STUDY BY THE STAFF OF THE U.S.

General Accounting Office

Perspectives On The Effectiveness Of Service Enlisted Bonus Programs

The services use cash bonuses to attract and retain enlisted personnel in occupations with critical shortages. Unless the Congress approves the proposed 5-year extension of the bonuses, they will expire in September 1982.

The key question, as well as the focus of this study, is: Are the bonuses cost-effective?

As yet, there are no definitive answers to this question, largely because there is no commonly accepted method for measuring bonus effectiveness. GAO points out, however, that improvements in these programs can be made.





GAO/FPCD-82-70 AUGUST 23, 1982

FOREWORD

This staff study summarizes observations and findings from numerous audit and research groups, including GAO, on the services' enlistment and reenlistment bonus programs. Because studies of this topic have been so extensive, a comprehensive review would have been beyond the practical limitations of this study. However, it does bring together pertinent information on bonuses and other options for solving certain occupation shortages in the armed services. To this extent, it should be a helpful guide to those who must decide on the future of the bonus programs.

Questions regarding this staff study should be addressed to Dr. Kenneth J. Coffey, Associate Director, Mr. Jim Johnson, Group Director, Military Personnel Subdivision, on (202) 275-3890, or Mr. Donald Weisheit, Principal Evaluator, on (216) 552-4892.

Clifford I. Gould

Dector

Contents

		Page
CHAPTER		•
	FOREWORD	i
1	INTRODUCTION Cash bonuses have become a widely used tool Bonus programs have undergone several legislative changes Congressional attention to bonuses Objectives, scope, and methodology	1 1 2 3 4
2	STUDIES VARY ON BONUSES' EFFECTIVENESS MANY CITE NEED FOR GREATER USE OF ALTERNATIVE INCENTIVES Studies are inconclusive about bonus effectiveness Are bonuses used as intended? Summary	6 7 14
3	ADMINISTRATIVE PROBLEMS HAMPER EFFICIENCY OF BONUS PROGRAMS Occupation selection and bonus award processes need to be improved Bonus recipients are assigned to jobs or used in occupations not directly related to their skills Services need to do a better job of recouping unearned bonuses Summary	15 15 18 19 21
APPENDIX		
I	Footnotes	22
II	Enlistment bonuses: fiscal years 1975-83	27
III	Reenlistment bonuses: fiscal years 1975-83	28
IV	Bibliography of reports used in this study	29
v	Literature searches	43
VI	Example of reenlistment bonus computation	44

ABBREVIATIONS

DOD Department of Defense

GAO General Accounting Office

CHAPTER 1

INTRODUCTION

Since the military draft was abolished in 1973, the Congress has expressed considerable concern about the services' ability to recruit and retain sufficient numbers and types of people, especially active duty enlisted personnel, to effectively run the Military Establishment.

Contrary to some perceptions, maintaining Active Force authorized strength levels, in the aggregate, has not been the most serious problem of the All-Volunteer Force. Rather, the major problem has been recruiting and retaining quality people with the right mix of skills and experience to perform the armed services' mission. The services are experiencing personnel shortfalls in specific areas because they have skill imbalances—too many people in some skills and not enough people in others.

The skill imbalance problem varies from service to service, from grade to grade, and from occupation to occupation, but it can be generally categorized as

- --shortages in occupations that are highly marketable in the civilian sector, such as aircraft mechanics;
- --shortages in occupations that are not marketable and that are generally thought of as being unattractive, such as combat occupations; and
- --overages in occupations that are relatively easy to fill, such as some clerical occupations.

Each of these conditions creates unique manpower problems, both in recruiting and retention. A solution that fits one problem does not necessarily fit others. Thus, across-the-board remedies, such as general pay raises, may not provide across-the-board cures. Such solutions may even aggravate staffing problems; not only are the solutions inflexible, they fail to recognize differences in the value of different skills.

CASH BONUSES HAVE BECOME A WIDELY USED TOOL

The basic pay and allowances system currently in use by the military does not provide an effective mechanism for correcting recruiting and retention problems in occupations with critical shortages. Therefore, to help correct the imbalances, the Congress, in 1974, authorized the selective use of cash bonuses to induce people to join or stay in military occupations where there are critical shortages. (This authorization was set forth in Public Law 93-277, the Armed Forces Enlisted Personnel

Bonus Revision Act of 1974, effective June 1, 1974.) The Department of Defense (DOD) estimates that by the end of fiscal year 1983, 675,000 enlistment and reenlistment bonuses costing over \$4 billion will have been awarded since fiscal year 1975.

Regular military compensation, consisting of basic pay and quarters and subsistence allowances, along with the exemption of the latter two from Federal income tax, is the primary monetary incentive for attracting and retaining people in the armed services, regardless of occupation. In addition to this regular compensation, people with certain skills and occupations sometimes receive bonuses or other special pays because their skills are either in short supply or their jobs are undesirable or involve high risk.

Bonuses seek to bring pay into line with the nature of the occupation, the job setting, the cost of investment in training, alternative employment opportunities in the civilian sector, and staffing conditions. When properly managed, bonuses can be more responsive than overall pay raises to changing personnel conditions because the bonuses can be quickly applied, adjusted, and withdrawn.

In aggregate, enlistment and reenlistment bonuses represent about 4 percent of total basic pay for active duty enlisted personnel, and are playing an increasingly significant role as a monetary inducement for those persons with critical skills. DOD estimates that in fiscal year 1983 it will award around 140,000 bonuses costing nearly \$1.2 billion, compared with only around 40,000 bonuses costing around \$1.8 million in fiscal year 1977, which was the low year. Appendixes II and III provide data on numbers and costs of bonus payments since fiscal year 1975. The number of awards in fiscal year 1983 represents one enlistment bonus for every 9.5 new recruits and one reenlistment bonus for every two reenlistments.

Although the number of military skills designated for enlistment and reenlistment bonuses varies on the basis of the services' and DOD's semiannual program reviews, in fiscal year 1982 about 12 percent of all occupations were designated for enlistment bonuses and 59 percent for reenlistment bonuses.

BONUS PROGRAMS HAVE UNDERGONE SEVERAL LEGISLATIVE CHANGES

Bonus programs have historically been used for different reasons to solve different problems. For example, the pre-1975 programs entitled everyone who reenlisted to a regular reenlistment bonus, regardless of occupation or staffing conditions. In addition, variable reenlistment bonuses were available to those possessing certain critically needed skills. Enlistment bonuses were more restrictive; they were available only for combat arms occupations and were limited to the Army and Marine Corps. These

old bonus programs were costly and inefficient and had some shortcomings that were not in tune with changing conditions under the All-Volunteer Force environment. A more selective and flexible program was needed that would pay bonuses only to fill occupations with critical shortages and that could be easily adjusted as conditions changed.

The Congress intended the new bonus programs, which were authorized in 1974, to be more efficient, more effective, and less costly than the programs they replaced. This meant two things. First, bonuses were to be applied selectively to specific recruiting and retention problem areas. In this regard, bonuses were to be used only after less costly options had been fully explored and bonus cost-effectiveness had been demonstrated. Implicit in the early discussions was that the services should resort to bonuses only if other less costly alternatives for meeting personnel shortfalls did not work. Second, the Congress expected program managers to administer their bonus authority prudently, to avoid waste, and to assure that funds were properly spent.

The basic structure and purpose of the enlistment and reenlistment bonus programs has not changed since they were first authorized in 1974. However, during the programs' history the armed services have been authorized to pay increasingly larger bonuses--currently up to \$8,000 for a 4-year enlistment and up to \$16,000 for reenlistment (a maximum of \$20,000 for nuclear occupations). Also, reenlistment bonuses may now be paid to persons with up to 14 years of active duty, whereas initially persons with over 10 years of service were ineligible. Also, payment methods have varied from time to time and have included lump-sum payments, installment payments, or a mix of lump-sum and installment payments. Currently, 50 percent of the reenlistment bonus is paid at the time of reenlistment, with the remainder paid in annual installments over the contract period. (See app. VI for a detailed description of how bonus amounts are computed.)

CONGRESSIONAL ATTENTION TO BONUSES

Faced with a September 30, 1982, expiration for the current bonus authority, the Congress must decide what to do with the bonus programs. Should they be continued? Should they be modified, and if so, how? Past deliberations on these matters have focused on the complex and diversified issue of effectiveness: (1) How successful are bonuses as an attraction and retention device? (2) How do bonuses compare with other options in terms of cost and desirability? (3) Are bonuses being administered efficiently and economically?

DOD officials claim that the bonus programs have been extremely successful, and they believe the programs should be continued. On more than one occasion, DOD has recommended that the bonus authority be made permanent. On May 10, 1982, DOD proposed legislation to extend bonus authority for 5 years, promising "to use bonus authorities only when cost-effectiveness is demonstrated and other less costly options have been fully explored and exhausted." The Congress has not totally shared DOD's enthusiasm for the bonus programs, at times expressing skepticism about using bonuses as the primary monetary incentive, other than pay, to induce people to join or stay in the armed This skepticism is evidenced in the course the Congress has pursued with the bonus programs since their inception. By periodically extending bonus authority instead of granting permanency, the Congress has, in essence, told DOD that if the programs are to receive continuing funding they need to be continuously monitored and evaluated and their need justified.

