 417 U.S. 733 (1974); Binkin and Kyriakopoulos, Paying The Modern Military, p. 21.

⁷Fifth QMRC: Executive Summary, pp. I-4 to I-6; Defense Manpower Commission (DMC), Defense Manpower: The Keystone of National Security, Report to the President and the Congress (Washington, D.C.: Government Printing Office (GPO), Apr. 1976), p. 341; Department of the Air Force, “Chapter 7: Manpower, Personnel and Training,” Air Force 2000 Study (Washington, D.C.), p. 270; David R. Segal, “Convergence, Commitment, and Military Compensation,” paper prepared for presentation at the 70th Annual American Sociological Association Meeting at San Francisco, Ca. on Aug. 25-29, 1975, pp. 2-3.

⁸Association of The United States Army, Special Report: A Bill of Rights for Those Who Serve (Arlington, Va.: Oct. 1977), p. 3; Parker, Warden, et al. v. Levy; Fifth QMRC: Executive Summary, p. I-4.

In exchange for military personnel accepting this unlimited liability contract, military leaders believe that they have a moral and ethical responsibility to care adequately for them and their families.⁹ This paternalistic view is demonstrated in the compensation system that has evolved over the years; it compensates people partly on the basis of need rather than exclusively on the jobs they perform.

Military Compensation System

The military compensation system is complex. It consists of more than 40 different pays and allowances and many supplemental benefits. All military personnel receive basic pay. Many receive additional pay, depending on their occupation or duty situation. Necessities such as housing, food, uniforms, and medical care are provided either directly or in the form of allowances. Some compensation elements are taxable, some are not; some are based on pay grade and time in service; some are based on whether the individual has dependents; and some—such as the tax advantage—are imputed. In addition, on-base consumer facilities for food, clothing, and other items are subsidized. And a large portion of military compensation is deferred; that is, retirement benefits are accrued and paid to persons leaving military service after completing 20 or more years of service.

The total compensation package is generally categorized into three components: (1) regular military compensation, (2) special and incentive pay, and (3) supplemental benefits and allowances. The major elements of the military compensation system and the estimated cost of each are shown in table 1.1.

⁹Chief of Staff, U.S. Army—White Paper 1983, pp. 1, 2, 12 and 13.

**Chapter 1
Contrasting Views on Approaches to
Military Compensation**

Table 1.1: Estimated Cost of Military Personnel for Fiscal Year 1985

Dollars in Millions		
Element	Amount	Percent
Regular military compensation	\$43,312.3	52.8
Basic pay	\$30,039.4	36.6
Housing, cash and in-kind (note a)	7,360.5	9.0
Subsistence, cash and in-kind	3,416.4	4.2
Tax advantage (note b)	2,496.0	3.0
Special and incentive pays	1,728.7	2.1
Benefits	36,988.7	45.1
Retirement (note c)	15,230.1	18.6
Other benefits (note d)	21,758.6	26.5
Total	\$82,029.7	100.0

^aIncludes basic allowance for quarters and variable housing allowance. Also includes maintenance but not construction costs for government provided housing. The fair market rental value of government-provided housing would be a more accurate representation of this compensation and would very likely increase it substantially, but such data are unavailable.

^bThe "tax advantage" is shown in the federal budget as a "tax expenditure," but it is not included in the Defense budget, or in the federal budget as an outlay.

^cAccrual costs for funding the retirement of military personnel currently on active duty.

^dIncludes medical care, employer's Social Security contribution, commissaries and exchanges, survivor's benefits, terminal leave payments, unemployment compensation, separation pay, overseas cost of living allowances, family separation allowances, clothing maintenance allowances, and death gratuities. Although it includes payments by Veterans Administration for veterans' compensation, and educational benefits, it does not include payments for home loan assistance, mortgage insurance, and burial.

Regular Military Compensation

In making comparisons between military pay and civilian salaries, analysts frequently use regular military compensation as the military equivalent to a civilian salary. Before December 1980, it was defined (37 U.S.C. 101 (25)) as consisting of the following elements:

- Basic pay, received in taxable cash. (This is the only cash pay received each month by all members. It is based on pay grade and time in service.)
- A nontaxable cash allowance for quarters when government housing is not provided. (The amount is based on pay grade and dependent status.)
- A nontaxable cash allowance for subsistence when meals are not provided. (The amount differs depending upon whether the individual is an officer or an enlisted person.)

- The tax advantage. (This is the amount of additional cash income military personnel would need to maintain their current take-home pay if the nontaxable allowances were subject to federal income taxes.)

In December 1980, the definition of regular military compensation was changed (Public Law 96-579, sec. 11) to include two variable amounts of compensation—the variable housing allowance and overseas station housing allowance—both of which depend on the location of the member's duty assignment. For purposes of evaluating military pay levels, some analysts use the pre-December 1980 elements renaming these elements "basic military compensation."

Special and Incentive Pays

Some military people receive one or more kinds of special and incentive pay because of their particular work situations or occupations. This additional pay is intended to

- attract and retain people in occupations that are in high demand in the civilian sector,
- compensate for duties that are dangerous (such as parachute duty), and
- compensate for duties that are uncomfortable or unattractive (such as sea duty).

Individuals receive no more than two incentive pays at any one time. But no such restriction applies to special pay; if an individual meets the requirements, he/she receives it (37 U.S.C. 301-315).

Special and incentive pay, which includes items such as enlistment and reenlistment bonuses, sea pay, flying duty pay, and continuation pay for medical personnel and nuclear officers, are extremely important in staffing the Armed Forces.¹⁰ One study showed, for example, that in fiscal year 1982 about 61 percent of Navy personnel and 18 percent of Air Force personnel received one or more kinds of special and incentive pay and that generally it went to career personnel rather than to first-term personnel.¹¹ Pay such as this provides military managers with some flexibility in setting monetary incentive levels to meet marketplace

¹⁰For a more complete description of the job duties which qualify members for special and incentive pays, see DOD, Military Compensation Background Papers: Compensation Elements and Related Manpower Cost Items, Their Purposes and Legislative Backgrounds, 2nd ed. (Washington, D.C.: GPO, July 1982), pp. 85-201.

¹¹General Accounting Office (GAO), Military and Federal Civilian Disposable Income Comparisons and Extra Pays Received by Military Personnel, GAO/NSIAD-84-41 (Washington, D.C.: May 9, 1984), p. 24.

demands; however, in total, they represent only about 2.0 percent of the military compensation package.

Supplemental Benefits

In addition to basic pay, allowances, and special and incentive pay, about 36 percent of the total compensation package is in the form of other entitled benefits. For example:

- Military retirement benefits are available to members who served on active duty for 20 years. Retirees with 20 years of service are entitled to annuities equal to 50 percent of their terminal basic pay.¹² (This represents about 35 percent of regular military compensation.) Annuities increase to 75 percent of basic pay (about 53 percent of regular military compensation) after 30 years of service.
- Military personnel are covered under the Social Security system and such benefits are added in full to military retirement annuities.
- If a member dies on active duty or from a service-connected disability following service, survivors are entitled to dependency and indemnity compensation and to Social Security benefits. We did not identify the cost of these benefits.
- By shopping at commissaries (military supermarkets), active duty and retired service members can save about 25 percent over prevailing prices in local grocery stores, according to DOD estimates. Service members are also entitled to use exchanges (military department stores) where, according to DOD, prices average about 23 percent below commercial retail prices.
- Personnel on active duty receive unlimited free health care, including dental and optometry services; subject to some limitations, their dependents may also receive free care in military facilities. When military facilities are not available, dependents may use civilian medical facilities under the Civilian Health and Medical Program of the Uniformed Services, a health-insurance-type program for which military members pay no insurance premiums. We did not identify the cost of these benefits.

Processes for Updating Military Compensation

Three elements of regular military compensation are updated annually: basic pay, quarters, and subsistence. In 1967, Public Law 90-207 (commonly known as “the Rivers Amendment”) was enacted that linked military pay increases to those granted to federal civilian, white-collar

¹²For personnel entering military service after Sept. 7, 1980, retirement pay will be based on the average of the high three years’ basic pay (Public Law 96-342, Stat. 1100, Sept. 8, 1980).

employees. This amendment did not establish comparability between military and federal civilian or private-sector levels of work. But it did assure that whenever federal civilian, white-collar pay increases, military pay would increase by an identical percentage.

This linkage was intended to serve as a temporary mechanism until military pay standards could be established and a pay adjustment mechanism more applicable to the military could be developed. Although military pay raises were disconnected on an ad hoc basis from the civilian increases in at least 4 of the past 6 years so the military would receive a larger pay increase, military pay standards have not been developed and the linking procedure established by the 1967 Rivers' Amendment, with several modifications, remains in effect. (The current pay adjustment process is discussed more fully on p. 78.)

Other compensation elements that are a stipulated percentage of basic pay—such as retirement—increase in dollar amount as a result of the annual pay adjustments. However, compensation elements that are stipulated amounts—such as sea pay—are adjusted on an ad hoc basis.

Payments to retired service members are increased to keep up with changes in the cost of living. Although modified several times since 1963 when the principle of adjusting retired pay on the basis of the Consumer Price Index was established, the current procedure calls for a once-a-year adjustment.

In addition, Public Law 89-132, August 21, 1965, required the President to direct a complete review of the principles and concepts of the military compensation system (not later than January 1, 1967, and not less than once every 4 years thereafter) and to report to the Congress any proposed changes. These reviews are each referred to as the QRMC.

The Institutional Versus the Market Approach to Military Compensation

Two competing schools of thought were apparent in the research literature on how military compensation levels should be determined and structured: the institutional view which many military leaders and military sociologists advocate, and the occupational or market view which some economists and others advocate. These differing views often underlie debate over proposed changes to the military compensation system rather than the specific change itself. Therefore, an understanding of these schools of thought is important to understanding the arguments for and against the various system changes that have been put forward over the years.

The summaries of the institutional and market approaches presented below represent the “pure” form. The contrasts between the two can be overdrawn because both have influenced the design of the current military compensation system. Nonetheless, the pure form of these approaches provides a framework within which analysts compare and argue their position and proposals.¹³

The Institutional Approach

Consistent with their view that members of an institution are motivated primarily by a sense of identity with an organization, those that hold the institutional view believe that the military compensation system should be a key tool for enhancing the relationship between the military institution and its personnel. Individuals of the same grade and seniority are viewed as equally important to the military mission regardless of the occupational specialty to which they are assigned. Because each military member’s primary duty is to be ready to defend the country with arms, all military jobs are considered equally important. To develop the cohesion, unity of purpose, and reciprocal loyalty among military people essential for an effective fighting force, differences in occupational knowledge and skills are subordinated to this common principal expectation. Therefore, proponents of the institutional view conceptually oppose differences in compensation among various military occupations.¹⁴

Although some differential pays, such as bonuses and other incentive pay, have been accepted in practice as necessary to staff the force, institutional proponents believe that such differences should be minimized. Generally, they favor keeping intact those parts of the pay system that they believe reinforce the unique relationship that exists between the military services and their members, such as the current basic pay and allowances system that includes some elements based on need. They oppose changes (such as a salary system) that they believe may tend to weaken this relationship.¹⁵

¹³Moskos, *Institution Versus Occupation*, p. 1.

¹⁴*Fifth QMRC: Executive Summary*, pp. I-6 to II-3; *Air Force 2000 Study*, p. 274; DOD letter, Secretary of Defense to Comptroller General of the United States, Oct. 26, 1982, Enclosure, p. 9; Letter, Chief of Naval Operations, pp. 1-3; Binkin and Kyriakopoulos, *Paying the Modern Military*, pp. 22, 23, 43 and 50; Charles C. Moskos, Jr., “Compensation and the Military Institution,” *Air Force Magazine*, Vol. 61, Apr. 1978, pp. 31-35.

¹⁵This position is explained in the *Report of the President's Commission on Military Compensation* (Washington, D.C.: GPO, Apr. 1978), pp. 108-109. See also Moskos, “Compensation and the Military Institution,” pp. 31-35.

The Market Approach

Although not disagreeing that the military has many institutional features, those advocating the market approach contend that the current compensation system, which emphasizes support for the traditional hierarchical structure, is inefficient. Their view is that the policies to affect accessions and retention should be evaluated in terms of supply and demand. Personnel and compensation policies are viewed as mechanisms for obtaining the desired force structure at least cost.

In contrast to the institutional view, the market approach advocates pay distinctions on the basis of occupation. While acknowledging that patriotic motives may be the primary reason some people enter military service, market approach advocates argue that, during peacetime, an individual is more likely to base decisions to join or remain in a military service on the level of his/her military compensation relative to that available in alternative civilian employment. Paying some occupations more than the market dictates just to preserve the traditional relative wage structure of the military needlessly increases the total cost of military compensation. Therefore, to minimize total personnel costs, they contend that competitive pay levels should be set and adjusted by occupation based on supply and demand conditions in the job market.¹⁶

One author explains that several characteristics distinguish the market approach:¹⁷

- The first is a concern for efficiency: The overriding goal is to determine what mix of compensation, personnel, and requirements-determination policies (including non-pecuniary enhancements) will result in the desired force at the least cost.

¹⁶For a more thorough discussion of these concepts, see Richard V.L. Cooper, Military Manpower and the All-Volunteer Force, R-1450-ARPA (Santa Monica, Ca.: Rand Corporation, Sept. 1977); Binkin and Kyriakopoulos, Paying the Modern Military; John T. Warner, Issues in Navy Manpower Research and Policy: An Economist's Perspective, Professional Paper 322 (Alexandria Va.: Center for Naval Analyses, Dec. 1981). These market concepts also formed the foundation for the compensation reform proposals by DMC in its report Defense Manpower and in the Report of the President's Commission on Military Compensation. The President's Commission on an All-Volunteer Armed Force also recognized the need to deal with conditions of the marketplace in setting pay levels and in designing the military compensation system; see The Report of the President's Commission on an All-Volunteer Armed Force, commonly referred to as "the Gates Commission Report" (Washington, D.C.: Feb. 1970).

¹⁷John T. Warner, "Issues in Evaluating Military Compensation Alternatives," Defense Management Journal, Fourth Quarter, 1983, pp. 23-24. Although Warner identified four characteristics, we present the three that particularly distinguish the market approach from the institutional approach. For additional discussion and critique, see Paul Hogan, "Military Compensation: Competing Views," unpublished paper, n.d. pp. 2-3; Moskos, Institution Versus Occupation, p. 24.

- The second recognizes that people have different preferences for goods and services: This diversity of preferences suggests that the compensation system should rely primarily on cash incentives. This is because a dollar spent in providing an in-kind benefit to a person who values that benefit at less than it costs the military is not as cost-effective in increasing the attractiveness of military service as is an equivalent amount spent on cash incentives.
- The third is acceptance of the view that people prefer current dollars to deferred dollars: People have a positive discount rate.¹⁸ Some research shows that this preference for current dollars is greatest among young people, the population segment that particularly concerns the military. This is an important consideration in evaluating whether bonuses are a more cost-effective, force-management tool when dealing with military personnel in their early years of service than are deferred educational assistance programs and retirement benefits.

GAO has generally taken positions consistent with the market approach in statements before congressional committees.¹⁹

Perspective

Advocates of the market viewpoint argue that it is based on long-established and recognized laws of supply and demand, and that an adequate analytical framework exists for proving the merits of their arguments. They contend that institutionalists have not adequately defined their viewpoint or developed an adequate analytical framework for proving their arguments.²⁰

On the other hand, institutionalists contend that the market approach has not been proven. Unlike advocates of the market approach, institutionalists argue that key qualities which may not be measurable—such as unit cohesion and goal commitment—must be considered in changing

¹⁸Harry Gilman, Determinants of Implicit Discount Rates: An Empirical Examination of the Pattern of Voluntary Pension Contributions of Employees in Four Firms (Alexandria, Va.: Center for Naval Analyses, 1976); Steven Cylke et al., The Personal Discount Rates: Evidence from Military Career Decisions (Washington, D.C.: Department of the Navy (OP-162), 1982); Matthew Black, Personal Discount Rates: Estimates for the Military Population (Arlington, Va.: Systems Research and Applications Corporation, 1983).

¹⁹GAO statements before congressional committees are listed with its publications in the bibliography at app. III.

²⁰See, for example, Hogan, "Military Compensation," pp. 1-6. Moskos disagrees with the implication that the debate is one between subjective researchers and objective analysts. As he sees it, the issue is which of two contrasting paradigms of military service does one adopt—social organization or systems analysis. See Institution Versus Occupation, pp. 1 and 24.

the military compensation system.²¹ They emphasize that the military compensation system must work effectively both in war and peace. They point out that the market approach has not been tested in the military under either condition and, of the two, they are most concerned about its efficacy under war conditions. But, they say, the current compensation system has been tested under both conditions and was proven to be effective.²²

In reality, a continuum of options extends from compensation policies based exclusively on the institutional approach at one extreme to policies based exclusively on the market approach on the other extreme. Neither the current military compensation system nor most alternatives proposed by various reform advocates are pure examples of either of these polar approaches. In practice, each approach accommodates certain realities either stated or implied in the other's point of view. For example, institutionalists must offer a competitive compensation package or they will not attract and retain the quantity and quality of personnel needed.²³ Similarly, the market approach must be tempered by considerations that impact on productivity and costs over the long-term because the unbending application of the laws of supply and demand may work against developing a stable employment relationship needed to attract, retain, and motivate military people.²⁴

Current military compensation policies have been largely influenced by those holding the institutional view. But, over the years, policy changes have reflected the influence of the market approach. In addition, while most reform proposals encourage further movement towards developing the military compensation package on a basis more consistent with the market approach, such proposals do not necessarily represent advocacy of a pure market approach. Accordingly, in this study, unless otherwise stated, reference to "the institutional view" or "the market view" means

²¹Moskos, Institution Versus Occupation, pp. 24.

²²Peter K. Ogloblin, "The Need for a Theory of Military Compensation," Proceedings of the Annual Conference of the Military Testing Association (23rd), Vol. 2, AD-A130 703, held at Arlington, Va. on Oct. 25-30, 1981, pp. 1479-86.

²³Moskos, Institution Versus Occupation, pp. 1, 4, and 5.

²⁴DMC, Defense Manpower, p. 287; Gary S. Becker, Human Capital: A Theoretical and Empirical Analysis, With Special Reference to Education, 2d ed. (New York: National Bureau of Economic Research, 1975), pp. 29-35; Edward P. Lazear, "Agency, Earning Profiles, Productivity, and Hours Restrictions," The American Economic Review, Sept. 1981, pp. 606-620; Robert E. Sibson, The Executive's Guide to Wage and Salary Administration, 2d ed. (New York: American Management Associations Extension Institute, Education for Management, Inc., 1980), p. 9.

that the particular view tends toward the institutional or market end of the continuum.

Objective, Scope, and Methodology

The purpose of this study is to provide a reference to assist others new to military compensation evaluations to (1) become familiar with the area, (2) consider future proposals that may be put forward regarding the military compensation system, and (3) better understand the debate that arises from time to time regarding whether pay should be adjusted across the board or “targeted” to overcome personnel shortages in specific problem areas. In 1981, we identified and summarized the body of studies and opinions relating to issues in military compensation so that the data could be considered in preparing our program plan, in planning and performing our evaluations, and in preparing congressional testimony. Since our initial summary, we updated the data and are publishing it in this study to extend its utility to managers and evaluators who deal with compensation issues.

Our study was designed to review the literature (studies, books, articles, papers, and speeches) on military compensation, identify and explain the key issues, and to summarize the differing views. Our study was not intended to evaluate each issue and, consequently, it does not make recommendations; however, it does identify positions GAO has taken on many of these issues over the years.

To identify the body of literature on military compensation, we initially examined four different literature searches (see app. I) containing over 1,400 document titles. From these listings, we selected documents for initial review. Using the references and bibliographies in these documents, we selected and reviewed other documents that were relevant. In addition, we reviewed documents suggested by individuals in the military manpower research community. In total, we obtained about 400 documents relating to personnel requirements, personnel policies, and military or civilian compensation, and consulted over one half in preparing this study. A bibliographic listing of documents consulted in this study is in appendix III.

Although much commentary on military compensation appeared in the 1960s and early 1970s, most of our reference material has been published since the advent of the all-volunteer force in 1973. The sources we used included

- groups commissioned to make comprehensive studies of the military compensation system, such as the QRMCS, DMC, and the President's Commission on Military Compensation;
- private research organizations and "think-tanks," such as the Brookings Institution, the Rand Corporation, and the Center for Naval Analyses;
- government research organizations, such as the Naval Personnel Research and Development Center;
- congressional organizations, including the Congressional Budget Office (CBO) and the Congressional Research Service; and
- individual authors from within the military services and from academia.

Because our study deals with summarizing the body of opinion on military compensation issues, we did not evaluate the methodology used and analysis performed in support of the studies we consulted. Nor did we pass judgment on the probability of getting any of the proposals through the administrative, budgetary, and legislative processes.

Although we restricted our study to military compensation issues, it is important to emphasize that total military personnel costs are determined by the combination of compensation, personnel, and requirements determination policies in effect at any given time. Factors which affect personnel costs that are not specifically discussed in this study include (1) the validity of the services' requirements determination process, (2) the optimum first-term versus career-personnel mix and years-of-service force profile by occupation, (3) productivity levels relative to length of service, (4) the closed personnel system, (5) the use of women in the military, and (6) the potential impact of the dwindling recruit pool.

Framework for Setting Military Compensation

Neither DOD nor the Congress has established a framework of principles for setting military compensation. Further, none of the studies recommended a specific framework for guiding the total military compensation setting process.¹ However, it is reasonable to infer from several studies, when considered together, that a framework consisting of written principles and implementing standards is needed. Such a framework has the potential to provide the basis against which the consistency, cost-effectiveness, and understandability of decisions affecting military compensation can be tested. Presently, the basis needed to make such tests is absent and changes to military compensation may or may not possess these attributes.

Although not fully developed in the military literature, the collective commentaries suggest that determining the need for and establishing a framework is essentially a process of sequentially addressing three questions:

- Should specific principles be established, either in law or regulation, to guide policy decisions that affect military compensation levels, composition, and structure?
- If so, what specific principle or principles should be adopted and should they apply to all or only a portion of the compensation package?
- If principles are established, what standard or standards should be used to guide implementation and measure whether they are being met?

Importance of Pay Principles

While virtually every other aspect of military activity has explicit principles and doctrines that have been stated in field manuals, technical manuals, and various joint publications, military compensation lacks this intellectual foundation.² The importance of military compensation in achieving national security objectives is universally recognized. Yet, DOD and the Congress have worked to achieve the required force structure goals—sometimes successfully and sometimes not—without an overall framework of definitive principles which clearly present the

¹Although some might argue that DMC recommended such a framework, we concluded that it was more of an approach than a framework. (As used in this study, a framework includes more specific direction than an approach.) DMC recommended that an independent Federal Compensation Board be established to make recommendations to the President and the Congress on the entire range of military compensation related issues following the principles of efficiency, equity, and motivation. See *Defense Manpower: The Keystone of National Security*, Report to the President and the Congress (Washington, D.C.: GPO, Apr. 1976), pp. 286, 308, and 314.

²DOD, *Fifth Quadrennial Review of Military Compensation: Executive Summary* (Washington, D.C.: Jan. 1984), p. II-1.

government's policies and objectives for compensating military personnel. Some studies recommend that specific principles be adopted or that principles be developed.³ Authors of other military compensation studies implicitly recognize the need for principles because they identify those needed to guide their studies.⁴

A principle is a fundamental law, doctrine, or assumption. Within the context of military compensation, it is further defined as a value judgment that states what ought to be.⁵

A well-reasoned statement of principles that are followed by DOD, the Office of Management and Budget, and the Congress to govern changes in the military compensation system offers several potential benefits. They would:⁶

- broadly define the policy for compensating military personnel,
- provide the framework for the Congress and DOD management to evaluate and make changes in the compensation system,
- provide a reference point for judging the direction and consistency of adjustments made to the compensation system,
- bring greater stability to the system, and
- help military people better understand the rationale for particular changes which occur from time to time.

The importance of military compensation principles was emphasized by the President in his August 17, 1982, directive which established the Fifth QRMC. The directive stated that:

"A coherent and logical statement of the principles and concepts of military compensation in relation to national security objectives should be required from such a review."

³GAO, The Congress Should Act to Establish Military Compensation Principles, FPCD-79-11 (Washington, D.C.: May 9, 1979), p. i and v; Thomas H. Etzold, Defense or Delusion? America's Military in the 1980's (New York: Harper & Row, 1982), p. 81; Peter K. Ogloblin, "The Need for a Theory of Military Compensation," Proceedings of the Annual Conference of the Military Testing Association (23rd), Vol. 2, AD-A130 703, held at Arlington, Va. on Oct. 25-30, 1981, pp. 1482-84; Association of The United States Army, Special Report: A Bill of Rights for Those Who Serve (Arlington, Va.: Oct. 1977), p. 32; DMC, Defense Manpower, p. 286.

⁴For example, see Fifth QRMC: Executive Summary, pp. II-2 to II-6; DOD, Reserve Compensation System Study: Final Report (Washington, D.C.: June 30, 1978), pp. xiii and chap. II.

⁵Fifth QRMC: Executive Summary, p. II-1.

⁶GAO, The Congress Should Act, pp. i, 5, 6 and 30; Etzold, Defense or Delusion?, p. 81; Association of The United States Army, Special Report: A Bill of Rights, pp. ii, 31, and 32.

In commenting on the President's memorandum, one DOD observer stated that:

"By implication, . . . [the President] was telling the [Fifth QRMC] . . . that the lack of an explicit exposition of such principles and concepts was exposing the individual elements of military compensation to piecemeal budgetary attack without regard to the effect of such action on the structure as a whole. . . . the law itself requires [such review] . . . Thus, the President was saying that such principles and concepts should be stated explicitly before they can be reviewed. . . ."⁷

Although the Fifth QRMC developed a set of compensation principles for guiding its review, it did not recommend that the Congress adopt them by legislation or DOD by regulation.⁸ Lacking a foundation based on principles, one author explains that an organization

"and its individual managers are likely to be involved repeatedly in crisis over pay questions. Even when management's actions are correct in terms of the practicalities of the moment, these crises usually involve excessive costs and, over a period of time, result in confusion, inequities, and trouble."⁹

Congressional decision-makers also have expressed frustration about the lack of a "policy framework for guiding the [military compensation] debate and making well-reasoned judgments,"¹⁰ the "piecemeal approach" in dealing with military compensation issues,¹¹ and the "limited thought given by the DOD to the value of the total military compensation package."¹²

⁷DOD, "Principles of Military Compensation," unpublished paper prepared for the Fifth QRMC, Feb. 16, 1983, p. 1.

⁸The principles deal with the interrelationship of personnel requirements and compensation, efficiency, equity, effectiveness, flexibility, and motivation. See Fifth QRMC: Executive Summary, pp. II-2 to II-6.

⁹Used by permission. Robert E. Sibson, The Executive's Guide to Wage and Salary Administration, 2nd ed. (New York: American Management Associations Extension Institute, Education for Management, Inc. 1980), p. 3.

¹⁰Letter, Chairman, Subcommittee on Manpower and Personnel (then Senator Roger Jepsen), Senate Committee on Armed Services, to Comptroller General of the United States, Apr. 25, 1983.

¹¹Remarks by Senator Sam Nunn, then Chairman, Subcommittee on Manpower and Personnel, Senate Committee on Armed Services, as reported in the Army Times, Oct. 10, 1977.

¹²Department of Defense Appropriation Bill, 1985, S. Rep. 98-636, 98th Cong., 2nd Sess. (1984), p. 15.

The continual debate about military pay policy, and the uneven pattern compensation decisions have taken over the years—particularly since the adoption of the all-volunteer force policy—has made the job of manning the force more difficult and, according to some analysts, more expensive than necessary. The difficulties were apparent during the late 1970s when recruiting goals were not being met and large numbers of experienced career personnel were leaving the services.¹³ Military personnel reportedly lost trust and confidence in the compensation system because of the continuing stream of what appeared to be random but across-the-board attacks on their pay and benefits.¹⁴ At the same time, their pay increases often lagged behind those of private-sector employees.

The concern about military compensation issues is further heightened by the perennial public debate over the following kinds of questions surrounding the military compensation system:

- Should the annual adjustment to basic pay and allowances match average increases in private-sector wages and salaries? If so, what standard should be used to measure the proper adjustment level? Or, should the annual pay adjustment be capped at something less than average increases in private-sector pay—a situation that has occurred frequently since 1972?
- Should individuals in some military pay grades or in some military occupations receive a higher percentage increase than those in other ranks or occupations—so-called pay-targeting? Pay-targeting by grade occurred in fiscal year 1982 and targeting by occupation was proposed as a compensation reform by the President's Commission on Military Compensation.
- Should military personnel forgo a pay raise altogether, an idea the Administration proposed, but the Congress rejected, for fiscal year 1984?
- Should authority continue for paying enlistment and reenlistment bonuses; should bonuses be paid in a lump-sum or annual installments;

¹³A DOD report estimated that the out-year training and other costs to rebuild the personnel losses brought about by "the turbulence and uncertainty in the military pay settings process" during this period will exceed \$6 billion. See Military Pay Adjustment Mechanism Study, Joint Services Report (Washington, D.C.: Apr. 15, 1982), pp. ii to iv.

¹⁴Association of The United States Army, Special Report: A Bill of Rights, p. 5; Congressional Research Service, What's Happened to Military Pay and Benefits Through the Past Decade, 78-9F, prepared by Richard L. Eisenman, Paul Zinsmeister, and Robert L. Goldich (Washington, D.C.: Dec. 30, 1972); GAO, The Congress Should Act, p. 6, and Need to Better Inform Military Personnel of Compensation Changes, FPCD-78-27 (Washington, D.C.: July 12, 1978), p. i.

will there be enough money appropriated to fund the bonus programs? Those questions have been debated almost annually for the past 10 years.

- Should military commissaries be closed or “privatized,” an issue raised periodically since at least 1949, and a cost-reduction action most recently recommended by the President’s Private Sector Survey on Cost Control (commonly known as the Grace Commission)?
- Should the military retirement system be “reformed”—generally meaning benefits reduced—as has been recommended by a variety of prestigious study groups, congressmen, and administration officials over the past 15 or more years?

In 1979, GAO recommended that the Congress establish a permanent independent military compensation board to recommend to the Congress, among other things, which military pay principles should be established.¹⁵ The Association of The United States Army (a non-profit educational association made up primarily of current and past Army military personnel) also called for the establishment of principles “subscribed to by the civilian leadership and endorsed by the Congress.”¹⁶

At that time, DOD was “not persuaded” that written principles were needed. DOD, however, may not have thoroughly evaluated GAO’s recommendation for principles because it was tied to establishing a permanent independent compensation board—which DOD opposed—to establish and administer principles. In any event, DOD stated that it had long accepted a combination of comparability and competitiveness as the guiding principle in setting levels of compensation. DOD said that compensation problems have generally been related to the “failure to apply these principles in specific circumstances.” Therefore, it saw “no merit

¹⁵GAO, The Congress Should Act, p. 29.

¹⁶In supporting a statement of principles, the Association of The United States Army, following the DMC’s lead, concluded that a clear statement must be made of the rights of military personnel of the active forces with respect to their compensation, expenses, reimbursements, and especially the procedure to change them. See Special Report: A Bill of Rights, pp. 31-31, and Special Report—Military Compensation and Retirement: A Response to the Recommendations of the President’s Commission on Military Compensation (Arlington, Va.: May 1978), pp. 23-24; DMC, Defense Manpower, p. 434.

in . . . stating compensation principles in law”¹⁷ and “no reason to further define Defense’s military pay principles.”¹⁸ DOD also indicated its concern that principles may be too restrictive in setting pay levels and proposing changes.¹⁹

Development of Principles

If a decision is reached that a written statement of principles should govern the military compensation setting process, the next question is “What principles should be adopted?” Several concerns have been occasionally mentioned and briefly discussed in the literature as principles. For example, military compensation should

- provide an acceptable standard of living;
- allow for management flexibility;
- have a predictable adjustment mechanism;
- distinguish between levels of responsibility;
- be acceptable to military personnel;
- support and preserve the hierarchical military structure;
- be equitable;
- minimize pay differentials among people of equal rank and service time;
- be fully visible to service members and the public;
- recognize differing working conditions; and
- reward superior performance.

Two others have been discussed extensively. To illustrate some of the arguments that must be weighed in deciding between alternative principles, this study includes a summary of the debate over those two principles. These principles are “comparability” and “competitiveness” which are presented in the literature as alternative approaches to setting compensation levels.

The debate over the comparability and competitive principles generally tends to be an extension of the debate over the institutional versus the

¹⁷DOD letter, Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics) to Comptroller General of the United States commenting on a GAO report (The Congress Should Act to Establish Military Compensation Principles), July 5, 1979, pp. 1-2.

¹⁸DOD letter, Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics) to Comptroller General of the United States commenting on a GAO report (The Navy’s Pilot Shortage: A Selective Bonus and Other Actions Could Improve Retention), May 29, 1980, p. 1.

¹⁹GAO, The Navy’s Pilot Shortage: A Selective Bonus and Other Actions Could Improve Retention, FPCD-80-31 (Washington, D.C.: Feb. 15, 1980), p. 7.

market approach. Those who favor the institutional view generally support comparability, depending on how it is defined and measured, which refers to setting pay in one organization based on wage surveys showing the amount of compensation paid to employees in other organizations. On the other hand, advocates of the market approach generally support the competitive principle which refers to setting pay on the basis of the supply and demand for people.²⁰

Both the comparability and competitive compensation principles seek the same goal: to establish pay levels that will attract, retain, and motivate the quantity and quality of people needed.²¹ In theory, the comparability principle should yield the same results as the competitive principle because individuals will be indifferent to what jobs they take if jobs are in every way comparable. However, in practice, it is difficult to find jobs that are in every way comparable, particularly when comparing civilian and military jobs. Jobs that seem to be similar in many respects may be quite different in several less-obvious characteristics. Yet the comparability principle would pay the jobs the same while the competitive principle would pay them differently according to the supply-and-demand conditions relevant to each job.²²

Comparability Principle

As previously stated, establishing comparable pay involves setting and adjusting pay levels in one organization on the basis of wage surveys showing the compensation paid by other organizations. Beyond this basic definition, descriptions vary. The descriptions include establishing military pay on the basis of private-sector pay for jobs that require similar (1) work, (2) abilities, (3) knowledge, skills, and responsibilities, and

²⁰There are exceptions to these general statements. Some who support the institutional approach do not endorse either principle. They argue that the basis for arriving at the appropriate pay amount for military personnel should be different from the private sector to further reinforce the idea that military service is profoundly different from civilian employment. See Capt. John E. Greenbacker, U.S. Navy, "The Perils of Pay Comparability," United States Naval Institute Proceedings, Vol. 104, July 1978, p. 37; Charles C. Moskos, Jr., Institution Versus Occupation: Contrasting Models of Military Organization (Washington, D.C.: Air Force Office of Scientific Research, Feb. 16, 1981), p. 8; White Hat's Pay Panel, A Report of the Views of Enlisted Personnel on Military Compensation and Retirement (Washington, D.C.: Fleet Reserve Association, June 3-Nov. 21, 1977), p. 19. Similarly, while Richard V.L. Cooper favors the competitive principle, both principles appear to influence an approach that he indicates would be acceptable for setting military pay. See Military Manpower and the All-Volunteer Force, R-1450-ARPA (Santa Monica, Ca.: Rand Corporation, Sept. 1977), pp. 359-360.

²¹Report of the President's Commission on Military Compensation (Washington, D.C.: GPO, Apr. 1978), p. 112; GAO, The Congress Should Act, p. 15; Christopher Jehn also discusses some conceptual problems in Setting Military Pay by Civilian Wage and Job Comparisons, Report CRC 207 prepared for the Third QRMC (Alexandria, Va.: Center for Naval Analyses, July 1976), pp. 52-56.

²²Cooper, Military Manpower, p. 360; Norvin E. Rader et al., Pay Principles and Standards, Report 1207-01-81-CR (McLean, Va.: General Research Corporation, Feb. 1981), p. 2-5.

(4) age and education.²³ The descriptions range from establishing comparable pay for individual occupations to establishing comparable pay for an entire workforce. Still another view holds that comparable pay should be established on the basis of salaries paid in non-military organizations and that differences in conditions of employment should be considered in other elements of the total compensation package.²⁴ Thus, there is not a consensus on a standard for establishing comparable pay. To implement the comparability principle would, of course, require decisions on these matters as discussed on pp. 35 to 38. In this section, our discussion is limited to the pros and cons dealing with the basic concept of comparability.

Proponents of the comparability principle contend that it enables the government to compete with the private sector for qualified people by offering fair, equitable, and stable pay that is determined on a credible basis. In general, they argue that:²⁵

- It is an approach widely used in the private sector as a guide for setting and adjusting pay and is used as the basis for adjusting federal civilian pay levels. As such, it would be viewed as equitable by military personnel since it generally reflects what they could reasonably expect to earn for a similar level of effort in the private sector.
- It offers a greater degree of predictability and stability than do some other approaches and is more immune than the competitive approach to fluctuations that may occur in the labor market.
- It is supportive of the institutional viewpoint about military service because it minimizes differences in pay among people in different occupations.
- It provides a logical and factual basis for setting pay that is readily explainable and understandable.

²³Rader et al., Pay Principles and Standards, p. 2-5; DOD, "Compensation Comparability", The Third Quadrennial Review of Military Compensation—Staff Studies and Selected Supporting Papers, Vol. 7, Compensation Comparability and Pay Setting, (Washington, D.C.: Dec. 1976), p. 5; DOD, Advisory Commission on Service Pay, Career Compensation for the Uniformed Services, commonly referred to as "the Hook Commission Report" (Washington, D.C.: Dec. 1, 1948), p. 8; Melvin R. Laird, People, Not Hardware, the Highest Defense Priority, Special Analysis No. 80-1 (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1980), pp. 1, 2, and 18; DOD, Draft Report of the Third Quadrennial Review of Military Compensation—Military Compensation: A Modernized System (Washington, D.C.: Mar. 29, 1977), p. 12.

²⁴Draft Report of the Third QRM, p. 12.

²⁵Draft Report of the Third QRM, pp. 11-15; Report of the President's Commission, pp. 111-112; Association of the United States Army, Special Report: A Bill of Rights, pp. 24-26.

However, critics of the comparability principle contend that:²⁶

- When applied across an entire workforce, which DOD supports, it is implemented in terms of averages across a wide range of occupations which may overpay some and underpay others. This requires additional add-on pay to attract sufficient people to the underpaid occupations but has no mechanism to reduce pay when it attracts a greater supply of people to an occupation than are needed to meet manpower requirements.
- It does not consider other factors which affect pay, such as changes in personnel requirements or in private-sector unemployment rates. These factors may require the military to pay more or less than “comparable” salaries to satisfy manpower requirements.
- True comparability is impossible to achieve because differences in military and civilian employment and working conditions are so great.²⁷
- Equity with the private sector is less important in an all-volunteer force because people serve by choice rather than involuntarily.²⁸

But, in supporting the comparability principle to guide federal white-collar pay setting, the President took the position that pay levels determined under such a principle were influenced by the interaction of various events in the market-place. In his February 1962 transmittal forwarding the draft legislation to the Congress, he stated:

“Reflected in this single standard are such legitimate private enterprise pay considerations as cost of living, standard of living, and productivity, to the same extent that those factors are resolved into the ‘going rate’ over bar-gaining tables and other salary determining processes in private enterprise throughout the country.”²⁹ (Underscoring added.)

²⁶DMC, Defense Manpower, p. 309; Report of the President’s Commission, pp. 117-124; Richard V.L. Cooper, The All-Volunteer Force: Five Years Later, P-6051 (Santa Monica, Ca.: Rand Corporation, Dec. 1977) pp. 58-63; Martin Binkin and Irene Kyriakopoulos, Paying the Modern Military (Washington, D.C.: Brookings Institution, 1981) pp. 37-41; Jehn, Setting Military Pay, pp. 53-54; CBO, The Costs of Defense Manpower: Issues for 1977 (Washington, D.C.: GPO, Jan. 1977) p. 74.

²⁷Potential or real differences in conditions of employment and working conditions that have been identified between the military and the private sector include differences in missions and lifestyles, employee quality, job security, extent of responsibility at an early age, rate of career progression, personnel policies, working hours, and extent of family separation.

²⁸Cooper, Military Manpower, p. 356, and The All-Volunteer Force, p. 4.

²⁹GAO, Improvements Needed in the Survey of Non-Federal Salaries Used as Basis for Adjusting Federal White-Collar Salaries, B-167266 (Washington, D.C.: May 11, 1973), pp. 5-6.

Advocates of the comparability principle contend that it does not require identical jobs and working conditions. The principle, as legislated for federal civilian workers, merely requires comparability between jobs that “are sufficiently similar in terms of personal qualifications, functions and levels of responsibilities as to be reasonable candidates” for establishing pay-levels through a linkage process. Thus, such process implies relative rather than exact comparability.³⁰

Competitive Principle

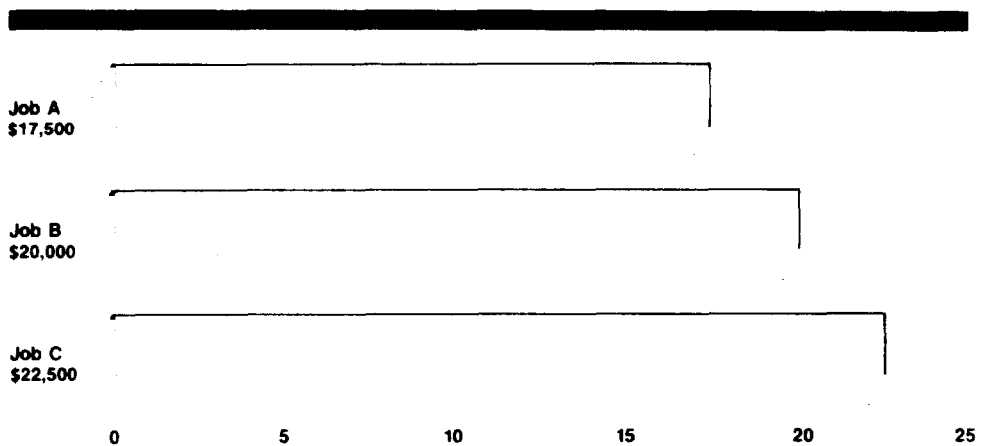
The principle of competitive compensation is based on the notion that total compensation (pay and fringe benefits) should be no more than necessary to attract and retain for as long as necessary the number and quality of personnel needed. Compensation is set on the basis of actual or forecasted supply-and-demand conditions for the needed quality and quantity of manpower. As supply-and-demand conditions vary among military occupations (or among other requirement variables such as education, skill experience, or responsibility), pay would vary. Within each occupation, pay would be that level required to attract and retain the right number and quality of personnel so that the first one to leave—if pay begins to fall in relation to private-sector pay—is paid only enough to make him/her slightly more than indifferent between staying and leaving.³¹

Proponents of the competitive principle believe that it would produce a more efficient pay system—that is, minimize the cost of attracting and retaining the quality and quantity of people needed—than the comparability principle. This can be illustrated by comparing three hypothetical military jobs, each having a different supply and demand, as shown in figure 2.1.

³⁰Draft Report of the Third QRMC, pp. 11-12.

³¹DMC, Defense Manpower, p. 286; Cooper, Military Manpower, pp. 357-359, and The All-Volunteer Force, pp. 63-64; Report of the President's Commission, p. 124; Binkin and Kyriakopoulos, Paying the Modern Military, pp. 56-61; John T. Warner, “Navy Manpower Issues,” Conference Proceedings: Naval Manpower Research in the 1980s, CNR 58 (Alexandria, Va.: Center for the Naval Analyses, June 30-July 1, 1982), pp. 5-9; Paul Hogan, “Military Compensation: Competing Views,” unpublished paper, n.d., p. 3.

Figure 2.1: Annual Compensation Required to Attract the Quality and Quantity of People Needed for Different Jobs



NOTE: This example is adapted from one used by Cooper, *Military Manpower*, p. 358.

Under the competitive principle, each job would be paid differently as shown in figure 2.1. However, if the comparability principle paid every job the same, the pay line would have to be set at Job C to attract the people needed. But it would overpay the people in Job A and Job B by \$5,000 and \$2,500 per year, respectively. Setting the pay line at Job B would not attract the number and quality of people needed for Job C and would overpay people in Job A by \$2,500 per year. Setting the pay line at Job A would result in shortages in the number and quality of people needed in Job B and Job C. (On the other hand, if comparable pay was established by job, the results would be closer to the results shown for the competitive principle.)

In contrast to the comparability principle, which takes into account the influence of collective bargaining in the private sector, the competitive principle rejects collective bargaining as an appropriate means of influencing compensation setting. This position was clearly expressed by DMC in its report, which states:

“It should be explicitly recognized that collective bargaining with respect to compensation is inconsistent with the principles of competitive compensation recommended by the Commission. This is true both when collective bargaining includes the right to strike and when it includes provisions for compulsory and binding arbitration in lieu of the right to strike. Historically, it is clear that the collective bargaining process has resulted in compensation and benefits above existing competitive levels for the same or similar types of work.”³² (Underscoring added.)

³²DMC, *Defense Manpower*, p. 287.

Critics contend that following the competitive principle will³³

- not assure stability of pay (because it encourages adjustment of pay levels based on shortages determined by the marketplace rather than applying any rule of equity or propriety);
- be extremely difficult and costly to administer (due to constant changes in pay necessitated by continuing changes in supply and demand and could lead to multiple pay tables that would be even more complex and confusing than the pay system now is);
- undermine the respect for authority essential to developing a disciplined armed force (by creating an adversary relationship between the military institution and its people over pay decisions);³⁴
- possibly undermine morale and motivation (because military personnel would not understand how their pay is determined and may view pay decisions as arbitrary and discriminatory);
- not be the way to motivate an all-volunteer force or strengthen the military as an institution (because it would place more emphasis on cash pay than on other entitlements—the latter are regarded as being particularly important in reinforcing the belief that the military takes care of its own); and
- implement a practice that has widely been discarded in the government and private sector and replaced with approaches that strive to achieve the objective of fair and equitable pay.³⁵

³³"Korb Favors: 'Fair,' 'Competitive' Pay," Army Times, Mar. 14, 1983, Interview with Lawrence Korb, Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics; Department of the Air Force, "Chapter 7: 'Manpower, Personnel and Training,'" Air Force 2000 Study (Washington, D.C.), p. 274; Draft Report of the Third QRMC, pp. 13-14; Charles C. Moskos, Jr., "Compensation and the Military Institution," Air Force Magazine, Vol. 61, Apr. 1978, p. 31-35; Report of the President's Commission, dissenting view, pp. 186-187; Association of The United States Army, Special Report: A Bill of Rights, pp. 24-25, and Special Report—Military Compensation and Retirement, pp. 3-6. Some supporting the competitive approach also caution about the initial risks involved in implementing it: DMC, Defense Manpower, p. 61-66; Report of the President's Commission, p. 113.