OBJECTIVES, SCOPE, AND METHODOLOGY

The Congress' perceptions regarding the effectiveness of these bonus programs, both from a cost standpoint and the extent to which the programs have accomplished what was intended, will determine the future course of the enlistment and reenlistment bonus programs. The aim of this study is to assist the Congress in its decisions on bonus programs, and DOD in administering them, by highlighting in a single document some of the findings of numerous past studies on bonus programs. In reviewing these studies, we were concerned primarily with two aspects of the bonus programs.

First, since bonuses are one of many devices available to manpower managers to help resolve recruiting and retention problems, we were interested in how effective bonuses are in increasing the number of enlistments and reenlistments, and how economical they are as compared to other incentives. One of our major concerns was whether bonuses were being used only after less costly alternatives had been fully explored. Chapter 2 discusses these and related aspects of the effectiveness issue.

Second, we were interested in how the bonus programs were being administered. If the current programs are going to be continued, we wanted to see what improvements could be made in economy and efficiency. Some of our major concerns were whether bonuses were awarded selectively, whether bonus recipients were being used in their designated occupations, and what success the services have had in recouping unearned bonuses from those who do not fulfill their bonus contracts. These program administration questions are discussed in chapter 3.

Numerous audit and research groups, including GAO, have reviewed bonuses, incentives, occupation shortages, recruiting, attrition, retention, and related manpower issues. This study therefore brings together pertinent information from previous studies on bonuses and other options for solving occupation shortages in the armed services. It should be a helpful guide to those who must decide on the future of these bonuses.

Five different literature searches disclosed over 1,500 documents that either directly or indirectly related to bonuses and other issues we examined. (See app. V for a list of searches used.) After reviewing abstracts of these documents, we narrowed our selection to the 150 studies that appeared most relevant. These became the basis for this staff study. (See app. IV for a bibliography of these studies.)

The 150 studies represent a cross-section of the research and audit community, with 44 different organizations performing one or more of the studies. Organizations conducting the studies include contract companies, such as the Rand Corporation; Government research laboratories, such as the Navy Personnel Research and Development Center; and audit and other groups, such as GAO.

Although many studies of bonuses and other incentives were done in the late 1960s and early 1970s, most of those we reviewed for this document were done since 1974, when the current bonus programs were started. A few that predate these programs were reviewed because they were particularly pertinent, and they provided a frame of reference for subsequent studies. Since some studies were still in process at the time of our review, we used progress reports and other draft documents so that we could include them in this staff study.

The 150 studies provide information and a possible basis for hypothesis testing of bonuses, incentives, and other matters relating to occupation shortages. Even though the studies provide a variety of (and often conflicting) findings on the effectiveness of bonuses and other aspects of the bonus programs, they also provide a wealth of information to aid decisionmakers. These studies were the main focus of our work; however, we also interviewed numerous DOD officials, including those responsible for managing the bonus programs. Their comments are addressed, where appropriate, throughout this study.

CHAPTER 2

STUDIES VARY ON BONUSES' EFFECTIVENESS--MANY CITE

NEED FOR GREATER USE OF ALTERNATIVE INCENTIVES

After reviewing the research, we have concluded that there is no simple, clear-cut answer to the question of whether enlistment and reenlistment bonus programs are effective. We reached this conclusion because there is no commonly accepted definition of "effectiveness" or "cost-effectiveness." DOD officials and others have suggested that one merely has to look at what the current bonus programs have accomplished to see that they have been effective: enlistment and reenlistment rates have increased, periods of service have lengthened, higher quality people have been recruited and retained, turnover and training costs have been reduced, and the programs are less expensive than the ones they replaced.

Certainly, bonuses may be partially responsible for these improvements. Nevertheless, many studies we examined seemed to suggest that measuring bonus effectiveness in this way is narrow and incomplete. To get a better view of bonus cost-effectiveness, these studies indicated, one must compare the cost and effectiveness of bonuses with other initiatives that have been implemented or that could be used to solve personnel shortfalls. Bonuses are used for almost all occupations where critical shortages exist. Yet, studies indicate that bonuses have a varying effect on different occupations. One study, for example, showed that Navy personnel in white-collar occupations are more responsive to reenlistment bonuses than those in occupations with more arduous working conditions. Thus, bonuses may not always be the best or least costly solution for every skill area where shortages exist. 1/

STUDIES ARE INCONCLUSIVE ABOUT BONUS EFFECTIVENESS

The studies we reviewed varied widely in their conclusions on the effectiveness of bonuses. Some found them an unqualified success. Others found them virtually ineffective. However, as could be expected, most studies found bonuses to be partially successful in increasing enlistments and reenlistments. Findings on bonus effectiveness appeared to depend on the method used to measure effectiveness.

Studies concluding that bonuses were unqualified successes generally measured effectiveness according to (1) the increase

Footnotes for chapters 2 and 3 are in app. I.

in enlistments and reenlistments when bonuses were applied and (2) bonus costs, which are less expensive than such across-the-board incentives as general pay raises or educational assistance programs. 2/

Only a few studies concluded that bonuses were not effective. They stated that their tests indicated bonuses consistently ranked low among reasons why people joined and remained in the military 3/ and that bonuses had little or no impact on improving staffing levels for occupations with critical shortages. 4/

Although most studies concluded that bonuses appeared to be effective, some uncertainty remained. For example, one study said that bonuses had good effects—they helped to increase reenlist—ments—but they also had some negative effects, one being that people sometimes viewed them as bribes. 5/ Another study concluded that bonus effectiveness varied by skill and that people in certain occupations were more attracted to bonuses than those in other occupations. 6/ Still another study said that monetary inducements, like bonuses, attracted the undereducated and disadvantaged, while job training and educational benefits were attractive to more highly educated people. 7/ According to some studies, bonuses influenced first—term reenlistment decisions, but had little positive, and possibly a negative impact on career decisions. 8/ Finally, many studies said that bonuses appeared to be an effective incentive, but more research was needed before this could be determined. 9/

The studies we reviewed probably raise more questions about the effectiveness of the bonus programs than they answered. Nevertheless, they provide valuable insight into a complex and multifaceted issue that is not going to be solved by any one incentive device. The following section discusses some alternative incentives.

ARE BONUSES USED AS INTENDED?

Legislative history shows that enlistment and reenlistment bonuses were to be used on a selective basis. Selectivity meant two things. First, the new bonus authority, unlike previous authority, was to concentrate bonus dollars where they were needed the most, namely, in occupations that were hard to fill. No longer would bonuses be allowed for all reenlistees, as was the case previously. And even though enlistment bonuses were extended to noncombat skills, they still had to be limited to occupations with critical shortages. Second, bonuses were to be used only after they were proven to be cost-effective as compared to other alternatives for resolving staffing shortfalls. In requesting this new bonus authority, DOD assured the Congress that bonuses would be used only when it was cost-effective to do so and after other less costly options had been fully explored and exhausted.

The studies we reviewed seem to indicate that military manpower managers have not adequately exhausted all options for reducing staffing shortfalls. Even though they have tried various
methods, manpower managers continue to rely heavily on traditional
monetary incentives, such as bonuses, to solve staffing problems.
Often ignored, overlooked, or given only token trials are numerous
nonmonetary, potentially effective, less costly devices that could
be used as alternatives or supplements to bonuses. Some innovative
ideas are difficult to sell because they are inconsistent with
the way things are customarily done in the military.

That bonuses are not being employed as a last resort was evident in many of the studies we reviewed. Dozens of other types of incentives were cited. Although the studies did not necessarily set out to test whether bonuses or other alternatives would be more cost-effective, they provided a picture of potential alternatives to help solve occupation shortages. 10/ In addition, the studies led us to raise questions about DOD claims that it was considering all options, and that it was using bonuses only as a final recourse.

Because the options, programs, and bonus alternatives cited in these studies were voluminous, we categorized them into three groups:

- --Alternative sources of personnel to fill shortages.
- -- Redirection of bonus funds.
- -- Internal management prerogatives.

Alternative sources of personnel to fill shortages

One means of improving staffing levels for occupations with shortages may be to use alternatives to the classical military approach for recruiting and retaining personnel. This approach involves bringing young recruits with no prior military experience into the services at the lowest enlisted grade, requiring them to serve a period of apprenticeship until they learn a skill, and encouraging them to reenlist if their skills are still needed when their initial term of service is near completion. Cash bonuses have been one of the major inducements for attracting and retaining people in these occupational specialties. Some researchers have suggested that this conventional method of procuring enlisted personnel should be restructured because it is archaic and costly. 11/

The services have already made some changes to traditional recruiting and retention methods by taking advantage of other opportunities to fill their staffing requirements. In recent years, for example, they have made concerted efforts to recruit more women, to civilianize some military occupations, to contract

out some jobs where military personnel are not required, to move personnel from overstaffed into understaffed occupations, and to bring back prior service personnel.