³⁴Critics contend that the competitive principle would erode the relationship needed between the military institution and its personnel. Pay levels were determined under the competitive principle much of the time in the early part of the United States' growth and development. This resulted in large-scale unionization of the private-sector labor force to protect the individual against management decisions over which he/she had no control. Unionization has tended to institutionalize the adversary relationship between management and workers that is implicit in the competitive process. Such relationship between the military institution and its people, critics argue, would be unworkable because it would undermine the respect for authority essential to developing a disciplined Armed Force. See Report of The President's Commission, dissenting view, p. 187; Association of The United States Army, Special Report: A Bill of Rights, p. 24; Draft Report of the Third QRMC, pp. 13-14; Moskos, "Compensation and the Military Institution," pp. 33-35.

³⁵Sibson, The Executive's Guide, p. 9; Bureau of National Affairs, Inc., Wage and Salary Administration, Personnel Policies Forum Survey No. 131 (Washington, D.C.: July 1981), p. 1; The Conference Board, Inc., Compensating Employees: Lessons of the 1970s (New York: 1976), pp. 1, 9, and 15.

In defense of the competitive principle,³⁶ proponents maintain that pay would be relatively stable—just as in the private sector—because the underlying factors are stable. Pay would not necessarily fluctuate on the basis of every change in retention rates and manpower requirements. Nor would the government pay only the bare minimum necessary to attract and retain the desired personnel. Over the long term, military pay would be stable because it must keep pace with wages and salaries in the private sector.³⁷ Nonetheless, over the short term, it may differ from those of the private sector. For example, during periods of high unemployment, military pay could lag behind private sector pay. Conversely, during periods of low unemployment, military pay may call for greater pay increases than in the private sector.³⁸

Although equity and fairness are subjective concepts, proponents of the competitive principle contend that it is fair. In principle, supply-and-demand conditions govern pay in the private sector. Similarly, in maintaining the quality and quantity of military personnel needed, market forces guarantee that the pay system will be fair and equitable. Otherwise, the desired personnel will not be attracted and retained.³⁹

Proponents of the competitive principle believe that the concept and its application would be understood by military personnel. In setting military pay according to supply-and-demand conditions, they contend that the factors governing such changes may be more easily understood and accepted by military personnel than pay that is allegedly determined according to some vague set of institutional principles.⁴⁰

³⁶Individual advocates of the competitive principle provide limited rebuttal to critics. However, when considering the collective comments, some rebuttal to each criticism can be shaped. To provide a more definitive view of how the competitive principle would work in practice, however, more point-by-point rebuttal by advocates would be helpful.

³⁷Hogan, "Military Compensation," p. 11; DMC, Defense Manpower, p. 287; DOD, "The Adjustment Mechanism for Military Pay: Present Policy and Alternative Approaches," The Third QRM: Staff Studies and Selected Supporting Papers, Vol. 7, Compensation Comparability and Pay Setting, a contract report prepared by Rand Corporation (Washington, D.C.: Dec. 1976), p. 13.

³⁸Third QRM, "The Adjustment Mechanism for Military Pay," p. 13.

³⁹Hogan, "Military Compensation," p. 11; Cooper, Military Manpower, p. 357; Jehn, Setting Military Pay, p. 52.

⁴⁰Hogan, "Military Compensation", p. 11.

The Competitive Principle
Allows More Discretion
Than Does the
Comparability Principle

Proponents favoring either of the two principles disagree on the basis to be used in setting military compensation levels. Following the comparability principle, military compensation would be determined primarily on the basis of a linkage to wage surveys of non-military organizations to assure that military personnel receive pay that is comparable to their counterparts in the private sector. On the other hand, advocates of the competitive principle contend that wage surveys merely provide a starting point for establishing competitive pay levels.⁴¹ Following the competitive principle, any pay survey results used would be adjusted as necessary to equalize the supply and demand for military personnel in order to minimize costs necessary for achieving force level objectives. Accordingly, proponents of the principles appear to be separated primarily by the extent of discretion in the pay setting process sought by those favoring the competitive principle.

DOD's Practices

Although comparable levels of pay have never been established between military and private-sector occupations, DOD contends that both the comparability and competitive principles influence the military pay-setting process.⁴² To DOD, comparability means maintaining basic pay lines at levels that are comparable to those established at some previous point in time which DOD believes were then reasonably competitive with the private sector.⁴³ In recent years, military pay-level adjustments, with some exceptions,⁴⁴ have been linked to pay increases granted federal civilian employees. The percentage increases are applied uniformly across the board to all military personnel of the same grade. Such increases are loosely referred to as comparability pay raises, meaning that the military pay increase percentage is comparable to those received by federal civilian employees.⁴⁵ When additional compensation is necessary to

⁴¹DMC, Defense Manpower, p. 286; Jehn, Setting Military Pay, p. 56; Report of the Presidents Commission, p. 124.

⁴²GAO, The Congress Should Act, p. 28.

⁴³DOD considered the pay levels at January 1, 1972, to be reasonably competitive with the private sector. On that date, pay increased across the board (as a result of the annual pay adjustment). It followed large pay raises for junior officers and enlisted personnel in November 1971 that had been put in place in preparation for going to the all-volunteer force. See DOD, Military Compensation Background Papers: Compensation Elements and Related Manpower Cost Items, Their Purposes and Legislative Backgrounds, 2d ed. (Washington, D.C.: GPO July 1982), pp. 9-15; and "Report of the Pay Adequacy Study," Oct. 1979, p. 13, an internal staff study—not an official DOD publication.

⁴⁴Military pay raises were disconnected from the civil service pay adjustments on an ad hoc basis in at least 4 of the last 6 years in order to provide a larger pay adjustment to military personnel.

⁴⁵When the military calls for a "comparability pay raise" they are instead calling for a pay raise aimed at maintaining parity with some previous pay level (generally 1972). When DOD says that

attract the people needed in a particular occupation or to compensate for certain types of demanding or unattractive duty, DOD says that it is provided in the form of add-on special or incentive pay following the competitive principle.⁴⁶

In defending DOD's pay practices, military leaders contend that achieving equity in compensation by maintaining pay levels that are generally comparable to private-sector pay levels is crucial to maintaining the institutional relationship between the military services and their people. They contend that, where necessary, pay distinctions can be made among occupations by using special and incentive pay such as bonuses and proficiency pay. But, they believe, a pay system that would lower the basic pay line in relation to private-sector pay and rely heavily on some unpredictable compensation elements (such as bonuses and special pay) to provide a large portion of a military person's pay would not provide a strong incentive to long-term career commitment by high-caliber people.⁴⁷

Standards for Implementing and Measuring Whether Principles Are Being Met

Once it is decided that military compensation principles should be adopted and the principles are established, other questions remain:

- Should the principles apply to the entire compensation package or only to certain components?
- Should different and maybe conflicting principles apply to different parts of the compensation package; for example, should comparability be applied to regular military compensation, competitiveness applied to special and incentive pay, and equity applied to retired pay?
- And what measurement standards, if any, should be used for determining whether, and to what extent, the adopted principles are being met?

How these questions are answered can have a significant impact on the future cost of military personnel and on military members' perception of their compensation system.

military pay lags behind private-sector pay, it means that, cumulatively, private-sector pay has risen at a faster rate than military pay. But, because a comparability baseline (however defined) has not been established, DOD does not know whether military pay levels are lower or higher than private-sector pay levels.

⁴⁶GAO, The Congress Should Act, p. 28; "Korb Favors: 'Fair,' 'Competitive' Pay."

⁴⁷DOD letter, Secretary of Defense to Comptroller General of the United States, Oct. 26, 1982, Enclosure, p. 9; Letter, Chief of Naval Operations (Department of the Navy) to Chairman, Committee on Armed Services, U.S. Senate, concerning the importance of adequate military compensation, May, 14, 1981, p. 1; Binkin and Kyriakopoulos, Paying the Modern Military, pp. 20-23.

While the literature offers some discussion of whether specific principles should apply to all or only part of the compensation package, little direct guidance or argument was offered on these questions. DOD does seem to believe that the comparability principle, if adopted, should apply only to the regular military compensation component of military pay—and not to benefits or any other elements—and that the competitiveness principle should apply to special and incentive pay and nothing else. The Fifth QRMC offered some discussion of these mixed approaches, but its discussion generally provided rationale for the way these pays are currently used.

The literature discusses several benefits of using explicit pay standards as guides for implementing and measuring achievement of compensation principles.⁴⁸ The benefits included:

- Explicit pay standards should help generate confidence among military personnel and the public that military pay is set according to a rational process and not by capricious or arbitrary actions.
- Standards would provide military personnel with a point of comparison for judging the value of their compensation package.
- Specified measurement standards, whether measuring comparability or competitiveness, would help resolve the continual controversy about whether military personnel are overpaid or underpaid.

Developing a Standard for Implementing and Measuring Comparability

Discussion about alternative standards in the military compensation literature is almost entirely directed to the principle of comparability, and it offers some guidance. One study suggests that to select and establish an appropriate standard, four questions must be answered. In answering each question, there are several alternatives to choose from, each with pros and cons. However, we are limiting our presentation to the questions and some of the alternatives to illustrate the process

⁴⁸Report of the President's Commission, dissenting view, p. 185; Linda D. Pappas, Perry W. Polk, and Douglas H. Macpherson, "Compensation Standards," Supplementary Papers of the President's Commission on Military Compensation—Final Report: Analysis of Selected Military Compensation Issues (Washington, D.C.: General Research Corporation, Apr. 1978), pp. 3-4; DOD, "Alternative Compensation Systems," The Third QRMC, Vol. 7, p. 16; DOD, "Military and Civil Service Work Comparison," The Third QRMC, Vol. 8, Work Level Comparisons (Washington, D.C.: Dec. 1976), p. ES-2; GAO, Need to Better Inform Military Personnel, pp. 15 and 27; Association of The United States Army, Special Report: A Bill of Rights, p. 25; Sibson, The Executive's Guide, pp. 2 and 8.

involved in establishing a standard for comparability. The questions, along with some alternatives, are listed below.⁴⁹

1. How should military compensation be linked to private-sector pay levels? Alternatives include:

- A direct linkage to private-sector jobs.
- An indirect linkage to the private sector by measuring a specified standard of living.
- An indirect linkage to the private sector by linking military pay with federal civilian pay schedules that are linked to the private sector.

2. At what level of specificity should comparisons be made? Alternatives include:

- Workforce to workforce.
- Grade-to-grade or equivalent linkages.
- Occupation to occupation.
- Job difficulty to job difficulty.

3. What methods should be used to link military and civilian pay levels? Alternatives include:

- Civilian earnings profiles that express earnings by demographic variables such as age, sex, and education.
- Civil service classification standards to match military positions to civilian grades.
- A point-factor evaluation system that assigns points for comparison purposes to factors such as work environment, task knowledge, decision-making, responsibility, and accountability.

4. What elements of compensation should be included in comparisons? Alternatives include:

- Basic pay.
- Regular military compensation.
- Total military compensation.
- Some other combination of compensation elements.

⁴⁹Although several studies mention pay standards, two provide a more thorough discussion about establishing them than do the others. See *Draft Report of the Third QRMC*, pp. 13-26; Norvin E. Radar et al., *Pay Principles and Standards*, pp. 2-9 to 3-1.

If a comparability principle was adopted, many studies contend that it should be based on total compensation; that is, all pay and fringe benefits. Two observations are offered in support of this position.⁶⁰

1. The fringe benefit package for military personnel is generally viewed as amounting to a greater proportion of total compensation than is the private-sector benefits package for its employees. Some of the military benefits package was implemented at a time when it was needed to help offset low military pay. Therefore, as regular military compensation was later increased to levels more nearly comparable to levels generally prevailing in the private sector, the total military comparison package exceeded the total private-sector compensation package.

2. The ratio of pay to total compensation differs from organization to organization.⁶¹ Therefore, making adjustments in any element of compensation (such as regular military compensation) on the basis of another organization's changes to a similar element does not assure comparability. To obtain the assurance, total compensation must be compared.

In practice, using total compensation as a basis for establishing comparability may be difficult.⁶² It depends on the availability of relevant data. But an essential first step is to achieve a consensus on what constitutes total military compensation. For example, some of the literature does not include educational assistance benefits as part of military compensation, but others do. Some consider allowances for uniforms, family separation, and dislocation as compensation whereas others do not. Another author suggests that the definition should include a measure of retirement and other fringe benefits such as health care, insurance, and exchange and commissary privileges. The definition would also have to

⁶⁰Jehn, Setting Military Pay, pp. 47-48; DMC, Defense Manpower, p. 292; CBO, The Costs of Defense Manpower, p. 74; Draft Report of the Third QRMC, p. 30; Report of the President's Commission, p. 113; Cooper, Military Manpower, p. 361.

⁶¹For example, a study by the Chamber of Commerce of the United States shows that employee benefits for 1,507 companies ranged from under 18 percent to over 65 percent of payroll. See Employee Benefits 1982 (Washington, D.C.: 1984), p. 7.

⁶²At the direction of the Congress (Department of Defense Appropriation Bill, 1984, S. Rep. 98-292, 98th Cong., 1st Sess., (1983), p. 21, and Department of Defense Appropriation Bill, 1985, S. Rep. 98-636, 98th Cong., 2nd Sess. (1984), p. 15), DOD compared military and private-sector pay and benefits. DOD's contractor (Computer Based Systems, Inc.) concluded that such comparisons could be made and developed a methodology to do so; see Pilot Study of Total Compensation for Selected Military and Civilian Occupations (Fairfax, Va.: July 1985), p. ES-5. See also Hay/Huggins Company and Hay Management Consultants, Study of Total Compensation in the Federal, State, and Private Sectors, prepared for the House Committee on Post Office and Civil Service, Committee Print 98-16, 98th Cong., 2nd Sess. (1984).

consider how to treat unvested retirement rights; leave (holiday, sick, and annual); length of workweek; and expected unemployment.⁵³

Little Discussion of a
Standard for Implementing
and Measuring
Competitiveness

While some authors indicate that principles must be translated into a standard for guiding, developing, and administering a compensation program, the limited discussion is contradictory as to whether the competitiveness principle would require a standard. None of the literature proposes a specific standard. However, one study contends that eventually some type of standard would be required to determine the compensation necessary to retain the personnel needed.⁵⁴ Another study refers to it as the “no standard approach” because it would be set on the basis of supply and demand. But, the study acknowledges that adoption of the competitiveness principle would require a choice between alternative means of implementation.⁵⁵

Some advocates of the competitive principle have described how it might work in practice. They suggest that the level, structure, and composition of the military compensation package be updated periodically by means of a comprehensive review of the military compensation system and the supply and demand for military personnel.⁵⁶ Recognizing that such a review would be costly, they suggest that it be done on a multi-year basis; one advocate suggests every 4 years. In the interim, average wage growth in the private sector would be used to approximate the annual adjustment needed (supplemented by add-on pay) to maintain competitive military pay levels. This approximation is similar to the comparability principle in the way it would determine pay increases, which is not inconsistent with a competitive system.⁵⁷ However, one author suggests that actual pay increases should be adjusted from that amount indicated by the average wage growth in the private

⁵³Jehn, Setting Military Pay, pp. 47-49.

⁵⁴Pappas, Polk, and Macpherson, “Compensation Standards,” p. 22.

⁵⁵Although some might argue that DMC recommended such a framework, we concluded that it was more of an approach than a framework. (As used in this study, a framework includes more specific direction than an approach.) DMC recommended that an independent Federal Compensation Board be established to make recommendations to the President and the Congress on the entire range of military compensation related issues following the principles of efficiency, equity, and motivation. See Defense Manpower: The Keystone of National Security, Report to the President and the Congress (Washington, D.C.: GPO, Apr. 1976), pp. 286, 308, and 314.

⁵⁶DOD, “The Adjustment Mechanism for Military Pay,” The Third QRMC, Vol. 7, p. 13; Jehn, Setting Military Pay, pp. 55-62.

⁵⁷DOD, “The Adjustment Mechanism for Military Pay,” The Third QRMC, Vol. 7, p. 13; Jehn, Setting Military Pay, pp. 55-62; Hogan, “Military Compensation,” p. 10.

sector “when it is clear that dogmatically adhering to ‘comparability’ will result” in pay levels that attract too few or too many people.⁵⁸

The limited discussion in the literature as to an appropriate standard for implementing and measuring achievement of the competitive principle may feed the skepticism of those favoring the comparability principle as to its practicality. On the other hand, those supporting the competitive principle could argue that the available discussion (along with the alternatives suggested for achieving more occupationally based pay which are discussed in the next chapter) provide a beginning.

⁵⁸Hogan, “Military Compensation,” p. 10.

The Structure of the Military Compensation Package

An important aspect in evaluating the military compensation system is its structure. For purposes of this study, structure refers to any of the factors used to make distinctions in compensation among military personnel such as grade, occupation, time in service, dependents, and duty assignments.¹

Although the military compensation literature provides differing views, advocates of the market approach generally believe that military pay should be structured so that

- pay distinctions emphasize occupation and not solely grade,
- pay distinctions consider work performed rather than marital or dependency status, and
- longevity increases encourage better work performance rather than reward “long and faithful service.”

Those who hold the institutional view generally support the status quo on the basis that the current structure reinforces the hierarchical structure and enhances unit cohesion.

Pay Differentials by Grade or Occupation

As discussed in chapter 1, advocates of the market approach would prefer to see the military compensation system structured so that pay distinctions are made among military occupations to the extent that such distinctions reflect supply-and-demand conditions. On the other hand, those holding the institutional view prefer the current structure which minimizes pay distinctions based on occupational specialty. While the pros and cons of occupational pay distinctions frequently appear within the context of discussions about the competitive and comparability principles, occupationally based pay can also be viewed as mutually exclusive from establishing pay principles. Therefore, it is appropriate to discuss occupationally based pay in the context of structuring the military compensation package.

Currently, DOD pays persons holding the same grade and serving the same number of years the same amount of basic pay. Neither occupational skills and capability nor the ease or difficulty of attracting and retaining people in different occupations affects an individual's basic

¹This is the definition presented by Richard V.L. Cooper in his report Military Manpower and the All-Volunteer Force, R-1450-ARPA (Santa Monica, Ca.: Rand Corporation, Sept. 1977), p. 357. Others define structure differently. For example, DMC defined structure as the composition of the many elements of compensation in its Defense Manpower: The Keystone of National Security, Report to the President and the Congress (Washington, D.C.: GPO, Apr. 1976), p. 316.

pay. To justify this position, those holding the institutional view stress that this approach contributes to establishing esprit de corps and commitment among military personnel by reinforcing things that military people share in common, including (1) choosing a "way of life" rather than an occupation, (2) accepting a legal liability to engage in combat, and (3) committing themselves to achieving the military mission. The institutional view believes that these common conditions warrant an equal-pay-for-equal-responsibility approach and, accordingly, downplay for pay purposes differences in people's occupational skills.²

DOD recognizes a link between occupation and pay only when it needs more people in an occupation and believes that more pay will attract them to the occupation. DOD makes this connection to attract and retain people in highly technical or hard-to-fill occupations such as pilots or combat infantrymen, respectively, or when it involves extra hazards or arduous duty. The means it uses to increase the "occupational" pay of such persons is special and incentive pay. For example, DOD may award up to a \$30,000 bonus to enlisted personnel for reenlisting if the occupation has insufficient people. Pilots may receive from \$125 to \$400 per month in incentive pay, depending on their years of service. In fiscal year 1985, about 65,000 enlisted personnel received reenlistment bonuses, and about 77,500 officers received aviation career incentive pay.³

Advocates of the market approach contend that DOD's efforts to use a single pay line (basic pay) to attract and retain the vast majority of people in its multi-occupation workforce is not cost-effective because it has the potential to overpay people in many occupations.⁴ They point out that a single pay line that is supplemented by add-on pay can be cost-effective only if it is set at the level which attracts the right quantity and quality of personnel in the occupations that are easiest to fill.

²DOD, Fifth Quadrennial Review of Military Compensation: Executive Summary (Washington, D.C.: Jan. 1984), p. II-3; Martin Binkin and Irene Kyriakopoulos, Paying the Modern Military (Washington, D.C.: Brookings Institution, 1981), pp. 20-23.

³For further discussion of extra pays and allowances received by a large portion of the career force, see GAO, Military and Federal Civilian Disposable Income Comparisons and Extra Pays Received by Military Personnel, GAO/NSIAD-84-41 (Washington, D.C.: May 9, 1984), p. 23.

⁴DMC, Defense Manpower, p. 286; Richard V.L. Cooper, The All-Volunteer Force: Five Years Later, P-6051 (Santa Monica, Ca.: Rand Corporation, Dec. 1977), p. 64; Report of the President's Commission on Military Compensation (Washington, D.C.: GPO, Apr. 1978), p. 124; Binkin and Kyriakopoulos, Paying the Modern Military, pp. 56-61; John T. Warner, "Navy Manpower Issues," Conference Proceedings: Naval Manpower Research in the 1980s, CNR 58 (Alexandria, Va.: Center for Naval Analyses, June 30-July 1, 1982), pp. 5-9.

Although those who favor the market approach encourage pay determinations by occupation, the literature does not identify a specific standard for implementation. However, several studies describe ways that an occupationally based pay system could be shaped:

1. Use the pay components in place, but lower the regular military compensation pay line in relation to private-sector pay to that level where it suffices to attract the people needed in the easiest-to-fill occupations.⁵ The pay line could be lowered gradually by retarding its growth over a period of several years. Because recent increases in military pay have been less than pay increases in the overall job market, this is now occurring. To the extent additional compensation is needed to attract and retain people in the more competitive or hard-to-fill occupations, add-on incentive and special pay should be used.⁶ This is consistent with the position GAO has taken.⁷

2. Establish separate pay tables for each occupation.⁸ The pay tables could be adjusted as supply-and-demand conditions dictate. However, one study noted that a system requiring numerous pay tables is probably impractical considering the extensive administration such a system would require.⁹

3. Establish separate pay levels by occupation.¹⁰ Through gradual reallocation of the annual pay raise (based on the relative staffing posture of each occupation), underpaid grades and occupations could be corrected

⁵Cooper, The All-Volunteer Force, p. 64.

⁶Similarly, the DMC recommended that the uniform pay table be retained with increased targeted application of add-on pays to those occupations and situations where additional personnel are needed. See Defense Manpower, pp. 103-104.

⁷GAO letter, Comptroller General of the United States to Secretary of Defense continuing a discussion of matters for consideration for more efficient management of DOD resources, June 24, 1982, p. 2 and Enclosure, p. 10; GAO, Military Compensation Issues, Statement of Kenneth J. Coffey before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services (Washington, D.C.: Apr. 7, 1983), p. 8.

⁸John T. Warner, Issues in Navy Manpower Research and Policy: An Economist's Perspective, Professional Paper 322 (Alexandria, Va.: Center for Naval Analyses, Dec. 1981), p. 42, and "Navy Manpower Issues," p. 9.

⁹Cooper, Military Manpower, p. 359.

¹⁰Report of the President's Commission, pp. 125-129.

by applying larger raises to the more serious and persistent problems.¹¹ But, the study was unclear as to how varying pay levels among occupations were to be achieved. It stated that development of separate pay tables by occupation would be allowed but not required. At the same time, however, the study would limit the use of add-on pay (the only tool for making distinctions in pay among groups when using a single pay table) to overcome staffing problems expected to endure for only a few years. Thus, the use of multiple pay tables would seem inevitable.

4. Retain the pay line as it now is but separate rank and pay grade.¹² Rank would continue to be based on merit and longevity, thereby preserving the individuals' institutional affiliation. However, pay grade would be based on supply and demand for the occupation as well as personal qualifications and performance. For example, at the rank of corporal, this would allow the pay grade for a highly competitive occupation to be an E-6 while it could be an E-3 for an easy-to-fill occupation. In other words, the rank of "corporal" could range from pay grade E-3 to E-6. Adjustments in allocation of pay grades among occupations would be the primary means for achieving competitive pay. Add-on pay would continue to be used but would be concentrated in specific areas requiring a short-term commitment.

Over the years, through compensation and personnel practices, the military compensation system has experienced changes like those cited above. For example:

- Military pay raise percentages have been lower in recent years than private-sector pay raise percentages. A recent comparison of selected military and civilian jobs shows that in 94 percent of them, military pay was less than the pay in the private sector.¹³
- Both compensation and personnel practices have contributed add-on incentives tailored to each occupation. Incentive and special pay that vary by occupation make differences of several thousand dollars in

¹¹The Military Manpower Task Force considered and rejected such an alternative in A Report to the President on the Status and Prospects of the All-Volunteer Force (Washington, D.C.: Oct. 1982), pp. IV-6 to IV-9.

¹²Binkin and Kyriakopoulos, Paying the Modern Military, pp. 56-61.

¹³GAO compared 156 military occupation job descriptions with job descriptions the Bureau of Labor Statistics uses in its wage surveys. Eighty-six were comparable with civilian occupations. For these occupations, GAO matched 126 skill levels (some job descriptions were matched at more than one grade/skill level). In 118 comparisons (94 percent), regular military compensation and bonuses were less than private-sector pay. The comparison did not consider conditions of employment, total compensation, or the age and experience of workers.

annual pay for persons of the same grade and years of service. In addition, the distribution of higher grades among occupations within and among military services and the differences in average time between promotions vary depending on supply and demand; occupations that get the greater portion of the higher grades and the faster promotions tend to be the occupations that are paid more in the private sector.¹⁴ Furthermore, new enlistees can receive up to \$14,400 in supplemental educational benefits for enlisting for 4 years in hard-to-fill occupations.¹⁵

While agreeing that add-on pay is useful in attracting and retaining personnel in occupations experiencing wide differences between military and civilian pay, the military contends that add-on pay has limitations. They maintain that a pay system which relies on unpredictable bonuses to provide a large component of a person's pay does not provide a strong incentive to attract high-caliber people into long-term career commitments. Instead, they explain, people will make long-term commitments only if the pay system provides adequate, reasonably competitive pay that is stable in earning power, predictable in size, and grows with increased experience and responsibility.¹⁶

DOD's concern is not unique to the military. Some economists who have studied compensation in the private sector contend that to encourage long-term commitment by skilled personnel, a stable, long-term compensation scheme is essential. In addition, to provide incentives for good performance over the long-term, they contend that compensation must regularly increase with experience whether or not accompanied by equivalent increases in productivity.¹⁷

¹⁴GAO, Less Expensive Internal Management Options May be Viable Alternatives for Countering Critical Military Skill Shortages, FPCD-82-16 (Washington, D.C.: Apr. 19, 1982), Enclosure I, p. 6.

¹⁵Department of the Army, "The New G.I. Bill and the New Army College Fund," recruiting brochure, n.d.

¹⁶Letter, Chief of Naval Operations (Department of the Navy) to Chairman, Committee on Armed Services, U.S. Senate, concerning the importance of adequate military compensation, May 14, 1981, p. 2; DOD letter, Secretary of Defense to Comptroller General of the United States, Oct. 26, 1982, Enclosure, pp. 8-9.

¹⁷Gary S. Becker, Human Capital: A Theoretical and Empirical Analysis, With Special Reference to Education, 2nd ed. (New York: National Bureau of Economic Research, 1975), pp. 29-35; Edward P. Lazear, "Agency, Earning Profiles, Productivity, and Hours Restrictions," The American Economic Review, Sept. 1981, pp. 606-620.

Compensation Differences Between Married and Single Personnel

The military compensation system pays personnel with dependents, usually married persons, more than personnel without dependents, usually single personnel, even though their grade, years of service, duties, and qualifications may be identical. (For purposes of this study, the discussion contrasts married and single personnel.) These differences in treatment occur because housing accommodations, or cash allowances in lieu of accommodations, have evolved as a part of the compensation package that is based on need rather than work performed. The housing accommodations are more costly and the housing allowances are higher for married people than for single people. Also, single personnel on field or sea duty for more than 90 days lose their housing allowance whereas married personnel continue to receive it. Many studies state that such a pay structure is neither equitable nor cost-effective.¹⁸

The practice of paying married and single personnel differently for housing has evolved over the past 60 years. Historically, the housing provided was on the basis of grade. However, in evaluating the adequacy of military pay levels in the early 1900s, the Congress was concerned about married officers' ability to maintain themselves and their families with reasonable decency under the various conditions of service. In its deliberations, a Special Committee of the House of Representatives noted that enactment of allowances based on dependents would merely be a variation of an old but accepted principle of law that recognized the existence of dependents and the need to provide for them. In addition to examples from earlier military compensation practices, examples of this attitude throughout society were highlighted:¹⁹

- Exemptions were granted for dependents in computing an individual's income tax liability.
- Large mining companies furnished quarters to men with families.

¹⁸Those that contend that single and married personnel should be paid the same usually do so in the context of justifying a salary system. Because these issues can be viewed as mutually exclusive, we treat equalization of housing compensation separately from a salary system. That is, a change to paying single and married people the same can be implemented without changing to a salary system. Studies that have recommended a salary system include: Martin Binkin, The Military Pay Muddle (Washington, D.C.: Brookings Institution, 1975), pp. 37, 39, and 46; DMC, Defense Manpower, pp. 330-31; GAO, Military Compensation Should Be Changed to Salary System, FPCD-77-20 (Washington, D.C.: Aug. 1, 1977), p. 34; John T. Warner, A Thinkpiece on Navy Manpower Problems, Memorandum (CNA) 80-0312.10 (Alexandria, Va.: Center for Naval Analyses, Dec. 21, 1979), p. 13, and Issues in Navy Manpower, p. 50.

¹⁹"Hearings on H.R. 10972, Readjustments of Service Pay," Before a Special Committee, U.S House of Representatives, 67th Cong., 2nd Sess., Mar. 18-20, 1922, Deliverable A001: History and Analysis of Basic Allowance for Subsistence (BAS) (Falls Church, Va.: Rehab Group, Inc., Feb. 1980), pp. A-20 to A-22.

- The Commission of Industrial Relations repeatedly emphasized that pay for males between the ages of 21 and 41 must be sufficient to support a wife and three children.
- One purpose of government is to protect the family group and make it possible for a man to build a home.

Accordingly, legislation was enacted in 1922 that expanded the purpose of military compensation to include consideration of housing needs. At that time, the majority of military personnel were single and most of them lived in military housing. When housing was not provided, married officers received a larger housing allowance than single officers because their needs were greater. In addition to making it possible for a married officer to raise a family, the additional pay was to partially compensate him for not being able to establish a home. Although the Congress considered extending a housing allowance in the same amount to single officers, it viewed such action as an unjustifiable economic burden on the public treasury.²⁰

In 1940, Congress extended the housing allowance to married enlisted personnel in the top three grades. Starting in 1949, the allowance for married personnel was expanded to include other enlisted grades and, in 1973, with the advent of the all-volunteer force, coverage was extended to married personnel in all grades.²¹

The appropriateness of maintaining a distinction between married and single persons in housing allowances is sometimes questioned.²² Advocates of both the market approach and some who generally hold the institutional view maintain that individuals of the same grade, same years of service, and same assignments ought to be paid the same in accordance with the concept of "equal pay for equal work."²³ At least in

²⁰Hearing on H.R. 10972, pp. A-20 and A-21.

²¹DOD, Military Compensation Background Papers: Compensation Elements and Related Manpower Cost Items, Their Purposes and Legislative Backgrounds, 2nd ed. (Washington, D.C.: GPO, July 1982), pp. 54-56.

²²One writer contends that the "major perceived inequity inherent in the present military pay system is the unequal treatment of single and married personnel." See Comdr. Ludvik Pfeifer, U.S. Navy, "The Military Compensation Mess," United States Naval Institute Proceedings, Feb. 1981, p. 24. See also the White Hats' Pay Panel, A Report of the Views of Enlisted Personnel on Military Compensation and Retirement (Washington, D.C.: Fleet Reserve Association, June 3-Nov. 21, 1977), pp. 9 and 11.

²³DOD, Report of the First Quadrennial Review of Military Compensation: Modernizing Military Pay, Vol. 1, Active Duty Compensation (Washington, D.C.: GPO, Nov. 1, 1967), p. 54; Binklin, The Military Pay Muddle, pp. 37-39; DMC, Defense Manpower, pp. 330-31; CBO, The Costs of Defense Manpower: Issues for 1977 (Washington, D.C.: GPO, Jan. 1977), p. 92; GAO, Military Compensation Should Be

this instance, those supporting the institutional view reject needs based compensation.

However, another view holds that the basic-pay portion of military compensation does conform to the concept of “equal pay for equal work” and that allowances, special pays, and benefits are provided on the basis of merit, dependents, and needs.²⁴

Similarly, in a 1925 decision involving an Army officer, the U.S. Court of Claims concluded that, within the meaning of the laws imposing the income tax, government furnished housing (or allowances in lieu thereof) was not compensation. The Court took the position that Army housing was an integral part of the military organization; that is, units of the military plant which are indispensable for keeping the Army intact. Therefore, it stated, a military officer is “not paid a salary and furnished a house to live in for his service; he is, on the contrary, paid a salary ‘to live’ in the quarters furnished.”

Further, the Court concluded that because an allowance in lieu of government-furnished housing is a decision of the military for its convenience—and not a decision of the individual for his/her benefit—such allowance is a reimbursement for housing that the individual would have otherwise been provided. Although the court noted that government-furnished housing or allowances results in a savings to the individual over what he/she would have otherwise spent for housing, such savings does not constitute income.²⁵

Critics also argue that it is not cost-effective to pay a larger housing allowance to married personnel than to single personnel. They contend that married personnel cost more than single personnel not only because of the greater costs of housing but also because of other costs that are greater for them such as medical care and moving. According to critics, a system which pays higher compensation based on marital status will tend to attract and retain a greater proportion of married than single persons whereas a system which pays both the same will not. Yet a majority of the individuals whom the military services seek to attract and retain through the first reenlistment point are single. Thus, critics

Changed, pp. 7-8; White Hat's Pay Panel, A Report of the Views of Enlisted Personnel, pp. 9, 11, and 14; Warner, A Thinkpiece, p. 13, and “Navy Manpower Issues,” p. 10.

²⁴DOD, Draft Report of the Third Quadrennial Review of Military Compensation—Military Compensation: A Modernized System (Washington, D.C.: Mar. 29, 1977), p. 22.

²⁵Jones v. United States, 60 Ct. Cl. 552 (1925), pp. 552, 567, and 569-577.

conclude, paying single and married persons the same should stop or even reverse the growth in the percentage of personnel who are married. Furthermore, a reduction in the number of married personnel and dependents will eventually cut the costs of medical care, moving, and other services.²⁶

From an economic point of view, market advocates argue, differences in compensation should be to attract, retain, motivate, and reward superior performers.²⁷ And absent any evidence that shows married personnel are more productive than single personnel, market advocates believe that paying married personnel a greater housing allowance is not cost-effective. While the research is limited, one study of Navy personnel aboard ships showed that whenever differences in productivity between single and married men were identified, singles were better.²⁸ However, there is no research showing whether either single or married personnel are, overall, more cost-effective than the other.

DOD has not commented directly on the issue of whether married and single personnel should receive the same housing allowance. However, in arguing against a salary system that would include the housing allowance and pay married and single personnel the same, DOD has taken the position that the increased cost of raising the allowances for single to married levels was unacceptable. DOD also stated that making the transition would require resolution of questions such as: How would the military establish the fair market rental value for its housing and barracks that varies widely in quality? And how would the military establish a rental value for accommodations provided to personnel assigned to field or sea duty?²⁹

However, equalization of pay for married and single personnel does not mean that costs to the government would have to increase. If a new housing allowance was set at a level between the current rates for single

²⁶DMC, Defense Manpower, pp. 330-331; CBO, The Costs of Defense Manpower, pp. 92-93.

²⁷DMC, Defense Manpower, pp. 331.

²⁸Stanley A. Horowitz and Comdr. Allan Sherman, U.S. Navy, Crews Characteristics, and Ship Condition (Maintenance Personnel Effectiveness Study (MPES)) (Alexandria, Va.: Center for Naval Analyses, Mar. 1977), p. 9; Warner, A Thinkpiece, p. 13.

²⁹DOD letter, Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) to Director, Federal Personnel and Compensation Division, GAO, June 27, 1977, Military Compensation Should Be Changed to Salary System, FPCD-77-20 (Washington, D.C.: GAO, Aug. 1, 1977), p. 45; CBO, The Costs of Defense Manpower, pp. 92-93; DOD Authorization for Appropriations for Fiscal Year 1982: Hearings on S. 815 Before the Senate Committee on Armed Services, Part 6, 97th Cong., 1st Sess. (1981), p. 3773.

and married personnel or at the current rates for single personnel, the government's total cost would be about the same or reduced.³⁰ Also, if equalization of pay resulted in increases in the proportion of single personnel, the costs of medical care and moving should decrease.³¹

Basic Pay Differentials Based on Time in Grade or Time in Service

Some advocates of the market approach generally disagree with the present practice of basing within grade basic pay increases on years in service (longevity) rather than on time in grade.³² They contend that basing such increases on time in grade would provide increased incentive to military personnel to perform better because it more closely rewards achievement. Although the research literature offers several opinions about what is the most appropriate basis for within-grade pay increases, our discussion centers around the First QRMC's report because it provides the most detailed discussion available.³³

The present basic-pay table compensates military personnel based on two considerations: grade and longevity. (Promotion to a higher grade rewards achievement.) Increases, within a grade, for longevity reward persons for long and faithful service. These increases were first introduced into the compensation system in 1922, apparently as incentives to retain people following the "post-World War I promotion slowdown." Currently, longevity increases for each grade are limited to the years-of-service point at which most individuals would normally be promoted to the next grade. For example, O-1s are expected to progress upward within a few years so within-grade pay raises are not provided after reaching the "over 3 years" point in service. In this way, such increases maintain some relationship between performance and higher pay.³⁴ However, two people at the same grade level who entered the service at the same time receive the same basic pay even though one may have been promoted to his/her current grade several years prior to the other.

³⁰GAO, Proposals for More Effective Military Manpower Policies, Statement of Kenneth J. Coffey before the Defense Task Force, House Committee on the Budget (Washington, D.C.: March 10, 1981), pp. 5-6.

³¹CBO, The Costs of Defense Manpower, p. 93.

³²Report of the President's Commission, pp. 5 and 139-41; Cooper, Military Manpower, p. 379; Warner, Issues in Navy Manpower, p. 48; Association of The United States Army, Special Report—Military Compensation and Retirement: A Response to the Recommendations of the President's Commission on Military Compensation (Arlington, Va.: May 1978), pp. 6 and 21.

³³Report of the First QRMC, Vol. 1, pp. 79-82.

³⁴DOD, Military Compensation Background Papers, p. 7.

The First QRMC examined this “equalization” policy, noting that time in grade prior to promotion varied among the four military services. The QRMC concluded that the variance was not primarily attributable to the superior merit, ability, or performance on the part of the individual. Rather, it attributed the variance more to differences in promotion opportunity among the four military services. Differences were attributed to factors such as occupational mix, supply, and demand. Therefore, in fairness to individuals who received late promotions due to influences over which they had no control, the QRMC affirmed the “equalization” policy, believing it essential that the late promotee be able to “catch up” in monthly basic pay to the early promotee having the same years of service.

But, the First QRMC also noted that the “system pays a price for this kind of equity.” It concluded the following:

- The differential reward to those promoted early because of individual merit is less under a longevity-based system than under a time-in-grade system. Still, those promoted early are rewarded with pay at the higher grade earlier than those not promoted. Thus, those receiving early promotion will be paid more over their full career than those who are promoted later.
- The reward for increased productivity that is obtained through experience in a job (or at level) is less under a longevity-based system than under a time-in-grade system. However, total experience is likely to contribute more to an individual’s productivity in higher grades in the military services than in other employment.³⁶

Some advocates of the market approach favor within-grade pay increases based on time in grade because they believe it accents (and therefore encourages) achievement by providing tangible rewards for excellence. Assuming that promotion reflects merit and that early promotion identifies the best performers, then pay increases based on time in grade would continue to differentiate between average and outstanding performance. One study asserts that this approach would provide a greater incentive than the time-in-service approach for retaining highly qualified officer and enlisted personnel.³⁶

³⁶Report of the First QRMC, Vol. 1, pp. 80-82.

³⁶Cooper, Military Manpower, p. 379.

Composition of the Compensation Package

Composition refers to the military compensation system's mix of pay and fringe benefits and the mix of current and deferred income. Because composition affects the ultimate cost of total military compensation, it is an important factor in cost-effectiveness considerations. However, debate has focused more on adding or deleting specific compensation elements to maintain benefits or implement cost savings than it has on the effect of these changes in fashioning a well-structured and cost-effective compensation package. In fact, several studies indicate that changes or modifications should not be made in any compensation element without evaluating its impact on the total compensation package.

In addition to the need to consider the effect of any change in compensation on the total compensation package, five composition changes have been discussed: paying for the hardships or unusual conditions of military service (X-factor), expanding post-service educational benefits (GI Bill), taxing housing and food allowances, implementing a salary system, and changing the retirement system.

Focus on Total Military Compensation

Some studies contend that any proposed change in military compensation should be evaluated within the context of total compensation. A criticism of the current compensation process is that changes are made in one or a few elements without assessing their impact on the system as a whole. This can result in paying more or less than is necessary to attract and retain the people needed. Several studies noted that many of the shortcomings in the present systems are due to piecemeal, uncoordinated changes.¹

The military compensation system provides a set of management tools that should be used to achieve specific personnel objectives. When viewed this way, it is clear that no system element should be studied, evaluated, or modified in isolation. Rather, alternatives should be analyzed so that the total mix of pay and fringe benefits and current and deferred compensation is no more than necessary to attract, retain, and motivate the number and quality of people that the military services

¹DOD, Draft Report of the Third Quadrennial Review of Military Compensation—Military Compensation: A Modernized System (Washington, D.C.: Mar. 29, 1977), pp. 28-37. Richard V.L. Cooper, Military Manpower and the All-Volunteer Force, R-1450-ARPA (Santa Monica, Ca.: Rand Corporation, Sept. 1977), pp. 361-363, and The All-Volunteer Force: Five Years Later, P-6051 (Santa Monica, Ca.: Rand Corporation, Dec. 1977), pp. 58-59; Association of The United States Army, Special Report: A Bill of Rights for Those Who Serve (Arlington, Va.: Oct. 1977), pp. ii-iii; John T. Warner, "Issues in Evaluating Military Compensation Alternatives," Defense Management Journal, Fourth quarter, 1983, p. 23; GAO, Military Pay Raise and Enlisted and Aviation Officer Bonus Programs, Statement of Kenneth J. Coffey before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services, Aug. 10, 1982, p. 2.

need to carry out their respective missions. And, for the system to be cost-effective, potential and current military personnel need to perceive that the value of the total compensation package is at least equal to the cost to the government. For example, if military people assign less value to fringe benefits than what they cost the government, it is more cost-effective to provide the benefits in cash. Considering changes in the context of total compensation would also help maintain the integrity of the total package because the net effect of pay changes would be clearer.

Failure to deal with the compensation system as a whole also may produce results that are not cost-effective. For example, past efforts to curb the costs of such relatively minor compensation elements as commissary and exchange privileges and home-travel benefits for recent enlistees could well have increased, rather than decreased, the government's costs. Therefore, changes to obtain savings may cost more in terms of lost "goodwill"; that is, they may have reduced retention rates and productivity, the cost of which may have exceeded the savings associated with the changes. This type of item-by-item approach to the management of military compensation does not assure that the individual elements of the compensation system are evaluated in the larger context of their influence on force management.²

Pay for the X-Factor

Discussions of the unique conditions of military service (X-factor) often surface either in defense of the present compensation components/elements or as an implicit justification for increased compensation. Most studies acknowledge the X-factor and view it as an overall disadvantage for which military personnel must be compensated. But they differ on how it should be compensated.³ Some studies support some form of across-the-board compensation for the X-factor, while others would limit such compensation to only those personnel experiencing a particular negative situation.

The X-factor definition varies in military literature.

- In a negative context, it is used to refer to the special conditions, hardships, or unusual demands of military service which are different or not normally found in civilian employment.

²Cooper, Military Manpower, p. 363; DMC, Defense Manpower: The Keystone of National Security, Report to the President and the Congress (Washington, D.C.: GPO, Apr. 1976), pp. 19-20.

³GAO, The Congress Should Act to Establish Military Compensation Principles, FPCD-79-11 (Washington, D.C.: May 9, 1979), p. 11.

- In a positive context, it is used to refer to the more attractive aspects of military service such as travel, training, job security, educational benefits, on-base recreational facilities, and a 4-week vacation each year.
- In a measurement context, it is used to refer to the net balance of positive and negative noncompensation elements of military service (such as working conditions) that are different from civilian employment.
- In a compensation context, it is used to refer to the additional compensation necessary to compensate for the net difference between positive and negative conditions of military service.⁴

In this study, the X-factor is used to refer to the first and second definitions above: those aspects of military service that differ from civilian employment.

According to one study, the X-factor exists at two levels—the general level and the individual level. At the general level is the “general military liability” which is used to refer to those negative conditions of military service that most military personnel experience. It includes involuntary relocation, separation from family, liability for combat, and variable overtime, weekend, and holiday work. At the individual level is the “individual military liability” which is used to refer to situational liability that only some experience. It involves assignment to a particular risk, hazard, or other unattractive condition to which some, but not all, military personnel are assigned.⁵

Some studies support an explicit across-the-board payment in some form to all military personnel for the X-factor. In 1978, the then Secretary of the Air Force stated that, in recognition of the unique calling of military service, military personnel and their families must be provided long-term security and a system of institutional supports that are beyond the level of compensation commonly offered in the private-industrial sector.⁶ Another study supports an explicit payment for the X-factor to all military personnel.⁷ But, in recognition of the preparatory measurement work needed, it recommended that (1) additional research be performed to document the value of the X-factor and (2) the dollar value of the X-

⁴For example, see DMC, Defense Manpower, p. 341; Draft Report of the Third QRMC, p. 30.

⁵Draft Report of the Third QRMC, pp. 30-31.

⁶Report of the President's Commission on Military Compensation, dissenting opinion (Washington, D.C.: GPO, Apr. 1978), p. 176.

⁷Norvin E. Rader, et al., Pay Principles and Standards, Report 1207-01-81-CR (McLean, Va.: General Research Corporation, Feb. 1981), pp. 3-4 to 3-6.

factor for each grade be included in base pay and in the calculation of retirement benefits. However, another study suggests that such payment could be in one or a combination of forms including an increment of regular military compensation, a direct monetary payment, or in benefits. The form should be determined in conjunction with the determination of the level of military pay and the mix of pay and benefits.⁸

The latter study focused on measuring the general military liability. It identified 60 positive and negative aspects of military service. The study judgmentally concluded that 48 were offsetting (the positive factors were generally sufficient to balance the negative factors). The remaining 12 conditions were regarded as negative and are discussed below.⁹

- Conditions for which compensation could not be quantified.
 1. Exposure to disease and inadequate sanitation.
 2. Isolated posts.
 3. Loss of earned leave.
 4. No right to quit.
 5. Responsibility of command.¹⁰
- Conditions that should be compensated under special and incentive pays as part of the individual military factor.
 1. Risks in combat.¹¹
 2. Sea duty.
- Conditions for which compensation could be estimated. Depending on the grade, compensation in recognition of the following conditions of service was estimated at 4.4 percent to 15.1 percent of the military equivalent of a civilian salary.