Some researchers suggest that the lateral placement program may be a viable alternative to existing recruiting and retention practices. Lateral placement would take already trained and qualified people from vocational or technical schools and place them directly in mid-level enlisted grades where shortages are most acute. It has been estimated that even if bonuses must be paid to compete with industry, the savings over the customary way of filling these postions still could be substantial. One study concluded, for example, that bringing on just 40 people to fill shortages in two critical skills, and paying them bonuses, would save \$1.7 million. 12/ The Army is working with the researcher to further develop this program.

Recruiting prior service personnel with needed skills is another potentially effective alternative to conventional methods for alleviating staffing shortfalls. Several studies recommended that more be done in this area. This potential source of trained personnel has been underused even though the services recruit thousands of veterans annually. Preliminary findings of a study which investigates this issue show that military personnel managers pursue a neutral course, at best, and sometimes have punitive policies regarding prior service enlistments. Many returning veterans rejoin the military not because they are actively pursued by the armed services, but because they cannot find civilian employment commensurate with what they had been paid in the military. 13/

Indeed, DOD regulations governing prior service enlistments suggest that the services may even be discouraging skilled veterans from returning to the military. Veterans who return to the military will, at best, reenter at their previous pay grade; those who remain in the civilian sector for any length of time must accept a reduction of one to three pay grades to return to active duty. Veterans with breaks in service of over 5 years must again take basic combat training. Regulations governing prior service would seem to penalize older and more experienced veterans. The services may have good reasons for these policies, but the larger question is whether the policies are cost effective.

The study mentioned above, which addressed this issue, indicated that prior service accessions were only about one-half of 1 percent of the potential pool of eligible male veterans in the civilian labor force between the ages of 20 and 39. Even using DOD's definition of this eligible pool—a more restrictive definition than used in the above study—only about 5 percent were being recruited from this market. Ongoing research will analyze the cost implications of military staffing through conventional methods versus recruiting prior service personnel. 14/

Redirection of bonus funds

According to some studies, a portion of bonus dollars could be redirected into more cost-effective programs. Among the more frequently mentioned alternatives were increased recruiting resources, use of performance bonuses, and smaller bonuses. 15/

While the debate continues among researchers on the value of increased recruiting and advertising resources, some researchers believe that these can be less expensive and more effective than cash bonuses in attracting people into the military, particularly for smaller increases of personnel. This may be particularly true when unemployment rates are high, especially among the youth, and military pay is reasonably competitive with industry. The suggestion is that during economically depressed periods, bonus dollars could be saved because many people would join the services even if no bonus were offered. 16/

Four studies we reviewed examined the cost-effectiveness of recruiting and advertising as compared to other methods of attracting new recruits, such as general pay raises, GI bill benefits, and bonuses. While cautioning that these were preliminary efforts and that more research was needed, the four studies concluded that increasing recruiting resources (recruiters and advertisements) appeared to be more cost-effective than other methods. General pay raises and GI bill benefits were viewed as the least cost-effective methods. Compared to these two, cash bonuses were seen as much more cost-effective, but not as cost-effective as adding recruiting resources. 17/ The cost of enlistment bonuses, per additional enlistee, for example, was almost triple the cost of adding recruiters, according to the preliminary results of one study. 18/

Some studies suggested that better use could be made of bonus dollars by switching to a performance bonus. Those who advocate bonuses on the basis of the quality of work performed instead of the criticality of the job, see this as a more equitable and attractive method for inducing people to join or stay in the military. 19/ In other words, enlistees would not get bonuses, or the same bonuses, just because they were in occupations with critical shortages, but rather because of the quality of their work.

Other studies indicated that bonuses could be smaller, and still be effective. 20/ For example, a study done a few years ago found that increasing the combat arms enlistment bonus from \$1,500 to \$2,500 did not appreciably affect enlistments. The study concluded that paying the larger bonus was not cost-effective and that the extra bonus dollars could have been more effectively applied by increasing recruiting resources. 21/

This seemingly illogical phenomenon was explained in several other studies we reviewed. Researchers have found that some people viewed larger bonuses warily. Often, they perceived the bonuses as bribes, or they perceived military life or certain jobs as so undesirable that people had to be coerced to join or stay in the military. 22/

Internal management prerogatives

Instead of using bonuses and other costly monetary devices, several studies seemed to suggest that military managers should first examine nonmonetary alternatives for addressing enlisted personnel shortages. About two-thirds of the studies we reviewed bore on this issue in one way or another. Through attitudinal and similar surveys of thousands of military personnel and potential recruits, researchers discovered that bonuses and other monetary incentives were the prime motivator for some groups, whereas nonpecuniary factors had a greater influence on enlistment and reenlistment decisions of other groups. This does not mean that nonmonetary initiatives have been totally neglected. On the contrary, our discussions with DOD officials and our review of numerous studies indicate that the services have instituted several programs to supplement bonuses, many of which have helped alleviate personnel shortfalls. Other actions, in addition to those DOD has taken, are possible.

DOD actions to improve internal management

Several of the management actions and programs appear to be in direct response to what researchers have discovered are the major reasons why people do not join, or why they leave, the military. For example, one of the most frequently cited causes of discontent in the military is job dissatisfaction. Not unlike their civilian counterparts, service members quit for a variety of reasons: they are not given challenging and interesting work, they must work long hours and under arduous conditions, they do not receive adequate supervision, they have little choice in the assignments or duty locations they get, and they fail to receive the training and educational opportunities they assumed they would receive. Consequently, some have suggested that better use of bonus and other dollars could be made by redirecting some of this money into programs that address many of these recruiting and retention problems. 23/

Recognizing that bonuses and other cash benefits cannot solve all of these problems, military manpower managers have tried, and continue to seek, other alternatives. Some of these programs, which vary from service to service, have been around for awhile; others are still in the embryonic stage. Many of these programs are intended to supplement rather than supplant bonuses, and are aimed at reducing attrition, improving skill matches, and alleviating occupation shortages. Some of these management initiatives include:

- 2. Guaranteed assignment Recruits' initial assignments are in the skill for which they are trained.
- Choice of location Reenlistees are assigned to a duty station of their choice, if feasible.
- 4. Shorter enlistments Some recruits are permitted to enlist for 2 years instead of the normally required 3 or more years.
- 5. Retraining Members in overstaffed occupations have the option to train for understaffed occupations.
- 6. Leadership training Improved leadership training is given to officers and senior noncommissioned officers.
- 7. Counseling The number of retention counselors has been increased and their training improved.
- 8. Removal of irritants The number of inspections and training exercises has been reduced.
- 9. Skill utilization Increased attention is being given to using service members in jobs for which they were trained.
- 10. Quality of life Surveys are being conducted to determine what can be done to keep people in the military.

As these actions indicate, DOD and the services have attempted to seek some balance between bonuses and other alternatives for solving personnel problems.

Additional management actions are possible

Studies have suggested, however, that additional, potentially less expensive management actions could be used to solve personnel shortfalls. These actions include (1) making military pay more visible, (2) tightening expeditious discharge policies, and (3) relaxing medical fitness standards for entry and then correcting the minor problems after enlistment.

One of the more important factors influencing the enlistment and reenlistment decision is a person's perception of the value of military pay. Yet, studies have shown that both potential recruits and service members sometimes grossly underestimate the amount of pay and benefits they receive. 24/ One study, for example, showed that many first-term personnel greatly underestimated the actual value of their compensation. 25/ Further, military recruiters indicate that most potential enlistees do not have a good idea of the value of military pay. Although the Air Force, at congressional insistence, has taken the lead in making pay and benefits more visible to its members, more can be done in this area. GAO and others have pointed out that converting the current complex pay and allowance system to a salary system would make pay more visible. 26/

DOD instituted an expeditious discharge policy several years ago, recognizing that it may be more costly to force marginal or poor performers to stay in the service than to release them and replace them with new recruits. Certainly this policy has merits, when properly managed, but when interpreted too liberally it can add to staffing problems. Some studies found that the policy encouraged attrition and made it too easy for unit level commanders to discharge people. Two studies we reviewed indicated that most who are discharged before completing their first term were salvageable, and that counseling or rehabilitation transfers should be used more often to reduce the number of such discharges. 27/ study indicated that the discharge policy would be more effective if it were more uniformly applied. The study showed that commanders with lower loss rates generally subscribed to a more stringent expeditious discharge policy, and that a more thorough documentation of the reasons for such discharges should be mandatory. 28/

GAO recently conducted a study on another potentially less expensive way to fill occupations with critical shortages. 29/ This report found that the services were foregoing opportunities to enlist more high quality recruits because their physical entrance requirements were set too high. If the services would relax weight restrictions, for example, they could more readily fill positions that do not require great physical ability. Or, by accepting persons with minor medical problems, the services could correct these problems at a cost less than paying enlistment bonuses.