⁸DOD, The Third Quadrennial Review of Military Compensation: Staff Studies and Selected Supporting Papers, Vol. 5, The Military Factor (Washington, D.C.: Dec. 1976), p. 46.

⁹The Third QRC: The Military Factor, pp. 11-42.

¹⁰Although the study recognized the availability of Responsibility Pay, it viewed the amount as a token recognition. See The Third QRC: The Military Factor, p. 35.

¹¹The study concluded that estimating the level of risk in warfare and the appropriate level of compensation may not be reasonably achievable. Therefore, the study stated it may be best to continue to rely upon the Congress to decide the appropriate compensation level for such risk. See The Third QRC: The Military Factor, p. 25.

1. Liability for combat; that is, acceptance of a continual risk that one may be exposed to combat service.
2. Frequent, directed moves.
3. Directed family separations.
4. Unlimited and irregular overtime without pay.
5. Field training and equivalent training at sea away from homeport.

Other studies argue against an explicit payment for the X-factor and support current compensation practices.

One view holds that all military personnel should be compensated with traditional “institutional benefits” such as commissaries, exchanges, portions of the health care program, and perhaps some part of the recreation and welfare benefits.¹² The existing system of special and incentive pays tailored to the particular X-factor situation would be used to compensate individual military personnel for specific hardships they were experiencing at any given time.

Another view holds that no across-the-board payment to all military personnel should be made for the X-factor. Rather, add-on special and incentive pay should be used where necessary to attract people to specific occupations or situations. Such pay should be limited, just as in the private sector, to those personnel experiencing the negative working conditions and only for the time during which the conditions are experienced.¹³

Educational Benefits As a Part of the Compensation Package

Since moving to the all-volunteer force, discussion continues about whether there should be a GI Bill and, if so, what benefits it should provide. Proponents believe that a GI Bill benefits the military services (by attracting high-quality recruits), the individual recipient, and the Nation. But critics argue that it is not the most cost-effective recruiting incentive.

Since World War II, the Congress has passed several different educational benefit programs.¹⁴ Initially, these benefits were provided to help

¹²The Third QRMC: *The Military Factor*, pp. 30, 31, and 36.

¹³DMC, *Defense Manpower*, p. 341.

¹⁴Educational benefits for World War II veterans; educational benefits for veterans of the Korean conflict; the Veterans' Readjustment Benefits Act of 1966 (Public Law 89-358, 80 Stat. 12); the Vietnam Era Veterans' Readjustment Assistance Act of 1974 (Public Law 93-508, 88 Stat. 1578); the Veterans' Education and Employment Assistance Act of 1976 (Public Law 94-502, 90 Stat. 2383); the

military personnel who had served at low rates of pay readjust to civilian life and continue their educational plans. More recently, educational benefits have been viewed as a means for attracting high-quality recruits.¹⁵

Recent legislation increased the educational benefits¹⁶ available to persons entering military service during the period July 1, 1985, through June 30, 1988, and serving either 3 years continuous active duty or 2 years continuous active duty followed by 4 years continuous service in the selected reserve. By accepting \$100 less pay per month for the first 12 months of active duty (\$1,200), an individual is eligible for \$300 per month when enrolled in a full-time program of education for a period of up to 36 months (\$10,800). Additionally, the Secretary of Defense may increase such benefits by up to \$400 more per month (\$14,400) for skills or specialties that he designates as being critically short of personnel. For persons who serve an additional 5 consecutive years of military service (total of 8 consecutive years), the Secretary may provide up to \$300 per month in additional supplemental educational assistance (\$10,800). In addition, if the person is serving in a skill that the Secretary designates as critically short of personnel, the Secretary may increase supplemental benefits by up to \$300 per month (\$10,800). Thus, for an investment of \$1,200 and 3 years' service, a veteran may receive as much as \$25,200 in educational benefits or, with 8 years' service, as much as \$46,800.¹⁷

GI Bill proponents are concerned about the military services' (particularly the Army's) ability to continue to attract high-quality personnel as the recruit pool decreases. They contend that educational benefits are more cost-effective than bonuses in attracting additional high quality

Veterans' Educational Assistance Act of 1984 (Public Law 98-525, Title VII, 98 Stat. 2492, 2553, Oct. 19, 1984).

¹⁵"High-quality" refers to personnel who have a high school diploma and test out in mental categories I-IIIa.

¹⁶The Veterans' Educational Assistance Act of 1984. The previous Veterans' Educational Assistance Program depended on an individual's contribution to an educational fund. Each person could contribute up to \$2,700 over the period of his/her enlistment. This was matched by the government on a two-for-one basis up to \$5,400, providing a total educational fund of \$8,100. In addition, the Army offered up to \$12,000 in supplemental educational benefits to high-quality recruits enlisting in hard-to-fill skills such as combat arms.

¹⁷The basic educational benefits of \$10,800 will be paid from the Veterans' Administration appropriation. Any additional benefits authorized by the Secretary of Defense must be funded from DOD's appropriation. To finance this liability, money must be accumulated in an Education Benefits Fund on an actuarially sound basis; that is, the present value of the future benefits to be paid out must be accumulated at the time the liability is incurred.

young men and women. Of the people in the top mental categories, the Army found that half aspire for education above the high school level. These people, it believes, are motivated by educational incentives rather than increased pay or bonuses. Therefore, the Army concluded, the only way to expand the market substantially is to reach for the college-bound market which will require educational incentives.¹⁸

GI Bill proponents also contend that educational benefits are beneficial to the Nation because they help young people obtain further education that they may not otherwise have aspired to or attained. The GI Bill, one author says, carries the “positive symbolism of one of America’s most successful social programs, [whereas] enlistment bonuses crassly emphasize the cash-work nexus.”¹⁹ Past experience shows that men and women who receive an education under the GI Bill are generally more successful in private life, pay more taxes, buy more goods, and contribute more money to the economy than do less-well-educated people.²⁰ Furthermore, one study observed that the Congress is more supportive of educational incentives as “fitting rewards” for military service than it is inclined to appropriate an equivalent amount for enlistment or reenlistment bonuses.²¹

But critics—including an Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics)²²—do not view educational assistance programs for military personnel as the most cost-effective enlistment incentives at this time. In a 1982 study, CBO concluded that increases in the recruiter force or bonuses would be more cost-effective in attracting additional high-quality young people into the Army than any of four educational assistance options considered. Higher enlistment bonuses would cost about \$35,000 for each additional high-quality enlistee attracted compared to (1) \$45,000 under the contributory Veterans’

¹⁸Testimony of Gen. Maxwell R. Thurman, Vice Chief of Staff, Department of the Army, “Recruitment and Retention Readiness Act of 1983 and Other Legislative Initiatives for the All-Volunteer Force,” Hearing on S. 1747, S. 1873, and Related Bills Before the Senate Committee on Veterans’ Affairs, S. Hrg. 98-1139, 98th Cong., 2nd Sess. (1984), pp. 109-53.

¹⁹Charles C. Moskos, Jr., “Making the All-Volunteer Force Work: A National Service Approach,” Foreign Affairs, Vol. 60 (Fall 1981), pp. 29-30.

²⁰Hearing on S. 1747, S. 1873, and Related Bills, pp. 56, 80, 85, and 86.

²¹Military Manpower Task Force, A Report to the President on the Status and Prospects of the All-Volunteer Force (Washington, D.C.: Oct. 1982), p. V-8.

²²The Assistant Secretary also pointed out that, except for the Army, none of the military services offered to pay for a GI Bill out of their budget. See Hearing on S. 1747, S. 1873, and Related Bills, pp. 95-109.

Educational Assistance Program available at that time or (2) \$120,000 under the least costly non-contributory plan.²³ Educational benefits are also less cost-effective, some argue, because (1) they are not limited solely to those enlisting in the area of shortage and (2) young people heavily discount the value of benefits or payments to be received sometime in the future.²⁴

Critics also contend that educational assistance may encourage needed personnel to leave the service rather than reenlist. Accordingly, the perceived benefits may become a disbenefit: the current sophistication of military equipment and operations requires more well-trained careerists than short-term personnel, yet educational benefits may induce experienced personnel to leave the military at the very time the services need to retain them. However, one study suggests that permitting military personnel who reenlist to receive 25 percent of the face-value of their earned educational benefits in exchange for permanent loss of the entitlement would largely offset this incentive to leave.²⁵

GAO does not believe that sufficient evaluation has been made to estimate the long-term benefits of a more generous GI Bill. Although agreeing that past GI Bills have been good investments, GAO said there is risk in assuming that a GI Bill is a good investment today. Therefore, GAO suggested that answers are needed as to (1) what extent, if any, more college-bound young people are needed in the military services and (2) whether the estimated long-term payback in terms of increased tax revenues, a higher quality of life, and so forth, would exceed the costs of the GI Bill benefits.²⁶

²³The four basic options (excluding supplements) considered were (1) the then existing contributory Veterans' Educational Assistance Program with additional benefits to Army personnel enlisting in shortage skills, (2) a non-contributory plan with the government paying the same total benefits now paid under option 1, (3) a non-contributory plan with increased benefits over option 2 that would double upon serving 6 years, and (4) a non-contributory plan with the same benefits as in option 3 with provision that they could be transferred—upon completion of 10 years' service and continued active duty service—to the individual's spouse or children. Because the Congress has increased the Vietnam-era GI Bill in response to inflation, the study indexed future educational benefits. See Improving Military Educational Benefits: Effects on Costs, Recruiting, and Retention (Washington, D.C.: Mar. 1982), pp. 26-55.

²⁴See Steven Cylke et al., Estimation of the Personal Discount Rate: Evidence From Military Reenlistment Decisions, Professional Paper 356 (Alexandria, Va.: Center for Naval Analyses, Apr. 1982), p. 1.

²⁵CBO, Improving Military Educational Benefits, p. xxii.

²⁶Hearing on S. 1747, S. 1873, and Related Bills, pp. 156, 157, and 176. See also GAO, The Cost Effectiveness of an Education Assistance Program (GI Bill) as a Recruiting Incentive is Unknown, FPCD-82-12 (Washington, D.C.: Jan. 26, 1982).

In response to GAO's and other similar criticism, the Army contends that a universal GI Bill can apply to all military personnel, while also offering targeted add-ons for the "bright, high school graduates we need." Such add-ons are justified, the Army implies, because bright individuals more easily master and retain the skills needed, are more likely to complete their terms of service, and are less likely to become discipline problems than those who are less bright. The Army also contends that such benefits need not affect retention adversely because it does not need or want to retain everyone who enlists.²⁷

Military literature suggests other ways to shape an educational assistance program:

1. Explore ways of using federal student aid programs to provide incentives for military service. For example, the government could forgive a specified dollar amount of federal educational loans for each year of military service.²⁸

2. Establish a new category of soldier: the citizen-soldier. A new GI Bill could be designed that would attract the counterpart of the peacetime draftee. In return for serving at one-third less pay than the career soldier, the citizen-soldier would receive a generous GI Bill following 2 years of active duty. With lower-paid soldiers, there should be a reduction in the incidence of marriage and single parenthood at the lower enlisted levels which some consider a problem today. The citizen-soldier would be assigned to combat arms and other labor-intensive tasks with lower pay and no expectation of learning a civilian skill. Rather he/she would be serving to benefit ultimately from the GI Bill. The influence of more mature personalities (as evidenced by their predisposition toward deferred gratification) would be reintroduced into the barracks which should enhance cohesion at unit level.²⁹

Another study raises a different issue. It notes that linking some portion of such assistance to higher mental aptitudes—particularly as was done

²⁷Hearing on S. 1747, S. 1873, and Related Bills, pp. 151-52.

²⁸Military Manpower Task Force, A Report to the President, p. V-10; John T. Warner, A Thinkpiece on Navy Manpower Problems, Memorandum (CNA) 80-0312.10 (Alexandria, Va.: Center for Naval Analyses, Dec. 21, 1979), p. 14; GAO, Alternatives for Funding a GI Bill, FPCD-81-45 (Washington, D.C.: Sep. 17, 1981), p. 1.

²⁹Charles C. Moskos, Jr. "Citizen Soldier and an AVF GI Bill: Alternative to the Draft," unpublished paper, Evanston, Ill.: Northwestern University, Oct. 1982, pp. 3-4.

by the Army under the previous Veterans' Educational Assistance Program—may open the entire program to charges of inequity. The study observed that:

“This most generous feature of a major program of educational assistance is closed to a majority of the youth population based only on their supposed ‘quality,’ a basis that is used in no other major federal student assistance program. That the excluded group is made up disproportionately of blacks and other minority group members leaves the program open to charges of discrimination.”³⁰

Housing and Food Allowances As Taxable Income

Housing and subsistence (or the cash allowances received instead) are not taxed, and are regarded as a tax advantage. The value of this advantage is the amount of cash military personnel would need to maintain their current take-home pay if the value of their quarters and subsistence were subject to federal income tax.³¹ DOD estimated the aggregate tax advantage for all military personnel in fiscal year 1985 to be about \$2.5 billion.

Some studies contend that the value of housing and subsistence should be taxed. Eliminating this advantage is necessary, they argue, to reflect accurately the total cost of military personnel in the military budget, clarify the amount of compensation each person receives, and eliminate an inequity in the current system.³²

The tax advantage was not deliberately designed into the compensation system. Until 1925, military compensation (both pay and allowances) that was paid in cash was income subject to taxation. But, in 1925, the U.S. Court of Claims held that, within the laws imposing the income tax,

³⁰Richard L. Fernandez, Issues in the Use of Postservice Educational Benefits as Enlistment Incentives, A Rand Note, N-1510-MRAL (Santa Monica, Ca.: Rand Corporation, July 1980), p. 69.

³¹DOD, Military Compensation Background Papers: Compensation Elements and Related Manpower Cost Items, Their Purposes and Legislative Backgrounds, 2nd ed. (Washington, D.C.: GPO, July 1982), p. 67.

³²Those who contend that military housing and subsistence should be taxable usually do so in the context of justifying a salary system. For example, see GAO, Military Compensation Should Be Changed to Salary System, FPCD-77-20 (Washington, D.C.: Aug. 1, 1977). Because these issues can be viewed as mutually exclusive, we treat the taxation issue separately from a salary system. That is, a change to taxing housing and subsistence can be implemented without changing to a salary system. Recently, the Department of the Treasury recommended that housing and subsistence be classified as taxable income whether provided in-kind or as allowances; see Tax Reform for Fairness, Simplicity, and Economic Growth, Vol. 2, General Explanation of the Treasury Department Proposals, The Treasury Department Report to the President (Washington, D.C.: Nov. 1984), pp. 47-48.

military housing provided in-kind or by allowances was not income subject to taxation.³³ The decision served as a precedent for the exemption of other allowances (such as subsistence) from taxation.³⁴

For many years, the tax advantage provided military personnel was of relatively minor significance because the tax rates and level of pay and allowances were such that most personnel would have paid little or no taxes even if their housing and food were taxable income. However, beginning in the 1940s, the tax advantage became increasingly important with each succeeding increase in basic pay, allowances, or tax rates. In 1965, Congress formally recognized the existence of the tax advantage and required that its value be included in computing the amount of regular military compensation for each grade. But, because the tax advantage is not a cash outlay, it is not included as a part of DOD's budget authority.³⁵

Critics contend that the tax advantage should be eliminated and replaced with fully taxable military pay. Paying the tax advantage in cash would be beneficial, they argue, for three reasons:

- It could benefit decision-making by showing more clearly the actual cost of military personnel in DOD's budget. Actual costs are important in selecting the most cost-effective alternative from among several that may be identified in the overall budget allocation process. Such decisions include choices between personnel and equipment, careerists and non-careerists, active duty and reserve personnel, and military and civilian personnel.³⁶
- The advantage individuals receive would be clearer to them than it is now. Because the value of the tax advantage depends on an individual's circumstances (i.e., family size, outside or spouse income, and tax deductions), it is probably unrealistic to expect military personnel to make or understand this calculation under the current system.³⁷ By paying the tax advantage in cash, any confusion over the value of the advantage

³³Jones v. United States, 60 Ct. Cl. 552 (1925).

³⁴DOD, Military Compensation Background Papers, pp. 68-69.

³⁵DOD, Military Compensation Background Papers, pp. 69-70.

³⁶Richard V.L. Cooper, The All-Volunteer Force, pp. 41-53.

³⁷GAO, Military and Federal Civilian Disposable Income Comparisons and Extra Pays Received by Military Personnel, GAO/NSIAD-84-41 (Washington, D.C.: May 9, 1984), p. 6.

would be eliminated. The risk under the current system is that people will under-estimate the value of the advantage.

- It would eliminate an inequity in the current system that favors those in higher tax brackets; that is, single personnel benefit more from the tax advantage than married personnel, senior personnel more than junior personnel, and those with outside income more than those with no outside income.³⁸ For example, a single person with the same taxable income as a married person would be in a higher tax bracket and consequently pay more taxes. Therefore, the tax advantage (or tax savings) is worth more to single personnel than it is to married personnel. However, this outcome results more from the design of the tax system than it does from inequities in the compensation system.

In commenting on a salary system, DOD estimated that paying the tax advantage in cash would significantly increase DOD's budget and provide dubious benefits. DOD also believed it would significantly increase mobilization costs (when more people are added to the force).³⁹

Those favoring monetization of the tax advantage argue that it would not increase the cost of military manpower; it merely records the cost in the appropriate agency budget. Thus, they argue, it does not represent an additional allocation of resources to DOD or an increase in the total cost to the government for maintaining the same level of national defense.⁴⁰

However, paying the tax advantage in cash would appear to either increase the government's costs or decrease military personnel's take-home pay. If take-home pay were to remain the same, gross pay would have to be increased by more than the amount of the current tax advantage. This increase would be necessary to cover the amount of individuals' Social Security taxes and state taxes on the amount of the tax advantage. Not increasing gross pay would, of course, reduce individuals' take-home pay. In either case, the contribution now made by the government to Social Security for the nontaxable portion of military

³⁸CBO, *The Costs of Defense Manpower: Issues for 1977* (Washington, D.C.: GPO, Jan. 1977), p. 92; Department of the Treasury, *Tax Reform for Fairness*, p. 47.

³⁹*Department of Defense Authorization for Appropriations for Fiscal Year 1982: Hearings on S. 815 Before the Committee on Committee on Armed Services*, U.S. Senate, Part 6, 97th Cong., 1st Sess. (1981), pp. 3771-73.

⁴⁰See, for example, GAO, *Military Compensation Should Be Changed*, pp. 31-34.

compensation could be offset against the additional contributions that would be required of DOD.⁴¹

Salary System

Many studies have recommended that the military pay and allowance system be replaced with a salary system to make military pay more understandable.⁴² Annual statements of estimated total compensation—cash and in-kind—issued to each military person in recent years should already have helped military personnel to better understand the value of their military compensation. However, whether the statements have succeeded in making military compensation more understandable has not been measured.

Studies in the 1970s reported that military personnel underestimated the value of their military compensation.⁴³ If military personnel sufficiently underestimate the value of their compensation, they may choose civilian employment over military service even though the military offered the most lucrative compensation package. To the extent this happens, military compensation is inefficient because it requires more pay than necessary to attract and retain the quality and quantity of people needed. Under a salary system, military personnel would be paid for food and housing and, in turn, would pay for the food and housing they obtain whether from the government or from private sources. Some believe that this would make military pay more visible, and greater visibility would lead to a better understanding of it.

⁴¹Because not all military compensation is taxable, and therefore not included in the base for computing Social Security, the government currently contributes up to \$1,200 annually (\$100 for each \$300 of taxable compensation) to Social Security for military personnel over and above the contribution computed on the basis of taxable income. Individuals are not required to make a similar contribution. See DOD, Military Compensation Background Papers, p. 222. See also GAO, Noncontributory Social Security Wage Credits for Military Service Should Be Eliminated, FPCD-79-57 (Washington, D.C.: Aug. 8, 1979).

⁴²As previously stated, proponents also contend that it would show in DOD's budget more nearly the actual cost to the government for military personnel and make compensation more equitable by paying married and single personnel the same and by removing the tax advantage. DOD, Report of The First Quadrennial Review of Military Compensation—Modernizing Military Pay, Vol. 1, Active Duty Compensation (Washington, D.C.: GPO, Nov. 1, 1967), p. S-5; The Report of the President's Commission on an All-Volunteer Armed Force, commonly referred to as "the Gates Commission Report" (Washington, D.C.: Feb. 1970), p. 61; DMC, Defense Manpower, p. 332; GAO, Military Compensation Should Be Changed, p. 34; Cooper, Military Manpower, p. 380.

⁴³Report of the First QRMC, Vol. 1, pp. 37-38; GAO, Need to Improve Military Members' Perceptions of Their Compensation, FPCD-75-172 (Washington, D.C.: Oct. 10, 1975), pp. 2-3; Cooper, Military Manpower, pp. 365-66; GAO, Need to Better Inform Military Personnel of Compensation Changes, FPCD-78-27 (Washington, D.C.: July 12, 1978), pp. 20-21.

Others, including DOD, advocate continuing the present system of pay and allowances because it is built around the institutional nature of military service. They contend that a salary system would destroy traditional values because it would cause military service to be viewed as "just another job." Salaries, they argue, would also encourage personnel to move off-base which would undermine military efforts to build cohesiveness and teamwork. And, they point out, the pay and allowances system has proved satisfactory both in peace and war. DOD also believes that a salary system would provide dubious benefits; it would include only four of the more than 40 pay elements at an estimated transition cost of \$4 billion and recurring annual costs of \$3 billion. The recurring costs would include raising single individuals' pay to the level received by married people and paying cash for the tax advantage.⁴⁴

A more recent study estimated that a salary system would result in only a small increase in reenlistments.⁴⁵ Using modeling techniques, this study estimated the effect on reenlistment rates if military personnel correctly estimated the value of their compensation. It showed that accurate estimates would increase reenlistments 2 percentage points from 22.5 percent to 24.9 percent. However, it also shows this increase could be approximated without using a salary system. The model showed that by taking other steps to make compensation more visible—such as printing the value of regular military compensation on the paycheck—reenlistments could be increased to 24.6 percent. The study concluded that the benefits of a salary system would not outweigh the "considerable costs and dislocations" that would be incurred in establishing it. Costs apparently referred to establishing and administering a system for collecting rents on government-owned housing. Dislocations apparently referred to the trauma involved in changing the system.

To make military pay more visible, at the urging of the House Appropriations Committee in Fiscal Year 1981, all of the military services now issue to each military person an annual statement to assist military people in estimating the value of their total compensation.⁴⁶ These statements are divided into three sections listing the direct compensation

⁴⁴Report of the President's Commission on Military Compensation, pp. 106-10; Hearings on S. 815, pp. 3771-73; Draft Report of the Third QRC, pp. 21-24; Charles C. Moskos, Jr., "Compensation and the Military Institution," *Air Force Magazine*, Vol. 61, Apr. 1978, pp. 33-34.

⁴⁵Winston K. Chow and J. Michael Polich, *Models of the First-Term Reenlistment Decision*, R-2468-MRA&L (Santa Monica, Ca.: Rand Corporation, Sept. 1980), p. 36.

⁴⁶Department of Defense Appropriation Bill, 1981, H. Rep. 96-1317, 96th Cong., 2nd Sess. (1980), pp. 27-28.

(basic pay, housing, subsistence, estimated tax advantage, and any special pay received), the indirect compensation (retirement, medical care, survivors' programs, and Social Security), and other considerations (where the individual can compute the value he/she places on benefits such as educational programs and commissary and exchange privileges).

A shortcoming in the statement is the value shown for the indirect compensation elements. They are valued at the cost individuals in a civilian organization contribute for such benefits rather than at the cost to the government. Therefore, the statement does not help people fully understand the value of their indirect compensation. For example, the amount shown for retirement is the amount an employee would contribute under the Civil Service system (which is 7 percent) even though DOD's contribution to the retirement fund for military personnel is much more.⁴⁷ To illustrate the impact of using just 7 percent, consider an E-6 who is coming to his/her second reenlistment decision at the end of 8 years service and making \$13,800 annually in basic pay. Using the 7 percent, he/she would compute the value of DOD's contribution to the retirement system that year at \$967, but, using the actual 41 percent, the correct amount would be \$5,662 or \$4,695 more.

Retirement

Since the conclusion of World War II, much has been written about why and how the military retirement system should be changed. In this study, we do not attempt to deal with all the debates and proposals related to the system. Rather, we introduce some of the considerations underlying differences in viewpoints, some key concerns, and some recent recommendations pertaining to the non-disability portion of the system.⁴⁸

Over the years, several studies have recommended changes to the military retirement system.⁴⁹ All proposed reduced benefits, and either

⁴⁷For the retirement system as a whole, the accrual cost is about 51 percent of basic pay. Separately, it is about 75 percent for officers and 41 percent for enlisted personnel. The difference is because, as a proportion of their entry group, about one-third as many enlisted personnel become eligible for retirement as do officers. See DOD, Valuation of the Military Retirement System: FY 1983 (Arlington, Va.: Office of the Actuary, Defense Manpower Data Center, n.d.), p. 14.

⁴⁸Other elements of the Uniformed Services retirement system include the survivors benefit plan for active duty personnel, National Guard and Reserve non-disability retirement, and disability retirement.

⁴⁹Studies and proposals during the last 10 years include: DMC, Defense Manpower, p. 374; Les Aspin, U.S. Representative from Wisconsin, Guns or Pensions: A Study of the Military Retired Pay System (Washington, D.C.: Nov. 1976), pp. 21-26; DOD, The Third Quadrennial Review of Military Compensation: Staff Studies and Selected Supporting Papers, Vol. 3, Retirement and Survivor Benefits—The

stated or implied that the current system is too expensive. In examining many of these studies, the Fifth QRMC⁶⁰ concluded that the methodology was flawed, incomplete, or failed to consider adequately the impact of the proposed modifications on the military's ability to meet its personnel requirements.

Because retired military pay is a major part of the total military compensation package, changes to it typically will affect retention and thus alter the size and average experience level of the military services. However, advocates of change believe that, by offering less costly incentives, retired pay can be reduced without adversely affecting the military's ability to meet its manpower requirements.

Currently, an immediate retirement annuity is paid to military personnel completing 20 years of military service. The annuity is equal to 2.5 percent of final basic pay multiplied by the number of years of service up to a maximum of 75 percent. (For personnel entering military service after September 7, 1980, retirement pay will be based on the average of the high three years' basic pay.) Retirement pay is fully adjusted for inflation on the basis of the Consumer Price Index (except for adjustments during fiscal years 1983-85). Over one-third of all military personnel eligible for retirement leave upon completing 20 years of service. Average retirement ages are 42 for enlisted personnel after 22 years of service and 46 for officers after 24 years. As of September 30, 1984, average non-disability retired pay for enlisted personnel was \$9,648 annually and for commissioned officers it was \$23,052.⁶¹ In addition, retired military personnel are eligible for earned Social Security benefits with no reduction in their military retirement annuities.

Health Care Benefit (Washington, D.C.: Dec. 1976); GAO, The 20-Year Military Retirement System Needs Reform, FPCD 77-81 (Washington, D.C.: Mar. 13, 1978), p. 33; Report of the President's Commission on Military Compensation, pp. 62-73; Cooper, Military Manpower, p. 379; DOD, Uniformed Services Retirement Benefits Act, Legislative Proposal 96-80, (1979); President's Private Sector Survey on Cost Control, Management Office Report on Federal Retirement Systems, commonly known as "the Grace Commission Report"; DOD, Fifth Quadrennial Review of Military Compensation, Vol. 1, Uniformed Services Retirement System (Washington, D.C.: Jan. 1984).

⁶⁰DOD, Fifth Quadrennial Review of Military Compensation: Overview (Washington, D.C.: 1984), pp. 11-12.

⁶¹The lump-sum equivalent of retired pay ranges from about \$100,000 for a very junior enlisted person after 20 years of service to over \$1 million for very senior officers with 30 or more years of service. See DOD Statistical Report on the Military Retirement System: FY 1984, RCS No. DDM (A) 1375 (Arlington, Va.: Office of the Actuary, Defense Manpower Data Center, n.d.), pp. 91, 106, 152, and 248.

Concerns over the present military retirement system center around its costs. Over the past 30 years, annual outlays have risen from about \$500 million annually to about \$16.5 billion. On an accrual basis, retirement costs equal about 51 percent of DOD's total basic pay (or about 35 percent of regular military compensation). The four primary causes of the increase are inflation, wage growth, retired population increase, and retired pay adjustments.⁵²

Although the outlays will continue to grow in the future, they are projected to grow more slowly and reach \$22.4 billion by the year 2043 (in constant dollars). Factors influencing future growth include increased life expectancy and increased retention.⁵³

Criticisms also have been voiced that the current system is inequitable, inefficient, and inhibits effective force management. Critics' views are summarized below:⁵⁴

1. When compared to public- and private-sector systems, the system is inequitable because it

- provides more generous benefits,⁵⁵
- receives complete protection against inflation,
- lacks severance payments, and
- does not consider Social Security benefits.

2. Inequities exist within the system because:

⁵²Fifth QRCM: Overview, p. 11.

⁵³CBO, Modifying Military Retirement: Alternative Approaches (Washington, D.C.: Apr. 1984), p. xii.

⁵⁴Unless otherwise noted, the listing is based on DMC's review of defects in the system that were cited in studies over the previous 10 years (Defense Manpower, p. 348) and the Report of the President's Commission on Military Compensation, pp. 26-29.

⁵⁵Supporters of the current system argue that a more appropriate comparison is between military retirement and retirement plans for federal, state, and local protective service personnel such as firemen, policemen, and air traffic controllers. GAO's comparison of military retirement benefits with benefits computed under criteria governing some of these systems (using military basic pay as the base) showed that, with some exceptions, lifetime retirement benefits (1) for 20 years of military service were more generous under the military criteria and (2) for 30 years of military service were generally similar. While some plans permitted retirement at any age with either 20 or 25 years of service, the majority permitted retirement at age 50 with a minimum 20 or 25 years of service. See GAO, How the U.S. Military Retirement System Compares With Other Systems, Statement of Kenneth J. Coffey before the Subcommittee on Military Personnel and Compensation, House Committee on Armed Services, July 14, 1983, pp. 24, 25, 34-38, and apps. II, III and IV.

- It does not provide vesting prior to 20 years of service. Therefore, those who serve at least 20 years receive a substantial benefit whereas those who serve less than 20 years receive nothing.
- For those who retire, it rewards shorter careers more than longer ones. On an actuarial basis, the shorter the career, the greater the amount—measured as a percent of basic pay—that must be set aside to meet the ultimate retirement payments. This occurs (assuming the same life expectancy) because the shorter the careers, the longer the individual receives such payments.⁵⁶

3. The system is regarded as inefficient because:

- It has little influence on prospective recruits or military personnel in their first enlistment. This results from the assumption that young people have a strong preference for current rather than deferred income.
- It provides a strong incentive for personnel in their 12th through 19th years of service to remain on active duty even though they may want to leave (or may not be needed). This occurs in part because of the preference for deferred income by older people, but, more importantly, because those who leave before completing 20 years of service receive nothing.

4. The system inhibits effective force management because:

- Managers are reluctant to separate ineffective people who are approaching 20-year retirement eligibility.
- It motivates early retirement: 20-year annuities are more competitive than annuities for longer service. Although an individual's annuity continues to rise with additional service (because of pay increases for additional time in service, promotions, and a 2.5-percentage point-per-year multiplier), it does not apparently offset the attractiveness of the annuity available after completing 20 years of service.⁵⁷

To understand better the debate over changing the military retirement system, it is necessary to understand the differing viewpoints between DOD and those who argue for change. The Grace Commission Report

⁵⁶Cooper, *Military Manpower*, pp. 374-375.

⁵⁷CBO, *Modifying Military Retirement*, p. 18.

highlighted the similarities and differences between public- and private-sector systems.⁵⁸

“Retirement systems in both the public and private sectors are generally designed to fulfill three basic objectives—attracting, retaining and, ultimately, separating employees in a socially acceptable manner. While similar in objectives, public and private sector retirement programs differ considerably in the relative importance attributed to each objective and the specific program provisions by which these objectives are attained.” (Underscoring added.)

DOD emphasizes that the military retirement system is first and foremost a management tool to support and complement the manpower requirements of the military services in order to meet national security objectives. As a management tool, DOD points out that it is designed to help insure that the following needs are fulfilled:

- to maintain young, vigorous, and mission-ready forces capable of operating efficiently both in peace and in war by providing for a continuing flow of officers and enlisted personnel through the military services' required personnel structures;
- to establish the choice of a career in the military as a reasonably competitive alternative by providing a measure of financial security (retirement) after release from active or reserve duty for military personnel and their survivors; and
- to support a mobilization base of experienced personnel subject to recall to active duty during time of war or national emergency.⁵⁹

In contrast, others contend that providing for old-age security should be the primary purpose of the retirement system; that is, providing military people with a measure of income insurance in old age.⁶⁰ They question the extent to which lifetime retirement annuities should be used to meet force-management goals. Instead, they contend that other less costly tools—such as severance pay, active duty pay, and bonuses—should be used to meet changing force requirements.⁶¹

⁵⁸Grace Commission, Management Office Report.

⁵⁹Fifth QRM: Overview, p. 9.

⁶⁰Aspin, Guns or Pensions, p. 27; Report of the President's Commission on Military Compensation, p. 64; Grace Commission, Management Office Report.

⁶¹Richard V.L. Cooper, Military Retirees' Post-Service Earnings and Employment, R-2493-MRAL (Santa Monica, Ca.: Rand Corporation, Feb. 1981), p. 48.

While differences between these two views may seem inconsequential at first glance, the extent to which one emphasizes either “force management” or “old-age security” as the principal purpose of the military retirement system affects its ultimate design and benefits.⁶² Each approach leads analysts to pursue answers to a different set of questions and, consequently, to examine different premises. For example, if one approaches the military retirement system as a force-management tool, then the questions concern the desired shape of the manpower force profile (which is displayed in a years-of-service distribution).⁶³ On the other hand, if old-age security is the controlling objective, one focuses on questions about how much an individual’s retirement income (from pensions and Social Security) should be in relation to preretirement income and at what age individuals should be eligible to retire.⁶⁴

Different views about the purpose of the military retirement system will also lead to different conclusions about how the system should be designed. This is illustrated in two recent studies by the Fifth QRM (who viewed the system as a force-management tool) and the Grace Commission (who viewed the system as an old-age pension). As shown in the analyses by CBO in tables 4.1 and 4.2, the Fifth QRM staff proposed changes in some elements of the retirement system that would, among other things, reduce fiscal year 1985 retirement accrual costs by 9.2 percent, increase the size of the career force, and increase the average seniority. In contrast, the Grace Commission proposed changes in all elements of the retirement system that would, among other things, reduce fiscal year 1985 accruals by 76.7 percent while also reducing the size of the career force and average seniority. Thus, depending upon initial premises, changes to the retirement system can impact the force profile quite differently.

⁶²GAO, Compendium of GAO's Views on the Cost Saving Proposals of the Grace Commission, Vol. 2, Individual Issue Analyses, GAO/OCG-85-1 (Washington, D.C.: Feb. 19, 1985), p. 406.

⁶³American Enterprise Institute for Public Policy Research, Military Retirement: The Administration's Plan and Related Proposals, Legislative Analysis No. 19, 96th Cong., 2nd sess. (Washington, D.C.: July 1980), p. 18.

⁶⁴Aspin, Guns or Pensions, p. 7-8; President's Commission on Pension Policy, Coming of Age: Toward a National Retirement Income Policy (Washington, D.C.: GPO, 1981).

Table 4.1: Comparison of the Current Military Retirement System Benefits With Proposals of the Fifth QRM and the Grace Commission

Element	Current System	Fifth QRM ^a	Grace Commission
Formula	2.5 percent per year of service (max 75 percent)	Same as current system	1.6 percent per year of service (max 48 percent)
Annuity base	Final basic pay (high-3 for those entering after Sept. 7, 1980)	Same as current system	High-5 basic military compensation
Two-tier provision	None	Annuity available at 20 years of service but reduced (3 percent per year) for those with less than 30 years of service	Retirement age of 62; reduced annuity at age 55 (6-percent annual reduction) for 20 or more years of service
Vesting	After 20 years of service	After 20 years of service	After 10 years of service
Transition pay	None	Enlisted: three times annual basic pay Officer: two times annual basic pay	(b)
Inflation protection	Full COLA ^c after 1985	Three-quarters COLA up to age 62; full COLA thereafter	Modified full COLA before age 62; one-third COLA thereafter
Social Security integration	None	None	Yes; reduction of 1.25 percent per year of service times primary Social Security benefit
Grandfathering (Leave system unchanged for personnel in the military)	Not applicable	Choice for members with 12+ years of service at enactment; none for partial COLA	Members with 10+ years of service at enactment; none for formula and COLA

^aThe Fifth QRM offered four different alternatives in its study. CBO analyzed this proposal which was the preferred alternative of the staff who did the study.

^bDOD shall determine the need for a 5-year transition payment for those retiring with 20 or more years of service (but prior to age 62). Such payment could be the same as normal retired pay in the first year, with a progressive 20-percent reduction for each of the remaining 4 years.

^cCost of Living Adjustment.

Source: CBO, Modifying Military Retirement, p. 44-45.

Table 4.2: Comparison of the Impact of the Fifth QRMC and Grace Commission Proposals on Retirement Costs and Force Management

	Fifth QRMC	Grace Commission
Accrual savings in 1985 (percent)	9.2	76.7
Reduction in 1985 budget authority (Billions of dollars)	1.6	13.5
Change in career force (personnel with more than 4 years service)		
Size (percent)	+4.7	-11.0
Average seniority (percent)	+2.3	-7.9
Increase in incentive for long career (20+ years)	Strong	Strongest
Increase in incentive for journeyman retention (4-12 years)	None	Strong
Adds flexibility to separate involuntarily	No	Yes
Risk of unanticipated effects	Small	Large

Source: CBO, Modifying Military Retirement p. xix.

The Grace Commission proposal also poses a greater risk of unanticipated effects (table 4.2). One effect estimated by CBO is reductions in the career force and seniority level. To offset this effect, current compensation would have to be increased to provide the incentives necessary to retain personnel. Although the Grace Commission did not estimate to what extent current compensation would have to be increased to deal with such an effect, any increase would have to be deducted from the 76.7 percent savings projected to arrive at net savings.⁶⁵

GAO has not taken a position on whether the military retirement system should be viewed primarily as a force-management tool or as an old-age pension system. But, GAO (and others) has stated that no element of the compensation package should be evaluated in isolation, as has been done by many on both sides of this question, and that in its totality, the military compensation package should be efficient.⁶⁶

While DOD argues that 20-year retirements are essential to maintaining a young and vigorous mission-ready force, critics contend that this “vague concept has not been carefully analyzed or adequately defended.”⁶⁷ Critics agree that some skills in the military do require youth and vigor, but they also observe that many military personnel spend all or the greatest part of their careers in occupations that do not require exceptionally vigorous duties. Yet, they are eligible to retire under the same criteria as

⁶⁵GAO, Compendium, Vol. 2, p. 407, and The 20-Year Military Retirement, p. 32.

⁶⁶GAO, Compendium, Vol. 2, p. 407, and The 20-Year Military Retirement, p. 32. See also Cooper, Military Manpower, p. 375.

⁶⁷Report of the President's Commission on Military Compensation, p. 53; GAO, The 20-Year Military Retirement, pp. 8-14, and 32.

those who serve in the more demanding type positions. This argument prompted GAO to raise the following questions which the services need to answer to develop an optimum force profile and an efficient retirement system:⁶⁸

- “1. What skills require youth and vigor?
2. In what age bracket are members no longer able to perform their duties?
3. How much of the force is actually engaged in work requiring youth and vigor?
4. How much of an individual’s career is devoted toward more physically demanding work and at what stage of the member’s career?
5. To what degree do career members perform the more physically demanding work?
6. Are the duties of senior members more concerned with judgment, knowledge, and experience?
7. Is the present mix of career and noncareer personnel the best?”

To provide youth and vigor in those occupations where they are needed and to also provide an incentive for people to serve in such occupations, some studies have recommended that the length-of-service criterion for retirement be based on the type of duty performed.⁶⁹ One study recommended that retirement be available after 20 years of service in combat jobs and 30 years in non-combat jobs. Because some people would work both in combat and non-combat jobs during their careers, every job would be assigned a multiplier between 1 and 1.5, depending on the type job and its demands. Each day of active duty would earn points equal to 1/365th times the multiplier applicable to an individual’s assigned job. Upon earning 30 retirement points, individuals would be eligible for retirement.⁷⁰

In response to this recommendation, DOD maintains that the unique conditions of military service necessitate a relatively youthful force universally. It stated:

⁶⁸GAO, The 20-Year Military Retirement, p. 32.

⁶⁹DMC, Defense Manpower, p. 374; GAO, The 20-Year Military Retirement, pp. ii and 33.

⁷⁰DMC, Defense Manpower, p. 374.

Chapter 4
Composition of the Compensation Package

“All members, regardless of occupational specialty, are subject to combat area assignments. Even rear area personnel must be able to perform their duties continuously with little rest for protracted periods in support of combat operations. The fact that these personnel may live under the physical and mental strain of the constant threat of attack and must be prepared to fight, as was the case in Viet Nam, cannot be discounted. Most older members do not readily adapt to and perform effectively under these conditions.”⁷¹

⁷¹DOD letter, Principal Deputy Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics) to Director, Federal Personnel and Compensation Division, GAO, Jan. 13, 1978, The 20-Year Military Retirement Systems Needs Reform, FPCD-77-81 (Washington, D.C.: GAO, Mar. 13, 1978), pp. 71-72.

Administration of the Military Compensation System

Equally important to obtaining and maintaining a cost-effective compensation system are measures to keep it updated. To achieve increased system effectiveness, changes have been suggested in two areas: setting up an independent compensation board and selecting an index more representative than the one now used to update most of the pay elements of regular military compensation.

Permanent Independent Compensation Board

Several studies support establishing a full-time, permanent compensation board to continuously review military compensation and related issues and make recommendations to the President and the Congress. A principal argument for an independent board is to ensure an unbiased application of agreed-upon principles in the evaluation and updating of the military compensation system. Proponents argue that such a board, would, in the long term, contribute to a more cost-effective pay system and bring stability to the compensation setting process.¹

The advantages put forth for an independent board, compared to previous ad hoc commissions and quadrennial reviews, are two-fold. The board would have a permanent staff—with sophisticated research capability to analyze properly the issues and evaluate the long run effects of various proposals—which would provide an institutional memory. The board would also have authority to submit its recommendations to the Congress without having to obtain consensus from the military services, DOD, and the Office of Management and Budget.

Over the past decade and a half, numerous top-level commissions have been appointed to study and make recommendations on how the military pay system could be improved. Almost without exception, no action was taken on these studies. Even the quadrennial review of military compensation—the legally² mandated process begun in 1967 that has been carried out within DOD—has been largely unable to bring about major improvements in the system. This occurs because DOD and the services cannot reach a consensus about many of the quadrennial review recommendations to reform the system.

¹DMC, *Defense Manpower: The Keystone of National Security*, Report to the President and the Congress (Washington, D.C.: GPO, Apr. 1976), pp. 308-16; GAO, *The Congress Should Act to Establish Military Compensation Principles*, FPCD-79-11 (Washington, D.C.: May 9, 1979), p. 29; *Department of Defense Authorization for Appropriations for Fiscal Year 1983: Hearings on S. 2248 Before the Committee on Armed Services*, U.S. Senate Part 2, 97th Cong., 2nd Sess. (1982), pp. 790-91; John T. Warner, "Issues in Evaluating Military Compensation Alternatives," *Defense Management Journal*, Fourth quarter, 1983, p. 24.

²37 U.S.C. 1008(b).

If a board were established, it could review and make recommendations on the entire range of current and deferred compensation and related issues including the general level, structure, and composition of the military compensation package. Such review would include benefits furnished in-kind, charges for such benefits, and compensation items or benefits not included in DOD's budget, such as benefits administered by the Veterans Administration. The board would also monitor special and incentive pays to determine whether they continue to be needed and to identify any new pay that it believes is needed.

DOD has disagreed with the creation of an independent military compensation board. DOD stated that it

“would be another ‘headless fourth branch’ of government, accountable neither to the Executive nor Legislative Branches, but exercising executive functions over the procurement and maintenance of DOD manpower. Military compensation should remain under the control of the President and the Secretary of Defense and [be] subject to Congressional review and approval.”³

Although DOD did not elaborate on the rationale for its position, its conclusion is consistent with the idea that compensation is a management tool. As such, DOD is saying that it—rather than a board that has no accountability for national security—must have control of shaping the compensation system in a form that it believes best achieves the force structure necessary to meet national security objectives.

GAO views the total compensation package as a set of management tools to be used to achieve specific mission related goals and requirements. To deal with changing personnel requirements and staffing problems in a cost-effective and efficient manner, GAO has testified in recent years that DOD should have more flexibility—along with increased accountability—for compensation decisions. More flexibility is needed, GAO asserts, to identify and promptly apply appropriate compensation incentives to specific staffing problems. GAO testified that, ideally, DOD managers should have (1) adequate resources, (2) authority to apply the resources in a timely manner, (3) authority to make adjustments,

³DOD letter, Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) to Comptroller General of the United States, commenting on a GAO report (The Congress Should Act to Establish Military Compensation Principles), July 5, 1979, p. 1. See also Department of Defense Response to the Report to the President and the Congress by the Defense Manpower Commission (Washington, D.C.: Jan. 1978), p. 129.

(4) authority to target the resources to the problem areas, and (5) adequate feedback to know if the targeting is working.⁴

Annually Updating Military Pay

Whether the principle of comparability, competitiveness, or a combination of the two is used for setting military pay, some contend that a process is needed to update military pay annually. In fact, many, including DOD, believe the current process should be changed. DOD would refine the current across-the-board pay adjustment process, while others favor changing to a more competitive approach.

Current Adjustment Process

Determining the annual military pay increase involves a pay survey and presidential and congressional action. Since 1967, the annual military pay increases (with some exceptions) have been linked by law to the average percentage increase in the General Schedule salaries for federal employees. These increases are based on a pay survey of professional, administrative, technical, and clerical workers in the private sector; by using this survey data, it is hoped that comparability will be achieved between federal and private-sector pay. After the survey and related analyses, the President's Pay Agent recommends pay adjustments to the President. If the President decides on a comparability adjustment, he approves the recommendation, or he may recommend to the Congress a less costly alternative. The President's recommendation prevails unless the Congress enacts legislation providing a different pay increase.⁵ In recent years, the President has consistently approved an amount that was less than the amount recommended by his Pay Agent.

For the military, this adjustment mechanism was intended to be temporary until a pay standard could be established and a more suitable

⁴See, for example, GAO statements by Kenneth J. Coffey, The Use of Monetary Recruitment and Retention Incentives before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services (Washington, D.C.: Nov. 19, 1981), pp. 2, 7, 8, 24, and 25, and Military Compensation Issues before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services (Washington, D.C.: Apr. 7, 1983), p. 24. While supporting more flexibility for DOD managers in compensation decisions, GAO also reported about this same time that DOD had not judiciously managed a program where it had considerable flexibility in making pay decisions. See statement of Kenneth J. Coffey, Navy and Marine Corps' Use of the Aviation Officer Continuation Bonus Program, before the Subcommittee on Defense, Senate Committee on Appropriations (Washington, D.C.: May 19, 1982), and Millions Spent Needlessly in Navy and Marine Corps' Aviation Bonus Program, GAO/FPCD-82-56 (Washington, D.C.: Aug. 9, 1982).