SUMMARY

While most of the studies we examined which set out to test bonus effectiveness concluded that, to some degree, bonuses have helped improve recruitment and retention, many others seemed to point to the fact that bonuses may not be the most effective and least costly method for solving occupation shortages. This should not be surprising since the studies' conclusions depend largely on how the researchers defined, and therefore measured, "effectiveness." Our review of these studies indicates that no single definition of "effectiveness" has been agreed upon. For example, some researchers have measured effectiveness by comparing pre-bonus recruitment and retention rates with post-bonus rates, and found the bonuses effective because rates increased. Others have found the bonuses relatively ineffective after surveying personnel on the reasons they joined and remained in the military.

A key question which has not been answered is: How do bonuses compare, from a cost-effectiveness standpoint, with other options that could be used to solve staffing problems in a particular occupation? We believe this must be known if bonuses are to be used as DOD assured the Congress they would be, that is, only after less costly options had been fully explored and exhausted. Many studies have suggested that bonuses have not been used as a last resort to reduce staffing shortfalls. Other actions could be taken that could be potentially more effective, less costly, and more responsive to specific shortages.

CHAPTER 3

ADMINISTRATIVE PROBLEMS HAMPER EFFICIENCY

OF BONUS PROGRAMS

Many audit and program evaluation studies we reviewed, which focused on the economy and efficiency of the bonus programs, concluded that the programs needed to be administered more economically. These reviews indicated that substantially lower program costs could be achieved if administrative problems were resolved and the programs were better managed. Of the many problem areas cited in these studies, the three most prevalent were the (1) selection of occupations for bonus designation, (2) utilization of bonus recipients, and (3) recoupment of unearned bonuses.

OCCUPATION SELECTION AND BONUS AWARD PROCESSES NEED TO BE IMPROVED

Various studies suggested that bonus dollars could be used more efficiently if awards were made more selectively. Some specific problems mentioned were bonuses being paid in overstaffed occupations or not being paid in understaffed occupations, occupations not being managed at the appropriate level, the best data not being used to make bonus decisions, and bonuses being paid when they may no longer be needed. Since bonuses were intended to be used only when absolutely necessary to overcome specific enlistment and reenlistment shortfalls, they were to be (1) targeted to those occupations experiencing the greatest personnel problems, (2) applied, adjusted, and withdrawn as circumstances changed, and (3) no larger than needed to overcome shortages.

DOD criteria for selecting military specialties or skills for bonus designation and for determining individual member eligibil—ity reinforce these basic tenets. DOD reviews each specialty programed by service manpower managers for bonus designation. This review establishes funding authorizations for the services' enlistment and reenlistment bonus programs, although designated occupations can be added or terminated and payment levels can be adjusted by bonus managers without DOD approval, as long as these changes are made within the funds approved. (At the direction of the House and Senate Committees on Appropriations, the services accelerated their semiannual review of the reenlistment bonus program and completed it in January 1982.)

Despite the extensive reviews by DOD and service managers and the elaborate systems used for selecting occupations and awarding bonuses, some studies have argued for greater precision in program management. In 1978, for example, GAO reported that the Army may have paid unnecessary enlistment bonuses of \$9.6 million to recruits in six overstaffed occupations. 30/

In 1980 the Army Audit Agency found a similar situation. In reviewing 13 of 34 occupations for which bonuses totaling about \$5 million were programed during fiscal year 1980, the auditors determined that about \$2 million in bonuses were offered for enlistments in 4 of these occupations which inventory statistics indicated were overstaffed. The auditors found an even worse situation in the reenlistment bonus program. In a test of 59 occupations, they determined that the Army awarded bonuses totaling \$6.8 million for 13 occupations which may not have been short of personnel or were no more critical than other occupations for which bonuses were not paid. The test showed 10 occupations were not included in the program that the auditors believed should have qualified for bonuses. 31/

Similarly, in a June 1981 report on the management of enlisted submarine personnel, the Naval Audit Service concluded that reenlistment bonuses were not consistently applied to those enlisted submarine occupations where Navy personnel losses were heaviest. In two of the six occupations reviewed, bonuses totaling \$2,250,000 were awarded to 222 people who apparently were in overstaffed occupations. The other four occupations showed shortages, but were not provided sufficient bonuses to overcome these deficiencies. 32/

To make occupation selection and bonus award systems more effective, and to avoid the types of problems discussed in these studies, DOD may need to manage the bonus program at a more refined level of detail. Currently, all services manage their bonus programs by military specialty. Each service has its own nomenclature for identifying specialties, such as the Army's Military Occupation Specialty System or the Navy's Rating System.

Instead of using staffing levels in each military specialty as a basis for determining which occupations should get bonuses, the reports suggest that the services could determine which specific skills within the individual specialties need the bonuses the most. For example, if the Navy were to manage its bonus programs by Navy Enlisted Classifications (subdivisions of Ratings) instead of by Ratings, it could allocate bonuses more efficiently and economically. Rather than pay everyone in a designated Rating a bonus, regardless of staffing levels in individual Navy Enlisted Classifications, only those occupations with the most serious shortages would need to be granted bonuses.

According to some studies, management information systems also hinder the occupation selection and bonus award processes. Because staffing problems are dynamic and fluid, and what may be a problem today may not be a problem next month, having the best information available to make bonus decisions is important.

Such information is not always readily available. For example, several reports disclosed that personnel inventory data, a basis for determining staffing levels and identifying shortages, was sometimes inaccurate, incomplete, and untimely. 33/ Instances of missing or inaccurate information which could be valuable to bonus managers were common. The Naval Audit Service, in its review of enlisted submarine personnel, estimated that 19 percent of the enlisted master records for over 4,000 bonus recipients did not show submarine qualification designators which were intended to provide personnel managers ready access to the Navy's inventory of enlisted submariners. 34/

Timeliness of data is another problem that makes bonus management systems less than ideal. Currently, shortage problems are initially identified when individual unit commanders learn that personnel are not reenlisting, and skills become understaffed. By the time this information is reported through the various levels of command within the service, several months may have lapsed. And, by the time DOD is informed of the shortages and reviews the situation to decide whether to authorize bonuses, over a year may have gone by. Because of the dynamic nature of staffing shortages, the problem may no longer exist or may have escalated by the time a decision is made. Consequently, bonuses may be paid when they are not needed, or they may not be paid in the numbers and at the levels needed.

Another important function of management information systems is to identify the best people to fill these shortages. This takes on added importance when bonuses are paid, because prudent management dictates that this extra investment pay additional dividends in terms of better people and longer enlistments and reenlistments.

DOD has established criteria that manpower managers must use in determining individual member eligibility for enlistment and reenlistment bonuses. For example, to qualify for an enlistment bonus, one must be a high school graduate, or equivalent, must be classified in one of the top three mental categories, and must enlist for at least 4 years. To receive a reenlistment bonus, one must be qualified in a military specialty designated as a bonus skill, and must be serving in a pay grade of E-3, or higher, as a minimum.

While acknowledging that these are reasonable standards for selecting people to fill critical shortages, some studies suggested more sophisticated information systems are needed to make occupation selection and bonus awards more effective. Besides filling vacancies with qualified people, personnel managers need to identify individuals most likely to make the military a career. According to several researchers, management information systems that better profile people in terms of biographical, attitudinal, and aptitudinal data, would help insure adequate staffing levels for occupation shortages and maximize the return on bonus and other dollars. 35/

If manpower managers made better use of personnel profiles and other information, as suggested by some of the studies we reviewed, occupation selection and bonus processes could be improved. For example, individuals with high probabilities of retention, or people who have indicated a desire to make the military a career, could be assigned to occupations that typically experience shortfalls. If sufficient numbers of these persons could be identified, maybe some occupations where bonuses are currently paid could be eliminated, or the amounts paid reduced. Some studies indicate that even if these persons would have to be retrained or reclassified, the added expense ultimately may be less than paying bonuses.

BONUS RECIPIENTS ARE ASSIGNED TO JOBS OR USED IN OCCUPATIONS NOT DIRECTLY RELATED TO THEIR SKILLS

Some bonus recipients are not being used and assigned to the jobs for which bonuses were paid. Thus, the services are not receiving the full value of their bonus payments, and in fact, may be paying additional bonuses to compensate for shortages that result. As numerous audit reports have shown, this practice has not been uncommon.

In 1980, during a review of personnel records of second-term marines, the Naval Audit Service identified 589 marines who received an estimated \$1.8 million in reenlistment bonuses working outside the occupation for which bonuses were paid. Only 99 of these had received waivers approving these assignments. 36/ That same year, the Army Audit Agency reviewed records of bonus recipients at five locations and reported that 2,425 of 18,751 bonus recipients were not being properly used. The rates of maluse ranged between 7 and 20 percent at the installations visited. A total of \$8 million in bonuses was awarded to people not being used in their bonus occupations. The auditors found bonus recipients serving in such duties as customs inspectors, recreational specialists, and members of a local marksmanship team. 37/

The Air Force Audit Agency reported in August 1981 that 109 airmen who were paid \$353,000 in bonuses were working in such nonbonus skills as training instructors, recruiters, training advisors, and dormitory and facility managers. The auditors did not term these cases as malutilization because they could not determine whether these were legitimate reassignments within service guidelines, which allow for certain instances where bonus recipients can be employed outside their specialty skills. 38/ A June 1982 Defense Audit Service report of the reenlistment bonus programs estimated that as much as \$4 million in future service was lost between fiscal years 1978 and 1982 to bonus recipients who served out of their fields for more than 180 days. 39/

The seriousness of this problem and the cost impact is not known. Service manpower managers contend that the practice is not widespread and that, more often than not, reassignments and uses of bonus recipients are legitimate. They tend to discount the high percentages auditors report, contending that auditors apply tougher criteria than were intended. For example, if service records do not document waiver actions that authorize assignments and usage outside bonus skills, the auditors consider these as maluse or malassignment.