⁵This procedure results from the Supreme Court decision Immigration and Naturalization v. Chadha, 462 U.S. 919 (1983). Previous to this decision, which states that it is unconstitutional for the Congress to veto decisions of the President, either House of Congress could pass a resolution disapproving the President's decision in which case the change recommended by the President's Pay Agent would be implemented.

mechanism could be designed. But it has continued in effect with several modifications.

Currently, by law, the annual military pay adjustment applies to basic pay, basic allowance for quarters, and basic allowance for subsistence, unless the President determines that different actions would be in the best interest of the government. The President may allocate the overall increase on other than an equal-percentage basis among basic pay, allowance for quarters, and basic allowance for subsistence. The President may also apply the basic-pay-percentage increase differently among grades and pay steps. But, those with 4 years or less service may not receive an increase that exceeds the overall percentage-pay increase authorized. In no instance may any military member receive an increase in basic pay that is less than 75 percent of the overall percentage-pay increase authorized.⁶

Proposed Refinement in the Current Across-the-Board Approach

Proponents of the present annual across-the-board pay increase believe that military personnel favor the approach because it is based on a survey which uses specific criteria as opposed to some other more subjective means. Many studies suggest that other indexes would be more appropriate. Most recent studies—including one by DOD—support the Employment Cost Index (ECI) which was established in 1975 to measure labor cost changes across the economy.⁷ They view the ECI as superior to other existing or proposed indexes because it is

- more representative of the military skill mix;
- more equitable to the military member;
- more equitable to the taxpayer;
- more accurate a gauge of private-sector wage changes;
- more responsive to military managers' needs;
- more administratively manageable from a cost and resource standpoint;
- more understandable;
- more predictable;
- more stable; and
- preferable in terms of use of timely data.

⁶37 U.S.C. 1009.

⁷Military Manpower Task Force, A Report to the President on the Status and Prospects of the All-Volunteer Force (Washington, D.C.: October 1982), p. IV-5; DOD, Military Pay Adjustment Mechanism Study, Joint Services Report (Washington, D.C.: Apr. 15, 1982), p. 4-6; GAO, Observations on the April 15, 1982, Joint Services Report, "Military Pay Adjustment Mechanism Study," GAO/FPCD-82-78 (Washington, D.C.: Sept. 28, 1982), p. 2.

However, the ECI has some shortcomings:

- Applying the percentage indicated by the ECI to pay levels presumes that the pay levels are adequate at the time an organization begins using it. If the pay levels are too high or too low, application of the ECI will generally perpetuate that condition.⁸
- To the extent that the occupational distribution of the military workforce differs from the private sector, the ECI's applicability to the military would be limited.
- Because the ECI is an index of the cost of an hour of labor, it may not be easily adjusted for different workweek lengths.⁹
- Indexes solely based on wages of employed workers, such as the ECI, tend to overstate wage increases during periods of increasing unemployment when low-paid workers are laid off. Conversely, such indexes understate the increases needed during periods of decreasing unemployment when low paid workers are hired.¹⁰
- Because the ECI covers the whole workforce and the military employs people who are mostly under 40, it may not provide an accurate indicator of the change in pay levels necessary to attract and retain the personnel needed. This is because entry level compensation and growth is strongly affected by whether an individual is born in a "baby boom" or "baby bust" cohort. Individuals in larger cohorts experience depressed earnings.¹¹

Although opposing the across-the-board approach to setting and adjusting military pay without the benefit of an established pay standard, GAO agreed that the ECI was probably the most suitable index currently available for annually adjusting military pay.¹²

⁸DOD, Military Pay Adjustment Mechanism Study, pp. 4-6.

⁹Christopher Jehn, Setting Military Pay by Civilian Wage and Job Comparisons, Report CRC 207 prepared for the Third QRM (Alexandria, Va.: Center for Naval Analyses, July 1976), p. 51; DOD, "The Basis for Establishing and Adjusting Military Pay," The Third Quadrennial Review of Military Compensation: Staff Studies and Selected Supporting Papers, Vol. 7, Compensation Comparability and Pay Setting, a contract report prepared by Rand Corporation (Washington, D.C.: Dec. 1976), p. 38.

¹⁰Warner, "Issues in Evaluating Military Compensation Alternatives," p. 25.

¹¹Mark C. Berger, "The Effect of Cohort Size on Earnings Growth: A Reexamination of the Evidence," Journal of Political Economy, Vol. 93, No. 3, June 1985, p. 561.

¹²GAO, Observations on the April 15, 1982, Joint Services Report, p. 2. Although the pay survey of professional, administrative, technical, and clerical workers in the private sector and the ECI may show different pay increase percentages in any given year, cumulatively, both showed about a 66-percent increase for the 7-year period ended March 31, 1984. See GAO, Comparison of Federal and Private Sector Pay and Benefits, GAO/GGD 85-72 (Washington, D.C.: Sept. 4, 1985), pp. 8-11.

Alternatives for Changing From the Across-the-Board Approach

Critics of across-the-board pay increases support a more competitive approach to adjusting pay; that is, basing the increases on supply and demand for various skills or occupations. This, they contend, would avoid paying some military personnel more, and others less, than is needed to attract and retain them. To accomplish this, they would give the President, the Secretary of Defense, or some other body authority to make appropriate pay adjustments for each occupation.

One study agreed that the aggregate annual military pay raise should continue to be linked to the average Civil Service percentage increase. But, the study advocated permitting the Secretary of Defense to propose (apparently to the Congress) a division of the total pay raise by pay grade, by occupation, by service, or by some other appropriate class of personnel based on the relative staffing posture of each class; that is, to use a targeting type of approach. This proposal would allow, but not require, the development of separate pay tables by service or by occupation. The study also recognized that, during an inflationary year, a pay raise in some amount should be given to all service members to cushion the impact.¹³

Similarly, another alternative (although not supported by the majority of the study members) would allow the President to reallocate up to 25 percent of the aggregate pay raise to pay programs directed at skill and occupational shortages.¹⁴ This alternative would maintain a uniform basic pay table. By using this authority, the President could slow the growth in the military basic pay line.

Another proposed approach would provide for a periodic review, a pay adjustment mechanism, and expanded use of the bonus authority. The periodic review, possibly every 4 years (which could be incorporated into the present quadrennial review), would allow military pay to be restructured along occupational lines in accordance with changes taking place in the civilian sector. The pay adjustment mechanism would provide for adjusting pay between periodic reviews. However, to minimize the need for any major downward adjustments in an occupation as a result of a periodic review, pay increases between reviews would be limited to the lesser of the increase in the Consumer Price Index or the change in real wages among private sector workers. Use of the bonus

¹³Report of the President's Commission on Military Compensation (Washington, D.C.: GPO, April 1978), p. 127.

¹⁴Military Manpower Task Force, A Report to the President, pp. IV-8 to IV-10.

authority would be expanded between periodic reviews to solve shortage and overage problems.¹⁵

Some question whether a competitive pay adjustment approach would be fully funded. They note that changing to multiple pay tables also would add new complexities to a pay system which some in the Congress believe already is too complex. Thus, questions arise: Would the Congress act promptly to adjust military pay whenever a periodic review showed it to be outside a reasonable range of private-sector pay? Or, if more discretionary funding was required for add-on differential pay or bonuses, how would the Congress and Office of Management and Budget treat the requested funds? Implicit in such questions are concerns that, in moving to more of a market approach, needed military pay increases may not be fully funded.¹⁶

¹⁵DOD, "The Adjustment Mechanism for Military Pay: Present Policy and Alternative Approaches," The Third Quadrennial Review of Military Compensation: Staff Studies and Selected Supporting Papers, Vol. 7, Compensation Comparability and Pay Setting. A contract report prepared by Rand Corporation (Washington, D.C.: Dec. 1976).

¹⁶See Report of the President's Commission, dissenting view, p. 186; Linda D. Pappas, Perry W. Polk, and Douglas H. Macpherson, "Compensation Standards," Supplementary Papers of the President's Commission on Military Compensation—Final Report: Analysis of Selected Military Compensation Issues(McLean, Va.: General Research Corporation, Apr. 1978), p. 22.

Literature Search

Literature Search Service	General Areas Searched
Defense Logistics Studies	Attrition rates Salary administration linked to military personnel. Retiree JUMPS
Defense Technical Information Center, Defense Logistics Agency, Cameron Station, Alexandria, Va.	Military retirement Military pay
Research and Development Information System, Navy Research and Development Center, San Diego, Calif.	Enlistment incentive/ inducements Enlistment influencing factors Training cost analysis First-term enlistment Military benefits, attitudes toward Personnel turnover Reenlistment standards Incentives Bonuses/special pays Pay special/incentive Reenlistment forecasting Job specialty/skill imbalance Reenlistment, related factors Reenlistment/drop-out rates by job specialty Retention Separations Enlistment/reenlistment incentives/inducements Retention rates Enlistment/reenlistment information projection system Attrition management information systems Enlistment/reenlistment data base
DIALOG, Lockheed Information Systems, Palo Alto, Calif.	Retirement Compensation Skill shortage/retention
National Technical Information Service, U.S. Department of Commerce, Springfield, Va.	
Social Sciences Citation Index, The Institute for Scientific Information, Philadelphia, Pa.	
Government Printing Office Monthly Catalog, U.S. Government Printing Office, Washington, D.C.	
Public Affairs Information Service International, Inc., New York, N.Y.	
Federal Index, Predicasts, Inc., Cleveland, Ohio.	
National Newspaper Index, Information Access Corporation, Menlo Park, Calif.	

List of Major Studies of Military Compensation

Since World War II, the military compensation system has been evaluated either in its entirety or in parts by at least 12 eminent study groups. Most of these groups were formed at the request or direction of the President. Members of these groups have included prominent private-sector individuals and high-level military officials. The following list shows each group and the year each issued its report.

Advisory Commission on Service Pay (Hook Commission)—1948

Cordiner Committee—1957

Gorham Committee and Randell Panel—1962

President's Special Panel on Federal Salaries (Folsom Panel)—1965

First QRMC—1967

President's Commission on an All-Volunteer Armed Force (Gates' Commission)—1970

1971 QRMC—1971 (Second QRMC)

Defense Manpower Commission—1976

Third QRMC—1977

President's Commission on Military Compensation—1978

Military Manpower Task Force—1982

Fifth QRMC—1984

Bibliography

We organized our bibliography by authoring organization, study group, or individual. Where a report, statement, letter, or paper represented the views of a government organization (such as DOD, CBO, or GAO), we listed the document under the organization and noted the individual(s) associated with the preparation or delivery of the document. Other documents are listed by author, or by organization, if an author is not identified.

American Enterprise Institute for Public Policy Research. Military Retirement: The Administration's Plan and Related Proposals, Legislative Analysis No. 19. 96th Cong., 2d Sess. Washington, D.C.: July 1980.

Aspin, Les, U.S. Representative from Wisconsin. Guns or Pensions: A Study of the Military Retired Pay System. Washington, D.C.: Nov. 1976.

Association of The United States Army. Fact Sheet: Military Retirement-- A Primer. Arlington, Va.: n.d.

----. Special Report: A Bill of Rights for Those Who Serve. Arlington, Va.: Oct. 1977.

----. Special Report--Military Compensation and Retirement: A Response to the Recommendations of the President's Commission on Military Compensation. Arlington, Va.: May 1978.

Balis, Ellen. Balancing Accession and Retention: Cost and Productivity Tradeoffs, Professional Paper 380. Alexandria, Va.: Center for Naval Analyses, Mar. 1983.

Becker, Gary S. Human Capital: A Theoretical and Empirical Analysis, With Special Reference to Education, 2d ed. New York: National Bureau of Economic Research, 1975.

Berger, Mark C. "The Effect of Cohort Size on Earnings Growth: A Reexamination of the Evidence." Journal of Political Economy, Vol. 93, No. 3, June 1985, pp. 561-573.

Binkin, Martin. America's Volunteer Military: Progress and Prospects. Washington, D.C.: Brookings Institution, 1984.

----. The Military Pay Muddle. Washington, D.C.: Brookings Institution, 1975.

----. Youth or Experience?: Manning the Modern Military. Washington, D.C.: Brookings Institution, 1979.

----. and Irene Kyriakopoulos. Paying the Modern Military. Washington, D.C.: Brookings Institution, 1981.

Black, Matthew. Personal Discount Rates: Estimates for the Military Population. Arlington, Va.: Systems Research and Applications Corporation, 1983.

Brunnhoeffer, Gilbert C., III, Major, U.S. Army. The Effects of the Proposed Changes in the Military Retirement System on Retention. Newport, R.I.: Naval War College, June 28, 1977.

Bureau of National Affairs, Inc. Wage and Salary Administration, Personnel Policies Forum Survey No. 131. Washington, D.C.: July 1981.

Chamber of Commerce of the United States. Employee Benefits 1982. Washington, D.C.: 1984.

Chipman, Mark, et al. Methods for Adjusting Military Pay, NPRDC TR 82-12. San Diego, Ca.: Navy Personnel Research and Development Center, Oct. 1981.

Chow, Winston K., and J. Michael Polich. Models of the First-Term Reenlistment Decision, R-2468-MRAL. Santa Monica, Ca.: Rand Corporation, Sept. 1980.

Clay-Mendez, Deborah, and Ellen Balis. Balancing Accession and Retention: The Disaggregate Model, Memorandum. Alexandria, Va.: Center for Naval Analyses, Aug. 1982.

The Conference Board, Inc. Compensating Employees: Lessons of the 1970s. New York: 1976.

Computer Based Systems, Inc. Pilot Study of Total Compensation for Selected Military and Civilian Occupations. Fairfax, Va.: July 1985. A contract study prepared for DOD.

Congressional Budget Office. The Costs of Defense Manpower: Issues for 1977, Washington, D.C.: GPO, Jan. 1977.

-
- . Costs of Manning the Active-Duty Military. Washington, D.C.: GPO, May 1980.
- . Improving Military Educational Benefits: Effects on Costs, Recruiting, and Retention. Washington, D.C.: Mar. 1982.
- . Military Educational Benefits: Proposals to Improve Manning in the Military. Background statement prepared by Robert F. Hale and Daniel F. Huck for the Subcommittee on Military Personnel and Compensation, House Armed Services Committee. Washington, D.C.: Sept. 1981.
- . Military Educational Benefits as a Recruiting Incentive. Statement by Robert F. Hale and Daniel F. Huck before the Subcommittee on Military Personnel and Compensation of the House Committee on Armed Services. Washington, D.C.: Nov. 17, 1981.
- . Modifying Military Retirement: Alternative Approaches. Washington, D.C.: Apr. 1984.
- Congressional Research Service. Designing a Retirement System for Federal Workers Covered by Social Security. Washington, D.C.: Committee on Post Office and Civil Service, House of Representatives, Dec. 1984.
- . What's Happened to Military Pay and Benefits Through the Past Decade, 78-9F. Prepared by Richard L. Eisenman, Paul Zinsmeister, and Robert L. Goldich. Washington, D.C.: Dec. 30, 1972.
- Cooper, Richard V.L. The All-Volunteer Force: Five Years Later, P-6051. Santa Monica, Ca.: Rand Corporation, Dec. 1977.
- . Military Manpower and the All-Volunteer Force, R-1450-ARPA. Santa Monica, Ca.: Rand Corporation, Sept. 1977.
- . Military Manpower and the All-Volunteer Force—Testimony Before the House Armed Services Committee (Subcommittee on Military Personnel): Feb. 15, 1978, P-5928. Santa Monica, Ca.: Rand Corporation, Feb. 1978.
- . Military Retirees' Post-Service Earnings and Employment, R-2493-MRAL. Santa Monica, Ca.: Rand Corporation, Feb. 1981.
- . The President's Commission on Military Compensation: A Review, P-6260. Santa Monica, Ca.: Rand Corporation, Nov. 1978.

Cotton, Charles A. Institutional and Occupational Values in Canada's Army. *Armed Forces and Society*, Vol. 8, No. 1, Fall 1981, pp. 99-111.

Cylke, Steven et al. Estimation of the Personal Discount Rate: Evidence From Military Reenlistment Decisions, Professional Paper 356. Alexandria, Va.: Center for Naval Analyses, Apr. 1982.

----. The Personal Discount Rates: Evidence From Military Career Decisions. Washington, D.C.: Department of the Navy (OP-162), 1982.

Dale, Charles. "Life-Cycle Earnings Comparisons of Military and Civilian Occupations," Working Paper PPRG 83-7. July 1983. Presented at the Conference of the Operations Research Society of America, Orlando, Fl., on Nov. 7-9, 1983.

---- and Curtis Gilroy. "The Effects of the Business Cycle on the Size and Composition of the U.S. Army." Atlantic Economic Journal, Vol. 11, No. 1, Mar. 1983, pp. 42-53.

Defense Manpower Commission. Defense Manpower: The Keystone of National Security. Washington, D.C.: GPO, Apr. 1976. Report to the President and the Congress.

Department of Defense. "The Adjustment Mechanism for Military Pay: Present Policy and Alternative Approaches." The Third Quadrennial Review of Military Compensation: Staff Studies and Selected Supporting Papers, Vol. 7, Compensation Comparability and Pay Setting. Washington, D.C.: Dec. 1976. A contract report prepared by Rand Corporation.

----. "Alternative Compensation Systems." The Third Quadrennial Review of Military Compensation--Staff Studies and Selected Supporting Papers, Vol. 7, Compensation Comparability and Pay Setting. Washington, D.C.: Dec. 1, 1976.

----. "The Basis for Establishing and Adjusting Military Pay." The Third Quadrennial Review of Military Compensation: Staff Studies and Selected Supporting Papers, Vol. 7, Compensation Comparability and Pay Setting. Washington, D.C.: Dec. 1976. A contract report prepared by Rand Corporation.

----. Career Compensation for the Uniformed Forces. Washington, D.C.: GPO, Dec. 1948. Advisory Commission on Service Pay, commonly referred to as "the Hook Commission Report."

-
- . "Compensation Comparability." The Third Quadrennial Review of Military Compensation--Staff Studies and Selected Supporting Papers, Vol. 7, Compensation Comparability and Pay Setting. Washington, D.C.: Dec. 1, 1976.
- . Defense Study of Military Compensation, Vol. 8, Cost and Value of Military Compensation, MA-2. Washington, D.C.: May 31, 1963.
- . Department of Defense Response to the Report to the President and the Congress by the Defense Manpower Commission. Washington, D.C.: Jan. 1978.
- . DOD Statistical Report on the Military Retirement System: FY 1984, RCS No. DDM (A) 1375. Arlington, Va.: Office of the Actuary, Defense Manpower Data Center, n.d.
- . Fifth Quadrennial Review of Military Compensation: Executive Summary. Washington, D.C.: Jan. 1984.
- . Fifth Quadrennial Review of Military Compensation: Overview. Washington, D.C.: Jan. 1984.
- . Fifth Quadrennial Review of Military Compensation, Vol. 1, Uniformed Services Retirement System. Washington, D.C.: Jan. 1984.
- . Letter, Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) to Comptroller General of the United States commenting on a GAO report (The Congress Should Act to Establish Military Compensation Principles), July 5, 1979.
- . Letter, Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) to Comptroller General of the United States commenting on a GAO report (The Navy's Pilot Shortage: A Selective Bonus and Other Actions Could Improve Retention), May 29, 1980.
- . Letter, Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) to Director, Federal Personnel and Compensation Division, GAO, June 27, 1977. Military Compensation Should Be Changed to Salary System, FPCD-77-20. Washington, D.C.: GAO, Aug. 1, 1977, pp. 41-46.
- . Letter, Principal Deputy Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics) to Director, Federal Personnel

and Compensation Division, GAO, Jan. 13, 1978. The 20-Year Military Retirement System Needs Reform, FPCD-77-81. Washington, D.C.: GAO, Mar. 13, 1978, pp. 69-72.

----. Letter, Secretary of Defense to Comptroller General of the United States, Oct. 26, 1982.

----. "Military and Civil Service Work Comparison." The Third Quadrennial Review of Military Compensation--Staff Studies and Selected Supporting Papers, Vol. 8, Work Level Comparison. Washington, D.C.: Dec. 1976.

----. Military Compensation Background Papers: Compensation Elements and Related Manpower Cost Items, Their Purposes and Legislative Backgrounds, 2nd ed. Washington, D.C.: GPO, July 1982.

----. Military Pay Adjustment Mechanism Study. Washington, D.C.: Apr. 15, 1982. Joint Services Report.

----. "Principles of Military Compensation." Feb. 16, 1983. Unpublished paper prepared for the Fifth Quadrennial Review of Military Compensation.

----. Report of the First Quadrennial Review of Military Compensation: Modernizing Military Pay, Vol. 1, Active Duty Compensation; Vol. 2, Appendices I Through IX; Vols. 4 and 5, The Military Estate Program. Washington, D.C.: 1967-1969.

----. Report of the 1971 Quadrennial Review of Military Compensation. Washington, D.C.: Dec. 1971.

----. Report of the 1971 Quadrennial Review of Military Compensation--Special Pays: Enlisted Attraction and Retention Incentive Pays. Washington, D.C.: Dec. 1971.

----. "Report of the Pay Adequacy Study." Washington, D.C.: Oct. 1979. Internal staff study—not an official DOD publication.

----. Report of the Third Quadrennial Review of Military Compensation--Military Compensation: A Modernized System. Washington, D.C.: Mar. 29, 1977. Draft of final report.

——. Reserve Compensation System Study: Final Report. Washington, D.C.: June 30, 1978.

——. Reserve Compensation System Study: Supporting Papers, Vol. 1, Basic and Special Pays; Vol. 2, Deferred Compensation and Benefits; Vol. 3, Miscellaneous Compensation-Related Topics. Washington, D.C.: June 1978.

——. The Third Quadrennial Review of Military Compensation: Staff Studies and Selected Supporting Papers, Vol. 1, Regular Military Compensation; Vol. 3, Retirement and Survivor Benefits—The Health Care Benefit; Vol. 5, The Military Factor; Vol. 7, Compensation Comparability and Pay Setting; Vol. 8, Work Level Comparisons; Vol. 10, Total Compensation Setting. Washington, D.C.: 1976-1977.

——. Uniformed Services Retirement Benefits Act, Legislative Proposal 96-80. 1979.

——. Valuation of the Military Retirement System: FY 1983. Arlington, Va.: Office of the Actuary, Defense Manpower Data Center, n.d.

Department of Labor, Bureau of Statistics. Employee Benefits in Medium and Large Firms, 1982, Bulletin 2176. Washington, D.C.: GPO, Aug. 1983.

Department of the Air Force. "Chapter 7: Manpower, Personnel and Training." Air Force 2000 Study. Washington, D.C, pp. 249-291.

Department of the Army. Chief of Staff, U.S. Army—White Paper 1983: The Army Family. Washington, D.C.: Aug. 15, 1983.

——. "The New G.I. Bill and the New Army College Fund." Recruiting brochure. n.d.

——. Testimony, Gen. Maxwell R. Thurman, Vice Chief of Staff. Recruitment and Retention Readiness Act of 1983 and Other Legislative Initiatives for the All-Volunteer Force: Hearing, on S. 1747, S. 1873, and Related Bills Before the Senate Committee on Veterans Affairs, S. Hrg. 98-1139. 98th Cong., 2d Sess. (1984).

Department of the Navy. Letter, Chief of Naval Operations to Chairman, Committee on Armed Services, U.S. Senate, concerning the importance of adequate military compensation, May 14, 1981.

Department of the Treasury. Tax Reform for Fairness, Simplicity, and Economic Growth, Vol. 2, General Explanation of the Treasury Department Proposals. Washington, D.C.: Nov. 1984. The Treasury Department Report to the President.

Edelstein, Dan N., Lt., U.S. Navy. "Retention: Is Pay the #1 Issue?" United States Naval Institute Proceedings, June 1980, pp. 74-78.

Enns, John H. Reenlistment Bonuses and First-Term Retention, R-1935-ARPA. Santa Monica, Ca.: Rand Corporation, Sept. 1977.

Etzold, Thomas H. Defense or Delusion? America's Military in the 1980's. New York: Harper & Row, 1982.

Faris, Dr. John H. The Citizen-Soldier in the Market Place: Recruitment and Retention in the All-Volunteer Force. Towson, Md.: Towson State University Foundation, June 22, 1981. Report prepared for the U.S. Army Research Institute for the Behavioral and Social Sciences.

Fernandez, Richard L. Issues in the Use of Postservice Educational Benefits as Enlistment Incentives, A Rand Note, N-1510 MRAL. Santa Monica, Ca.: Rand Corporation, July 1980.

General Accounting Office. Across-the-Board Pay Raises and Other Military Manpower Issues. Statement of Kenneth J. Coffey before the Senate Committee on the Budget. Washington, D.C.: Mar. 31, 1981.

----. Alternatives for Funding a GI Bill, FPCD-81-45. Washington, D.C.: Sept. 17, 1981.

----. Alternatives in Controlling Department of Defense Manpower Costs, PAD-77-8. Washington, D.C.: Nov. 12, 1976.

----. Comparison of U.S. Military and Civil Service Pay and Benefits. Statement of Kenneth J. Coffey before the Subcommittee on Civil Service, Post Office and General Services, Senate Committee on Governmental Affairs; and Subcommittee on Defense, Senate Committee on Appropriations. Washington, D.C.: Nov. 30, 1983.

----. Comparison of Federal and Private Sector Pay and Benefits, GAO/ GGD 85-72. Washington, D.C.: Sept. 4, 1985.

-
- . Compendium of GAO's Views on the Cost Saving Proposals of the Grace Commission, Vol. 2, Individual Issue Analyses, GAO/OCG-85-1. Washington, D.C.: Feb. 19, 1985.
- . Confusion Over Validity and Effects of Purported Petty Officer Shortage, GAO/NSIAD-84-30. Washington, D.C.: June 27, 1984.
- . The Congress Should Act to Establish Military Compensation Principles, FPCD-79-11. Washington, D.C.: May 9, 1979.
- . A Contributory Retirement System for Military Personnel, FPCD-76-43. Washington, D.C.: Mar. 4, 1976.
- . The Cost Effectiveness of an Education Assistance Program (GI Bill) as a Recruiting Incentive is Unknown, FPCD-82-12. Washington, D.C.: Jan. 26, 1982.
- . Defense Budget Increases: How Well Are They Planned and Spent?, PLRD-82-62. Washington, D.C.: Apr. 13, 1982.
- . Defense Spending and Its Relationship to the Federal Budget, GAO/PLRD-83-80. Washington, D.C.: Aug. 1983 (Revised).
- . High-Quality Senior Marine Corps Officers: How Many Stay Beyond 20 Years of Service?, GAO/PEMD-85-1. Washington, D.C.: Nov. 13, 1984.
- . How The U.S. Military Retirement System Compares With Other Systems. Statement of Kenneth J. Coffey before the Subcommittee on Military Personnel and Compensation, House Committee on Armed Services. Washington, D.C.: July 14, 1983.
- . Improvements Needed in the Survey of Non-Federal Salaries Used as Basis for Adjusting Federal White-Collar Salaries, B-167266. Washington, D.C.: May 11, 1973.
- . Information and Observations on the Need to Revise the Method of Increasing Military Pay, B-163770. Washington, D.C.: Mar. 14, 1974.
- . Less Expensive Internal Management Options May be Viable Alternatives for Countering Critical Military Skill Shortages, FPCD-82-16. Washington, D.C.: Apr. 19, 1982.

----. Letter, Comptroller General of the United States to the Secretary of Defense continuing a discussion of matters for consideration for more efficient management of DOD resources, June 24, 1982.

----. Military and Federal Civilian Disposable Income Comparisons and Extra Pays Received by Military Personnel, GAO/NSIAD 84-41. Washington, D.C.: May 9, 1984.

----. Military Compensation Issues. Statement of Kenneth J. Coffey before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services. Washington, D.C.: Apr. 7, 1983.

----. Military Compensation Should Be Changed to Salary System, FPCD-77-20. Washington, D.C.: Aug. 1, 1977.

----. Military Pay Raise and Enlisted and Aviation Officer Bonus Programs. Statement of Kenneth J. Coffey before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services. Washington, D.C.: Aug. 10, 1982.

----. Military Pay Raises and Other Manpower Management Issues. Statement of Kenneth J. Coffey before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services. Washington, D.C.: May 8, 1981.

----. Military Personnel Eligible for Food Stamps, FPCD-81-27. Washington, D.C.: Dec. 9, 1980.

----. Military Personnel Issues: Managing and Compensating the Armed Forces, GAO/FPCD-83-17. Washington, D.C.: Oct. 12, 1982.

----. Military Personnel Issues. Statement of Kenneth J. Coffey before the Subcommittee on Defense, House Committee on Appropriations. Washington, D.C.: Apr. 21, 1983.

----. Millions Spent Needlessly in Navy and Marine Corps' Aviation Bonus Program, GAO/FPCD-82-56. Washington, D.C.: Aug. 9, 1982.

----. Navy and Marine Corps' Use of the Aviation Officer Continuation Bonus Program. Statement of Kenneth J. Coffey before the Subcommittee on Defense, Senate Committee on Appropriations. Washington D.C.: May 19, 1982.

- . The Navy's Pilot Shortage: A Selective Bonus and Other Actions Could Improve Retention, FPCD-80-31. Washington, D.C.: Feb. 15, 1980.
- . Need to Better Inform Military Personnel of Compensation Changes, FPCD-78-27. Washington, D.C.: July 12, 1978.
- . Need to Improve Military Members' Perceptions of Their Compensation, FPCD-75-172. Washington, D.C.: Oct. 10, 1975.
- . Noncontributory Social Security Wage Credits for Military Service Should Be Eliminated, FPCD-79-57. (Washington, D.C.: Aug. 8, 1979).
- . Observations on the April 15, 1982, Joint Services Report, "Military Pay Adjustment Mechanism Study," GAO/ FPCD-82-78. Washington, D.C.: Sept. 28, 1982.
- . Observations on the Method of Adjusting Military Pay, FPCD-78-45. Washington, D.C.: June 2, 1978.
- . Perspectives on the Effectiveness of Service Enlisted Bonus Programs, GAO/FPCD-82-70. Washington, D.C.: Aug. 23, 1982.
- . Preliminary Analysis of Military Compensation Systems in the United States and Five Other Countries, FPCD-81-21. Washington, D.C.: Dec 31, 1980.
- . Proposals for More Effective Military Manpower Policies. Statement of Kenneth J. Coffey before the Defense Task Force, House Committee on the Budget. Washington, D.C.: Mar. 10, 1981.
- . The Proposed 14.3 Percent Military Pay Raise. Statement of Kenneth J. Coffey before the Subcommittee on Defense, House Committee on Appropriations. Washington, D.C.: June 1, 1981.
- . Quality of Career Non-Commissioned Officers, FPCD-81-33. Washington, D.C.: Dec. 31, 1980.
- . Small Percentage of Military Families Eligible for Food Stamps, GAO/FPCD-83-25. Washington, D.C.: Apr. 19, 1983.
- . Survey of Private-Sector Earnings of Navy Enlisted Personnel Who Left the Service in Mid-Career, GAO/NSIAD-85-25. Washington, D.C.: Nov. 20, 1984.

----. The 20-Year Military Retirement System Needs Reform, FPCD-77-81. Washington, D.C.: Mar. 13, 1978.

----. Urgent Need for Continued Improvements in Enlisted Career Force Management, FPCD-77-42. Washington, D.C.: Sept. 29, 1977.

----. The Use of a Peacetime GI Bill as a Recruiting and Retention Incentive. Statement of Kenneth J. Coffey before the Senate Committee on Veterans' Affairs. Washington, D.C.: Feb. 21, 1984.

----. The Use of Educational Assistance Programs to Improve Military Recruiting and Retention. Statement of Kenneth J. Coffey before the Senate Committee on Veterans' Affairs. Washington, D.C.: Mar. 16, 1983.

----. The Use of Monetary Recruitment and Retention Incentives. Statement of Kenneth J. Coffey before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services. Washington, D.C.: Nov. 19, 1981.

Gilman, Harry. Determinants of Implicit Discount Rates: An Empirical Examination of the Pattern of Voluntary Pension Contributions of Employees in Four Firms. Alexandria, Va.: Center for Naval Analyses, 1976.

Goldberg, Lawrence. Summary of Navy Enlisted Supply Study, Memorandum 81-1158. Alexandria, Va.: Center for Naval Analyses, July 22, 1981.

Goldberg, Matthew S., and John T. Warner. Determinants of Navy Reenlistment and Extension Rates, CRC 476. Alexandria, Va.: Center for Naval Analyses, Dec. 1982. Sponsor Review.

---- and Michael F. Hager. A Comparison of the PROPHET and ACOL Force Projection Models. Alexandria, Va.: Center for Naval Analyses, June 1981.

Greenbacker, John E., Capt., U.S. Navy. "The Perils of Pay Comparability." United States Naval Institute Proceedings, Vol. 104, July 1978, pp. 31-39.

Grosz, Nicholas H. Jr. The Inadequacy of Projected Military Compensation Casts Foreboding Shadow Over the All-Volunteer Force. Essay. Carlisle Barracks, Pa.: U.S. Army War College, Apr. 18, 1983.

Haber, Sheldon E., T. Ireland and Herbert Solomon. Manpower Policy and the Reenlistment Rate, Technical Report TR-1201. Arlington, VA.: June 10, 1974. Report prepared by George Washington University for the Office of Naval Research.

Hagemann, Robert A., Capt., U.S. Air Force. An Analysis of the Institutional-Occupational Orientation Prediction Variables on the 1977 USAF Quality of Life Survey. Thesis. Wright-Patterson Air Force Base, Oh: Air Force Institute of Technology, Sept. 1978.

Hale, T.M., Capt., U.S. Navy. "Military Compensation: An Overview of the Cash Pay Structure, Challenges For the Future." Unpublished paper: n.d.

Hay/Huggins Company and Hay Management Consultants. Study of Total Compensation in the Federal, State, and Private Sectors. Prepared for the House Committee on Post Office and Civil Service. Committee Print 98-16. 98th Cong., 2nd Sess. (1984).

Hessman, James D. "Military Personnel Problems Reach Crisis Stage: Laird Purposes Sweeping Compensation Reforms as Partial Solution." Surface Forces to the Fore, Vol. 23, No. 3. Fort Lee, Va.: Defense Logistics Studies Information Exchange, U.S. Army Logistics Management Center, Mar. 1980, pp. 23-28.

Hill, Lawrence G. Military and Civilian Lifetime Earnings. Working Paper PPRG 83-10. Alexandria, Va.: U.S. Army Research Institute for the Behavioral and Social Sciences, Sept. 1983.

Hiller, John R. Analysis of Second-Term Reenlistment Behavior, R-2884-MRAL. Santa Monica, Ca.: Rand Corporation, Sept. 1982.

Hogan, Paul. "Military Compensation: Competing Views." Unpublished paper: n.d.

Horowitz, Stanley A. and Allan Sherman, Comdr., U.S. Navy. Crew Characteristics, and Ship Condition (Maintenance Personnel Effectiveness Study (MPES)). Alexandria, Va.: Center for Naval Analyses, Mar. 1977.

Huck, D.F., et al. An Evaluation of the Effectiveness of the U.S. Army Enlistment Bonus, Vol. 1. McLean, Va.: General Research Corporation, Aug. 1976.

Immigration and Naturalization v. Chadha, 462 U.S. 919 (1983).

Janowitz, Morris. "From Institutional to Occupational: The Need for Conceptual Continuity." Armed Forces and Society, Vol. 4, No. 1, Nov. 1977.

Jehn, Christopher. The Current Comparability Process, Memorandum (CNA) 1872-75. Alexandria, Va.: Center for Naval Analyses, Dec. 11, 1975.

----. Setting Military Pay by Civilian Wage and Job Comparisons, CRC 207. Report prepared for the Third Quadrennial Review of Military Compensation. Alexandria, Va.: Center for Naval Analyses, July 1976.

Jones v. United States, 60 Ct. Cl. 552 (1925).

Kettner, George A., et al. Military Compensation and Quick Reaction Support, Task 1 Final Report: Military Pay Comparability Analysis, Report 126001-82-CR. McLean, Va.: General Research Corporation, Jan. 15, 1982.

Kleinman, Samuel D., et al. The Effect of Reenlistment Bonuses, Report CRC 269. Alexandria, Va.: Center for Naval Analyses, Sept. 1974.

"Korb Favors: 'Fair,' 'Competitive' Pay." Army Times, Mar. 14, 1983. Interview with Lawrence Korb, Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics.

Laird, Melvin R. People, Not Hardware, the Highest Defense Priority, Special Analysis No. 80-1. Washington, D.C.: American Enterprise Institute for Public Policy Research, 1980.

Lazear, Edward P. "Agency, Earnings Profiles, Productivity, and Hours Restrictions." The American Economic Review, Sept. 1981, pp. 606-620.

Leepson, Marc. "Military Pay and Benefits." Editorial Research Reports, Vol. 1, No. 22, June 16, 1978, pp. 423-440.

Lockman, Robert F. Final Report of the Personnel Management in the All-Volunteer Force Study, CNSR 8. Alexandria, Va.: Center for Naval Analyses, Apr. 1980.

----, Edward M. Barrow, and Robert H. Simmons. Models for Enlisted Manpower and Personnel Planning, Memorandum (CNA) 78-0045. Alexandria, Va.: Center for Naval Analyses, Apr. 1978.

Military Manpower Task Force. A Report to the President on the Status and Prospects of the All-Volunteer Force. Washington, D.C.: Oct. 1982.

Moskos, Charles C., Jr. "Citizen Soldier and an AVF GI Bill: Alternative to the Draft." Unpublished paper. Evanston, Ill.: Northwestern University, Oct. 1982.

----. "Compensation and the Military Institution." Air Force Magazine, Vol. 61, Apr. 1978, pp. 31-35.

----. "From Institution to Occupation: Trends in Military Organization." Armed Forces and Society, Vol. 4, No. 1, Nov. 1977, pp. 41-49.

----. Institution Versus Occupation: Contrasting Models of Military Organization. Washington, D.C.: Air Force Office of Scientific Research, Feb. 16, 1981.

----. "Making The All-Volunteer Force Work: A National Service Approach." Foreign Affairs, Vol. 60, Fall 1981, pp. 17-34.

Motowidlo, Stephan J., Marvin D. Dunnette, and Rodney L. Rosse. Reenlistment Motivations of First-Term Enlisted Men and Women. Arlington, Va.: Personnel Decisions Research Institute for the U.S. Army Institute for the Behavioral and Social Sciences, Feb. 1980.

Nunn, Sam, Senator. Remarks as reported in the Army Times, Oct. 10, 1977.

Ogloblin, Peter K. "The Need For a Theory of Military Compensation." Proceedings of the Annual Conference of the Military Testing Association (23rd), Vol. 2, AD-130 703. Held at Arlington, Va. on Oct. 25-30, 1981, pp. 1,479-86.

Pappas, Linda D., Perry W. Polk, and Douglas H. Macpherson. "Compensation Standards." Supplementary Papers of the President's Commission

on Military Compensation—Final Report: Analysis of Selected Military Compensation Issues. Washington, D.C.: General Research Corporation, Apr. 1978.

Parker, Warden, et al. v. Levy, 417 U.S. 733 (1974).

Pfeifer, Ludvik, Comdr. "The Military Compensation Mess." United States Naval Institute Proceedings, Feb. 1981, pp. 24-32.

President's Commission on an All-Volunteer Armed Force. The Report of the President's Commission on an All-Volunteer Armed Force. Washington, D.C.: Feb. 1970. Commonly referred to as "the Gates Commission Report."

President's Commission on Military Compensation. Report of the President's Commission on Military Compensation. Washington, D.C.: GPO, Apr. 1978.

----. Supplementary Papers of the President's Commission on Military Compensation—Final Report: Analysis of Selected Military Compensation Issues. McLean, Va.: General Research Corporation, Feb. 24, 1978.

President's Commission on Pension Policy. Coming of Age: Toward a National Retirement Income Policy. Washington, D.C.: GPO, 1981.

President's Private Sector Survey on Cost Control. Management Office Report on Federal Retirement Systems. Commonly referred to as "the Grace Commission Report."

Rader, Norvin E., et al. Pay Principles and Standards, Report 1207-01-81-CR. McLean, Va.: General Research Corporation, Feb. 1981.

Rehab Group, Inc. Deliverable A001: History and Analysis of Basic Allowance for Subsistence (BAS). Falls Church, Va.: Feb. 1980.

Rodney, David, David Hoshaw, and Michael Yaphne. The Development of a Selective Reenlistment Bonus Management System. Falls Church, Va.: Rehab Group, Inc., July 1980.

Rodney, David, et al. The Impact of Selective Reenlistment Bonuses Upon First- and Second-Term Retention. Falls Church, Va.: Rehab Group, July 1980.

- Ross, Sue Goetz. Comparisons on Military Compensation, CRC 316. Alexandria, Va.: Center for Naval Analysis, Dec. 1976. Prepared for the Third Quadrennial Review of Military Compensation.
- . and John T. Warner. Comparisons of Military and Veteran Compensation, CRC 306. Alexandria, Va.: Center for Naval Analyses, Dec. 1976.
- Segal, David R. "Convergence, Commitment, and Military Compensation." Paper prepared for presentation at the 70th Annual American Sociological Association Meeting at San Francisco, Ca., Aug. 25-29, 1975.
- Shirey, Wilbur C., Col. Military Pay an Incentive to Stay. Student essay. Carlisle Barracks, Pa.: U.S. Army War College, Apr. 19, 1982.
- Sibson, Robert E. The Executive's Guide to Wage and Salary Administration, 2d ed. New York: American Management Associations Extension Institute, Education for Management, Inc., 1980.
- Siggerud, Dan-Norman. Retention Intention Among U.S. Navy's Enlisted Personnel: An Analysis of Social, Environmental, and Economical Factors. Thesis. Monterey, Ca.: Naval Postgraduate School, Mar. 1981.
- Sinaiko, H. Wallace, et al. Military Personnel Attrition and Retention Research in Progress, Technical Report TR-10. Arlington, Va.: Smithsonian Institute Manpower Research and Advisory Services for the Office of Naval Research, Oct. 1981.
- Singer, James W. "Is It Time to Cut the Link Between Military and Civilian Pay?" National Journal, No. 26, June 28, 1980, pp. 1056-60.
- Stahl, Michael J., Charles W. McNichols, and T. Roser Manley. "An Empirical Examination of the Moskos Institution-Occupation Model." Armed Forces and Society, Vol. 6, No. 2, Winter 1980, pp. 257-269.
- Stelluto, George L. "Federal Pay Comparability: Facts to Temper the Debate." Monthly Labor Review, June 1979, pp. 18-28.
- Thomas, Vincent C., Jr. "Expensive Ways to Save Money." Air Force Magazine, Feb. 1984, pp. 60-63.
- Towell, Pat. "October Increase Set: Military Pay Raise Legislation May Test Congressional Will to Save All-Volunteer Army." Congressional Quarterly, Inc., July 11, 1981, pp. 1219-22.

United States House of Representatives. Department of Defense Appropriation Bill, 1981, H. Rep. 96-1317. 96th Cong., 2nd Sess. (1980).

----. "Hearings on H.R. 10972, Readjustments of Service Pay," Before a Special Committee, U.S. House of Representatives. 67th Cong., 2nd Sess., Mar. 18-20, 1922. Deliverable AOO1: History and Analysis of Basic Allowance for Subsistence (BAS). Falls Church, Va.: Rehab Group, Inc., Feb. 1980.

United States Senate. Department of Defense Appropriation Bill, 1984, S. Rep. 98-292. 98th Cong., 1st Sess. (1983).

----. Department of Defense Appropriation Bill, 1985, S. Rep. 98-636. 98th Cong., 2nd Sess. (1984).

----. Department of Defense Authorization for Appropriations for Fiscal Year 1982: Hearings on S. 815 Before the Committee on Armed Services, Part 6. 97th Cong., 1st Sess. (1981).

----. Department of Defense Authorization for Appropriations for Fiscal Year 1983: Hearings on S. 2248 Before the Committee on Armed Services, Part 2. 97th Cong., 2nd Sess. (1982).

----. Letter, Chairman, Subcommittee on Manpower and Personnel (then Senator Roger Jepsen), Senate Committee on Armed Services, to Comptroller General of the United States, Apr. 25, 1983.

----. Recruitment and Retention Readiness Act of 1983 and Other Legislative Initiatives for the All-Volunteer Force: Hearing on S. 1747, S. 1873 and Related Bills Before the Committee on Veterans' Affairs, S. Hrg. 98-1139. 98th Cong., 2nd Sess. (1984).

Veteran's Educational Assistance Act of 1984. Public Law 98-525, Title VII, 98 Stat. 2492, 2553, Oct. 19, 1984.

Watkins, James D. "Erosion of Benefits: A Challenge for Leadership." Naval Affairs, Vol. 56, Apr. 1977, pp. 3-6.

Warner, John T. The Effects of Alternative Retirement Systems on Enlisted Retention. Memorandum 79-0497. Alexandria, Va.: Center for Naval Analyses, Mar. 28, 1979.

- . Estimating the Effects of Alternative Military Retirement Systems on Enlisted Retention, Memorandum 79-0444. Alexandria, Va.: Center for Naval Analyses, Mar. 22, 1979.
- . The Estimation of the Effect of a New Retirement System On Retention, Memorandum 78-1561. Alexandria, Va.: Center for Naval Analyses, Oct. 10, 1978.
- . "Issues in Evaluating Military Compensation Alternatives." Defense Management Journal, Fourth quarter, 1983, pp. 23-29.
- . Issues in Navy Manpower Research and Policy: An Economist's Perspective, Professional Paper 322. Alexandria, Va.: Center for Naval Analyses, Dec. 1981.
- . Military Compensation and Retention: An Analysis of Alternative Models and a Simulation of a New Retention Model, CRC 436. Alexandria, Va.: Center for Naval Analyses, Aug. 1981.
- . Models of Retention Behavior, Memorandum (CNA) 79-1139.10. Alexandria, Va.: Center for Naval Analyses, July 31, 1979.
- . A Thinkpiece on Navy Manpower Problems, Memorandum (CNA) 80-0312.10. Alexandria, Va.: Center for Naval Analyses, Dec. 21, 1979.
- . "Navy Manpower Issues." Conference Proceedings: Naval Manpower Research in the 1980s, CNR 58. Alexandria, Va.: Center for Naval Analyses. June 30-July 1, 1982.
- . and Matthew S. Goldberg. The Influence of Non-Pecuniary Factors On Labor Supply, Professional Paper 337. Alexandria, Va.: Center for Naval Analyses, Dec. 1981.
- Weeks, David A. Compensating Employees: Lessons of the 1970's, Report No. 707. New York: Conference Board, 1979.
- White Hats' Pay Panel. A Report of the Views of Enlisted Personnel on Military Compensation and Retirement. Washington, D.C.: Fleet Reserve Association, June 3-Nov. 21, 1977.
- Wright, Steven Earl. The Taxation of Military Pay and Allowances: A View From 1982. Thesis. Washington, D.C.: George Washington University, Aug. 1982.