While asserting that no rate of malutilization is acceptable, bonus managers told us there are instances where this cannot be avoided. To meet sea/shore rotation, continental United States/overseas, or other mission-essential requirements, bonus recipients sometimes have to be used in occupations other than those for which they were paid a bonus. According to bonus managers, this is where most of the apparent maluses occur, and these cases are not an inappropriate way of using people who have been paid reenlistment bonuses.

When viewed from this perspective, actual malutilization rates may be much lower than some auditors have reported. One DOD official estimated that Defense-wide malutilization of bonus recipients was less than 5 percent. While bonus managers do not view this as a significant problem, DOD and the services have taken various actions to keep this practice to a minimum.

SERVICES NEED TO DO A BETTER JOB OF RECOUPING UNEARNED BONUSES

The services have had little success in recouping unearned portions of bonuses that result when bonus recipients either leave the service before fulfilling their bonus contracts or do not maintain their skill qualifications. As a result, bonus dollar losses may be in the millions.

By law, a service member who voluntarily, or because of misconduct, does not complete the term of enlistment or reenlistment for which a bonus was paid, should refund that portion not earned. Moreover, entitlement to the full amount of a bonus will be contingent upon a member's maintaining the technical qualification required for effective performance in the skill for which the bonus was awarded.

Unearned bonuses, and service members' debts in general, have been the subject of numerous audit reports. Even though the statistics vary from report to report, the basic message is always the same: most of these debts go uncollected. Like malutilization, recouping unearned bonuses has been a problem throughout the history of the bonus programs.

In a 1980 report on the Army Bonus Program, the Army Audit Agency disclosed that during fiscal years 1978 and 1979, individuals who prematurely left the Army owed \$4.8 million in prepaid bonuses. As of November 1979, only \$600,000 had been collected. The auditors indicated that more could have been collected had the Army had better procedures to recoup these payments before discharging bonus recipients. The auditors also questioned what they viewed as a rather lenient practice of not requiring recoupments from some persons who, they believed, should have been liable for unearned portions of their bonuses. For example, persons who received early discharges because of a lack of interest in the military were not required to pay back their bonuses. 40/

In its August 1981 report on the Air Force Selective Reenlistment Bonus Program, the Air Force Audit Agency questioned determinations made on 167 members who left the service before completing their reenlistments and were not asked to return \$276,000 in unearned bonuses. Although all these were involuntary discharges, which technically did not require bonus recoupments, the auditors believed these determinations where illogical or inconsistent with determinations to recoup for related reasons. For example, bonuses were not recouped from members who were involuntarily separated for unsuitability or for being overweight, but were recouped from members who were reassigned because they were not technically qualified in their bonus skill. The auditors called for a more equitable recoupment policy to avoid these and other recoupment problems. 41/

The Defense Audit Service's June 1982 report also discussed the unearned bonus issue. The report estimated that as much as \$69 million in bonuses had been paid in fiscal years 1978-82 to reenlistments who had left the service prematurely and that changing the method of paying reenlistment bonuses could save about \$11 million annually. 42/

Statistics provided to us by manpower managers indicate that, in DOD, the number of defaulted bonus contracts is averaging 2,500 contracts annually. The unearned portion of these awards totals about \$4 million, with about 70 percent of the total attributed to Army contracts. Although the services appear to be doing a better job of recouping unearned bonuses than they had in the past, most of this money still goes uncollected. Collection data for all the services combined indicate that about 70 percent of the unearned bonus dollars are not recouped.

As part of an overall debt collection effort designed to more aggressively pursue bonus and other overpayments, the services have developed plans they hope will improve their track records in this area. Many of the current and planned actions incorporate recommendations that GAO and other audit groups have suggested, including more effectively using collection letters, offsetting debts against separation payments, redesigning pay

and accounting systems, and using collection agencies and credit bureaus. It is too early to tell what impact these changes will have.

SUMMARY

If the current bonus programs are continued, DOD and service managers need to pursue every opportunity to administer their programs better and more economically, with a view toward curtailing the rapid cost growth of these programs. As the studies we reviewed pointed out, improvements are needed in three major areas of program administration:

- --Bonus awards need to be made more selectively, as the Congress intended. To do this, bonus occupations will have to be managed more precisely. Better targeting of bonus dollars to skills experiencing the heaviest losses and to occupations where bonuses will do the most good, for example, will help correct such problems as paying bonuses in overstaffed occupations and not paying bonuses in understaffed occupations. More sophisticated information systems are needed to identify persons most likely to succeed in occupations with shortages and to make bonus decisions more accurate and timely. And, as a means to reduce program costs, less extensive use of maintenance level and career bonuses should be considered, since many of these bonuses are being paid to people who would probably stay on even if no bonus, or a smaller bonus, were given.
- --To get the maximum return on their bonus dollars, the services need to pay closer attention to how bonus recipients are used. Too frequently, bonus recipients are assigned to jobs or used in occupations not directly related to their bonus specialties.
- --The services need to improve their record for recouping unearned bonuses. When bonus recipients fail to complete their terms of service, or fail to maintain their bonus skill qualifications through their own fault or doing, they should be held accountable for that portion of their bonuses they did not earn.

FOOTNOTES

1. Robert F. Lockman, Final Report of the Personnel Management In the All-Volunteer Force Study, Center For Naval Analyses, prepared for the Office of Naval Research (Alexandria, Va.: 1980).

- 2. Air Force Selective Reenlistment Bonus Program, Air Force Audit Agency, Project 805685 (Norton Air Force Base, California: 1981). Robert F. Hale and Joel N. Slackman, Congressional Budget Office, Statement Before the National Security and Veterans Task Force of the Committee on the Budget, U.S. House of Representatives (Washington, D.C.: 1981).
- 3. James T. Bennett and Sheldon E. Haber, An Assessment of the Marine Corps Combat Arms Enlistment Bonus, George Washington University, prepared for the Office of Naval Research (Arlington, Va.: 1973). H. Wallace Sinaiko, First Term Enlisted Attrition, Volume I: Papers, Smithsonian Institution, prepared for the Office of Naval Research (Arlington, Va.: 1977).
- 4. Military Retention Incentives: Effectiveness and Administration, Report to the Congress by the Comptroller General of the United States, No. B-160096 (Washington, D.C.: 1974).
- 5. Examination of the Feasibility of Developing Reenlistment Allocation Methodologies for the United States Air Force, Air Force Human Resources Lab (Brooks AFB, Tex.: 1981).
 - 6. Lockman, Personnel Management.
- 7. Jim R. Joy, New Incentives For Enlistment In the All-Volunteer Force, USAWC Military Studies Program Paper (Carlisle, Pa.: 1979.). Charles C. Moskos, "Making the All-Volunteer Force Work," Defense Manpower Planning: Services for the 1980s, Pergamon Press (New York, N.Y.: 1981).
- 8. Sheldon E. Haber, An Application of Discriminant Analysis to the Problem of Assigning Variable Reenlistment bonuses, George Washington University, prepared for the Office of Naval Research (Washington D.C.: 1975). Charles T. Stewart, Jr., Jobs, Occupations, Careers, George Washington University, prepared for the Office of Naval Research (Washington, D.C.: 1976).
- 9. See, for example, Haber, Variable Reenlistment Bonuses and Roberta J. Smith, A Description of the Enlisted Service Rotation system, A Rand Note, prepared for the Office of the Assistant Secretary of Defense/Manpower Reserve Affairs and Logistics (Santa Monica, Cal.: 1979).

APPENDIX I

10. Studies offering examples include: J.A. Sheridan and J.O. Monozhan, Navy Attrition and Turnover In Private Industry: Concepts, Measurement, and Management, Paradigm Consultants, prepared for the Office of Naval Research (Arlington, Va.: 1980). Phillip James Spence, Contract Employment—What are the Alternatives? Naval Postgraduate School (Monterey, Cal.: 1975). Robert L. Frey, Jr., A Study of Experimental Incentives As An Influence On Enlistment Intention: More Is Not Better, American Institutes For Research, prepared for the Office of Naval Research (Washington, D.C.: 1974).

- ll. Walter Muller, <u>Lateral Placement Study</u>, George Washington University, prepared for the Office of Naval Research (Washington, D.C.: 1981).
 - 12. Ibid.
- 13. A recent study that deals in depth with this issue is:
 Dennis De Tray, New Sources of Active Duty Military Personnel: The
 Prior Service Accessions Pool, A Rand Note, prepared for the Office
 of the Assistant Secretary of Defense/Manpower, Reserve Affairs and
 Logistics (Santa Monica, Cal.: 1981).
 - 14. Ibid.
- 15. Studies addressing these alternatives are: Richard L. Fernandez, Issues in the Use of Postservice Educational Benefits As Enlistment Incentives, A Rand Note, prepared for the Office of the Assistant Secretary of Defense/Manpower, Reserve Affairs and Logistics (Santa Monica, Cal.: 1980). Lawrence Goldberg, Recruiters, Advertising, and Navy Enlistments, Center For Naval Analyses, Professional Paper 275 (Alexandria, Va.: 1980). Brigadier General Walter J. Mehl, et al., Manning the Force: Final Task Force Report, Headquarters, Department of the Army, Office of the Deputy Chief of Staff for Personnel (Washington, D.C.: 1979). Frey, More Is Not Better.
 - 16. Goldberg, Recruiters.
- 17. D.W. Grissmer, et al., An Econometric Analysis of Volunteer Enlistment of Service And Cost Effectiveness Comparison of Service Incentive Programs, General Research Coporation, prepared for the Assistant Secretary of Defense (Manpower and Reserve Affairs, Washington, D.C.: 1974). Daniel F. Huck, K. D. Midlam, et al., An Evaluation of the U.S. Army Enlistment Bonus, General Research Corporation, prepared for the Office of the Assistant Secretary of Defense (Washington, D.C.: 1976). Lawrence Goldberg, "Enlisted Supply Study," (research findings delivered in briefing to be published as a study, January 1983) Center For Naval Analyses (Alexandria, Va.: 1981). Goldberg, Recruiters.

APPENDIX I

- 18. Goldberg, "Enlisted Supply Study."
- Robert L. Frey, et al., Reenlistment Incentives: More Is Not Better In the Fleet Either, American Institutes For Research, prepared for the Office of Naval Research (Washington, D.C.: 1974). Barry E. Goodstadt, et al., Relationship Between Organizational Beliefs, Affected Dispositions and Navy Reenlistment Intention: Theoretical and Administrative Implications, American Institutes For Research, prepared for the Office of Naval Research (Washington, D.C.: 1974).
- 20. Huck, Midlam et al., Army Enlistment Bonus. James, Alternatives For Contract Employment.
 - 21. Huck, Midlam et al., Army Enlistment Bonus.
 - 22. Frey, More Is Not Better.
- 23. Majorie H. Royle and David W. Robertson, Job Satisfaction Measures As Predictor of Retention For Navy Enlisted Personnel, Navy Personnel Research and Development Center (San Diego, Cal.: 1977). Lockman, Personnel Management. Stephen J. Motowidlo, Marvin D. Dunnette, and Rodney L. Rosse, Reenlistment Motivations of First-Term Enlisted Men and Women, Personnel Decisions Research Institute, prepared for the U.S. Army Research Institute For the Behavioral and Social Sciences (1980).
- 24. Winston K. Chow and J. Michael Polish, Models of the First-Term Reenlistment Decision, The Rand Corporation, prepared for the Office of the Assistant Secretary of Defense/Manpower, Reserve Affairs and Logistics (Washington, D.C.: 1980). Choongroo Kim, Gilbert Nestel, Robert L. Phillips, and Michael E. Borus, The All Volunteer Force: An Analysis of Youth Participation, Attrition, and Reenlistment, Center For Human Resource Research, Ohio State University, prepared for the Employment and Training Administration, U.S. Department of Labor (Columbus, Ohio: 1980). Need to Better Inform Military of Compensation Changes, Report to the Congress by the Comptroller General of the United States, FPCD-78-27, (Washington, D.C.: 1978).
 - 25. Chow and Polish, Models of Reenlistment Decision.
- 26. Military Compensation Should Be Charged To A Salary System, Report to the Congress by the Comptroller General of the United States, FPCD-77-20 (Washington, D.C.: 1977). Defense Manpower: The Keystone of National Security, Report to the President and the Congress by the Defense Manpower Commission, (Washington, D.C.: 1976).

APPENDIX I

27. Arthur S. De Vang and T.R. Saving, Life-Cycle Job Choice and the Demand and Supply of Entry Level Jobs: Some Evidence From the Air Force, Resources Research Center (Bryan, Tex.: 1981). Joy, Incentives For Enlistment.

- 28. Barry E. Goodstadt, Sharyn M. Mallamad, and Mary Beth Merrin, Research on Determinants of Unit-Level Attrition Decision Making: II Quantitative Analysis of Attrition Impacts, Westat Inc., prepared for the Office of the Assistant Secretary of Defense, Manpower, Reserve Affairs and Logistics, Final Technical Report (Rockville, Md.: 1981).
- 29. Revising Medical Fitness Policies Could Provide Additional Quality Recruits At Less Cost Than Enlistment Incentives, Report by the U.S. General Accounting Office to the Secretary of Defense, FPCD-82-13 (Washington, D.C.: 1982).
 - 30. Ibid.
- 31. The Army Bonus Program, United States Army Audit Agency, Audit Report: HQ80-210, (Washington, D.C.: 1980).
- 32. Management of Enlisted Submarine Personnel, Naval Audit Service, Audit Report C37110, (Falls Church, Va: 1981).
- 33. Ibid. Marine Corps Military Manpower, Naval Audit Service, Audit Report T30289, (Falls Church, Va.: 1980). Lack of Control and Feedback Hinders Army Manpower Management Improvements, Report to the Congress by the Comptroller General of the United States, FPCD-80-9, (Washington, D.C.: 1979).
 - 34. Naval Audit Service, Submarine Personnel.
- 35. Nancy Gwinn, George Berberich, and Bart Vitola, Reenlistee/Non-Reenlistee Profiles and Prediction of Reenlistment
 Potential, Air Force Human Resources Lab, (Brooks AFB, Tex.:
 1977). Richard J. Orend and Richard E. Kriner, Assessing Reenlistment Eligibility: A Preliminary Examination of Some New
 Reenlistment Criteria, Human Resources Research Organization,
 prepared for U.S. Army Research Institute For the Behavioral
 and Social Sciences, (Arlington, Va.: 1975). James S. Thomason,
 Rating Assignments To Enchance Retentions, Center for Naval Analyses
 prepared for the Office of Chief of Naval Operations, (Washington,
 D.C.: 1980). Naval Audit Service, Military Manpower.
 - 36. Ibid.
 - 37. United States Army Audit Service, The Army Bonus Program.
 - 38. Air Force Audit Agency, Bonus Program.

39. Report on the Review of the DOD Enlisted Bonus Program, Defense Audit Service, No. 82-101 (Arlington, Va.: 1982).

- 40. United States Army Audit Agency, The Army Bonus Program.
- 41. Air Force Audit Agency, Bonus Program.
- 42. Defense Audit Service, Bonus Program.

ENLISTMENT BONUSES: NUMBER OF NEW CONTRACTS AND PROJECTED

CASH OUTLAYS OVER THE LIFE OF THE CONTRACTS	Dollars	(million)	\$ 58.8	77.7	31.9	34.1	42.6	9.05	71.6	130.7	174.0	\$672.0
	Total Number		24,407	33,611	14,858	14,741	18,280	20,246	25,667	34,430	38, 762	225,002
	Air Force	(million)	1	i	1		i	ı	2.2	3.0	2.3	\$7.5
	Air		ı		ı	• 1	14	Ĩ	1,137	1,346	1,136	3,619
	Marine Corps unber Dollars	(million)	\$ 5.9	8.1	5.5	5.7	7.1	7.7	7.2	11.8	14.3	\$73.3
	Marin		2,674	3,323	2,653	2,445	3,123	3,480	2,898	3,998	4,166	28, 760
	Navy Number Dollars	(million)	\$ 0.6	9.0	1	1	6.0	3.2	5.4	14.0	16.5	\$41.2
			378	369	ı	1	450	1,908	3,456	7,548	7,381	21,490
	V Dollars	(million)	\$ 52.3	0.69	26.4	28.4	34.6	39.7	56.8	101.9	140.9	\$550.0
	Army Number Dollars	•	21,355	29,919	12,205	12,296	14,707	14,858	18,176	21,538	26,079	171,133
	'iscal year		1975	I+9/61	1677	1978	1979	1980	1981	1982	1983	Total

\$3,396.9

451,562

\$542.3

106,560

\$344.6

40,742

\$1,586.6

148,694

\$923.4

155,566

Total

1983

1982

1,002.3

(million)

\$ 254:8

138.8

146.8

165.2

175.L

231.2

529.8

752.9

REENLISTMENT BONUSES: NUMBER OF NEW CONTRACTS AND

Fiscal

1975 1976+T

	Tot	39,357	24,793	25,349	32,253	31,333	37,760	72,069	87,768	100,880
PROJECTED CASH OUTLAYS OVER THE LIFE OF THE CONTRACTS	orce Dollars	(million) \$ 26.1	3.4	2.8	3.5	17.3	30.3	91.7	183.6	183.6
	Air Force Number Doll	8, 797	3,528	2,799	3,205	3,954	5,088	19,480	29,958	29, 751
	Marine Corps unber Dollars	(million) \$ 5.9	4.5	4.4	8.7	11.4	21.6	77.8	7.68	120.6
	Marine Number	(r 936 \$	716	1,056	2,169	2,496	2,996	10,035	10,061	10,277
	y Dollars	million) \$ 89.7	73.6	80.3	87.2	88.9	115.8	240.0	329.8	481.3
	Number D	(1 14,242	9,651	9,984	10,499	9,991	14,309	20,644	26,360	33,014
	N Dollars	(million) \$133.1	57.3	59.3	65.8	57.5	63.5	120.3	149.8	216.8
	Army Number D	(r 15,382	10,898	11,510	16,380	14,892	15,367	21,910	21,389	27,838

1977 1978 1979 1980 1981

BIBLIOGRAPHY

OF REPORTS USED IN THIS STUDY

Active Duty/Manpower Problems Must Be Solved. (Classified) Report to the Congress by the Comptroller General of the United States, C-FPCD 80-1. Washington: 1979.

Adie, D. K. and I. A. Ghazalah. The Effect of Compensation on Voluntary Separation of Navy Enlisted Personnel. Institute for Research Studies Inc., prepared for Office of Naval Research. Athens, Ohio: 1980.

Air Force Selective Reenlistment Bonus Program. Air Force Audit Agency, Project 805685. Norton Air Force Base, Cal.: 1981.

Anderson, MAJ Calvin M., MAJ Anthony K. Holtry, and Rene'
Plourde. Cost Effectiveness Analysis of Bonuses and Reenlistment Policies (CEABREP). U.S. Army Concepts Analysis Agency,
prepared for Office of the Asst. Secretary of the Army for
Manpower and Reserve Affairs. Bethesda, Md.: 1977.

Arbogast, Kate A. and Charles T. Stewart, Jr. The Supply of Women Enlistees and Their Utilization in the Navy. The George Washington University, prepared for the Office of Naval Research. Washington: 1976.

The Army Bonus Program. United States Army Audit Agency, Audit Report No. HQ80-21. Washington: 1980.

The Army Continues To Have Serious Problems Identifying Its

Resource Requirements. Report to the Congress by the Comptroller

General of the United States. LCD-80-67. Washington: 1980.

The Attractiveness of Air Force Non-Monetary Benefits. Cooper and Company, prepared for Air Force Human Resources Laboratory Stamford, Ct.: 1974.

Belt, John A., and Arthur B. Seveney. The Air Force Wife: Her Knowledge Of And Attitude Toward The Air Force. Wichita State University, prepared for Air Force Office of Scientific Research. Wichita, Kansas: 1976.

Bennet, James T. and Sheldon E. Haber. An Assessment of the Marine Corps Combat Arms Enlistment Bonus. George Washington University, prepared for the Office of Naval Research. Arlington, Va.: 1973.

Bennett, LTC W. M., COL H.T. Chandler, COL J. P. Duffy et al. Army Families. U.S. Army War College. Carlisle Barracks, Pa.: 1974.

Berry, Ola C. Personnel Retention Model Analysis. U.S. Army Concepts Analysis Agency. Bethesda, Md.: 1980.

Binkin, Martin and Irene Kyriakopoulos. Paying the Modern Military. The Brookings Institution. Washington: 1980.

Bloom, Richard D. Enlisted Ratings of Possible Incentives
For Skill Acquisition. U.S. Army Research Institute for the
Behavioral and Social Sciences. Arlington, Va.: 1977.

Bradley, David Glenn. A Predictive Statistical Model Of Navy Career Enlisted Retention Behavior Utilizing Economic Variables.

Naval Postgraduate School. Monterey, Ca.: 1980.

Bruni, John R., A. P. Jones, and L. R. James. <u>Correlates of First-term Reenlistment Behavior Aboard Navy Ships</u>. Texas Christian University, prepared for Office of Naval Research. Fort Worth, Tx.: 1975.

Carlisle, Rayon Hughes Jr. An Investigation into the Job Factors Affecting the Reenlistment of Marines in the Tele-communications Fields. Naval Postgraduate School. Monterey, Ca.: 1975.

Chipman, Mark D. Comparative Analysis of Enlisted Retirement Behavioral Models. Navy Personnel Research and Development Center. San Diego: 1979.

Chipman, Mark D. and Hans Mumm. Forecasting Naval Enlisted Occupational Retention Behavior Under Alternative Retirement Systems. Navy Personnel Research and Development Center. San Diego: 1979.

Choongsoo, Kim, Gilbert Nestel, Robert L. Phillips, and Michael E. Borus. The All Volunteer Force: An Analysis of Youth Participation, Attrition, and Reenlistment. Center for Human Resource Research, The Ohio State University, prepared for the Employment and Training Administration, U.S. Department of Labor. Columbus, Ohio: 1980.

Chow, Winston K. and J. Michael Polich. Models of the First-Term Reenlistment Decision. The Rand Corporation, prepared for Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics. Washington: 1980.

Cohen, Les and Diane Erikson Reedy. "A Note on the Sensitivity of Navy First Term Reenlist to Bonuses, Unemployment and Relative Wages." Naval Research Logistics Quarterly. Vol. 27, No. 3. 1980.

Commons, Norbert Anthony, Jr. An Examination of Two Formal School Initial Specialized Training Pipelines With Respect to Retention. Naval Postgraduate School. Monterey, Ca.: 1979.

Cooper, Merri-Ann. Enlisted Attrition in the Army: A Board Conceptual Framework and Analysis. Advanced Research Resources Organization, prepared for U.S. Army Research Institute for the Behavioral and Social Sciences. Washington: 1979.

Cooper, Richard V.L. <u>Defense Manpower Policy: Presentations</u> from the 1976 Rand Conference on <u>Defense Manpower</u>. The Rand Corporation, prepared for Defense Advanced Research Projects Agency. Santa Monica, Ca.: 1978.

Cooper, Richard V. L. The President's Commission on Military Compensation: A Review. The Rand Corporation, Santa Monica, Ca.: 1978.

Cost of Manning The Active-Duty Military. A Staff Working Paper. Congressional Budget Office. Washington: 1980.

Croan, Gerald M. et al. Roadmap for Navy Family Research. Westinghouse Public Applied Systems Division, prepared for Organizational Effectiveness Research Programs, Office of Naval Research. Columbia, Md.: 1980.

Davis, DeQuincey Adam. The Feasibility And Cost-Effectiveness Of Utilizing Skilled Parolees In the United States Armed Forces. Naval Postgraduate School. Monterey, Ca.: 1980.

<u>Defense Manpower: The Keystone of National Security</u>. Report to the President and the Congress. Defense Manpower Commission Washington: 1976.

Desch, LTC. Gerald D. Retention of Aircraft Maintenance Technicians. Air War College. Maxwell Air Force Base, Ala.: 1978.

De Vang, Arthur S. and T. R. Saving. Life-Cycle Job Choice and the Demand and Supply of Entry Level Jobs: Some Evidence from the Air Force. Resources Research Center. Bryon, Tx.: 1981.

De Vang, Arthur S., Thomas R. Saving, and William F. Shughart II. Supply Rate and Equilibrium Inventory of Air Force Enlisted Personnel. Resources Research Corporation, prepared for Air Force Human Resources Laboratory. College Station, Tx.: 1978.

DOD Bonus Management Conference. Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics. Washington: 1975.

Doering, Zahava D., David W. Grismer, and Jane S. Morse. 1979

DOD Survey of Personnel Entering Military Service: Wave 1 and 2

User's Manual and Codebook. A Rand Note. The Rand Corporation, prepared for the Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics. Santa Monica, Ca.: 1980.

Doren, Wayne R. Van. Demand and Supply of High Quality Sailors. Naval Postgraduate School. Monterey, Ca.: 1981.

De Tray, Dennis, New Sources of Active Duty Military Personnel:
The Prior Service Accessions Pool. A Rand Note, prepared for the
Office of the Assistant Secretary of Defense for Manpower, Reserve
Affairs and Logistics. Santa Monica: Ca.: 1981.

Enlisted Career Force Management Systems: An Evaluation Of Department Of Defense Comments On A Report. Report to the Congress by the Comptroller General of the United States. FPCD-78-20. Washington: 1978.

Enns, John H. Effect of the Variable Reenlistment Bonus on Reenlistment Rates: Empirical Results for FY 1971. The Rand Corportation, prepared for Defense Advanced Research Projects Agency. Santa Monica, Ca.: 1975.

Enns, J. H. Reenlistment Bonuses and First-Term Retention. The Rand Corporation, prepared for Defense Advanced Research Projects Agency. Santa Monica, Ca.: 1977.

Evanco, William M. Developing Strategies For Class A and C School Training. Center for Naval Analyses, prepared for Office of the Chief of Naval Operations. Alexandria, Va.: 1979.

An Examination of Alternative Manning Concepts for the Oceanographic System. (Classified). Presearch Inc., Arlington, Va.: 1976.

Examination of the Feasibility of Developing Reenlistment Allocation Methodologies for the United States Air Force. Air Force Human Resources Lab. Brooks Air Force Base, Tx.: 1981

Fabry, Cdr. Steven E. A Total Force Manpower Alternative—Civilian Substitution At Sea. Center for Advanced Research. Newport, R.I.: 1980.

Feris, Michael LeeRoy and Vernon Melvin Peters. Organization Committment and Personnel Retention in the Military Health Care System. Naval Postgraduate School. Monterey, Ca.: 1976.

Fernandez, Richard L. <u>Issues In the Use Of Postservice</u>

<u>Educational Benefits As Enlistment Incentives</u>. A Rand Note.

The Rand Corporation, prepared for Office of the Assistant
Secretary of Defense/Manpower, Reserve Affairs and Logistics.

Santa Monica, Ca.: 1980.

Field Test Of The Perceived Value Of Military Benefits. The Hay Group prepared for the Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics. Philadelphia, Pa.: 1980.

Finstuen, Kenn and Charles N. Weaver. Predictions of Job Satisfaction, Reenlistment Intent, and Reenlistment Behavior with the Occupational Attitude Inventory. Air Force Human Resources Laboratory. Brooks Air Force Base, Tx.: 1981.

Flexible Management: A Must for Effective Armed Service
Recruiting. Report to the Congress by the Comptroller General
of the United States, FPCD-80-64. Washington: 1980.

Frey, Robert L. et al. Reenlistments Incentives: More Is Not Better In The Fleet Either, American Institutes for Research, prepared for the Office of Naval Research. Washington: 1974.

Frey, Robert L., Jr. A Study of Experimental Incentives As
An Influence on Enlistment Intention: More Is Not Better.
American Institute For Research, prepared for Office of Naval
Research. Washington: 1974.

Gates, Ed. "Fine-Tuning Enlisted Incentives." Air Force Magazine. Vol. 63. No. 4., 1980.

Glickman, Albert S., Barry E. Goodstadt, Robert L. Frey, Jr., Abraham K. Korman, and Alan P. Romanczuls. Navy Career Motivation Programs in an All-Volunteer Condition. American Institutes for Research, prepared for Office of Naval Research. Washington: 1974.

Goldberg, Lawrence. "Enlisted Supply Study." Unpublished research findings; publication expected Jan. 1983, Center for Naval Analyses. Alexandria, Va.: 1981.

Goldberg, Lawrence. Recruiters, Advertising, and Navy Enlistments. Professional Paper 275. Alexandria, Va.: 1980.

Goodstadt, Barry E. et al. Relationship Between Organizational Beliefs Affective Dispositions And Navy Reenlistment Intention Theoretical And Administrative Implications. American Institutes for Research, prepared for the Office of Naval Research, Washington: 1974.

Goodstadt, Barry E. and Albert S. Glickman. The Current Status of Enlisted Attrition in the U.S. Navy and in the U.S. Marine Corps and the Search for Remedies. American Institutes for Research, prepared for Office of Naval Research. Washington: 1975.

Goodstadt, Barry E., Sharyn M. Mallamad, and Mary Beth Merrin.

Research on Determinants of Unit-Level Attrition Decision

Making: II Quantitative Analysis of Attrition Impacts. Westat

Inc., prepared for the Office of the Assistant Secretary of

Defense, Manpower, Reserve Affairs, and Logistics; Final Technical

Report. Rockville, Md.: 1981.

Gould, R. Bruce. Review of an Air Force Job Satisfaction Research Project: Status Report Through September 1976. Air Force Human Resources Laboratory. Brooks Air Force Base, Tx.: 1976.

Grace, Gloria L., Harold A. Holoter, Robert J. Provenzano, James Copes, and Mary B. Steiner. Navy Career Counseling Research, Phase 3, Summary and Recommendations. System Development Corporation, prepared for Office of Naval Research, Santa Monica, Ca.: 1976.

Grace, Gloria L., Harold A. Holoter, and Michele I. Soderquist. Career Satisfaction as a Factor Influencing Retention. System Development Corporation, prepared for Office of Naval Research. Arlington, Va.: 1976.

Grace, Gloria L., Mary B. Steiner and Harold A. Holoter. Navy Career Counseling Report: Navy Wives Study. System Development Corporation, prepared for Office of Naval Research. Santa Monica, Ca.: 1976

Greenberg, Marshall G., James Murphy, and Gerald McConeghy.

Exploratory Development Research of USN/USMC Personnel Phase I

Factors Affecting Attrition. Booz, Allen, and Hamilton, prepared for Office of Naval Research. Bethesda, Md.: 1977.

Grissmer, D.W., et al. An Econometric Analysis of Volunteer Enlistments Of Service and Cost Effectiveness Comparison Of Service Incentive Programs. General Research Corporation, prepared for Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs. McLean, Va.: 1974.

Guthrie, Robert V., Robert A. Lakota, and Marjorie W. Matlock. Voluntary Release Pilot Program: Effects on Attrition of General Detail Personnel. Navy Personnel Research and Development Center. San Diego: 1978.

Gwinn, Nancy, George Berberich, and Bart Vitola. Reenlisted
Non-Reenlisted Profiles and Prediction of Reenlistment Potential.
Air Force Human Resources Lab, Brooks Air Force Base, Tx.: 1977.

Haber, Sheldon E. An Application of Discriminant Analysis to the Problem of Assigning Variable Reenlistment Bonuses. George Washington University, prepared for the Office of Naval Research. Washington: 1975.

Haber, Sheldon E. Factors Influencing Attrition In The Marine Corps. George Washington University, prepared for Office of Naval Research. Washington: 1975.

Haber, Sheldon E. Some Aspects of Navy Manpower Management: Career Manning Ratios, Variable Reenlistment Bonuses and Proficiency Pay. George Washington University, prepared for the Office of Naval Research. Washington: 1973.

Haber, Sheldon E. and Charles T. Stewart, Jr. The Responsiveness of Reenlistment to Changes in Navy Compensation. George Washington University, prepared for Office Naval Research. Washington: 1975.

Hale, Robert F. and Joel N. Slackman. Statement Before the National Security and Veterans Task Force of the Committee on the Budget, U.S. House of Representatives. Congressional Budget Office witnesses. Washington: 1981.

Hand, Herbert H., Rodger W. Griffeth, and William H. Mobley.

Military Enlistment, Reenlistment and Withdrawal Research: A

Critical Review of the Literature. University of South Carolina,
prepared for Office of Naval Research. Columbia, S.C.: 1977.

Harpman, LTC David A. and George E. Armstrong. Management of Enlisted Bonus Recipients. U.S. Army Concepts Analysis Agency, prepared for Office of Asst. Secretary of the Army for Manpower and Reserve Affairs. Bethesda, Md.: 1975

Harpman, LTC David A., MAJ George Handy, MAJ Calvin Anderson. Cost Effectiveness Analysis of Enlistment/Reenlistment Bonuses. U.S. Army Concepts Analyis Agency, prepared for Office of the Asst. Secretary of the Army for Manpower and Reserve Affairs. Bethesda, Md.: 1974.

Hawkins, Robert Baron. The Prior Service Navy Veteran; An Unexploited Source Of Manpower For The Decade Of the 1980's. Naval Postgraduate School. Monterey, Ca.: 1979.

Hoiberg, Anne and Newell H. Berry. There's No Doubt About It, A Diploma Goes A Long Way for Combat Efficiency. Naval Health Research Center, prepared for Bureau of Medicine and Surgery, Department of the Navy. San Diego: 1977.

Holoter, Harold A., Robert J. Provenzano, and James Copes.

Navy Career Counseling Research: Command Retention Team Study.

Systems Development Corporation, prepared for Office of Naval

Research. Santa Monica, Cal.: 1976.

Huck, Daniel F. and K. D. Midlam et al. An Evaluation of the U.S. Army Enlistment Bonus. General Research Corporation, prepared for Office of the Assistant Secretary of Defense. Washington: 1976.

Interim Fourth Annual Report To The Congress On the Post-Vietnam Era Veteran's Educational Assistance Program. A report to the House and Senate Committees on Veterans' Affairs. Office of the Assistant Secretary of Defene for Manpower, Reserve Affairs, and Logistics. Washington: 1981.

John, Christopher, Samuel Kleinman, and William Shugart, USN. The Use of Reenlistment Bonuses. Center for Naval Analyses, prepared for Office of Chief of Naval Operations. Arlington, Va.: 1975.

Joy, Jim R. New Incentives for Enlistment in the All-Volunteer Force. USAWC Military Studies Program. Carlisle, Pa.: 1979.

Kleinman, Samuel D., et al. The Effects Of Reenlistment Bonuses. Center for Naval Analyses, prepared for Office of the Chief of Naval Operations. Arlington: 1974.

Lack of Control and Feedback Hinders Army Manpower Management

Improvements. Report to the Congress by the Comptroller General
of the United States, FPCD-80-9. Washington: 1979.

Landau, Samuel B. Selective Retention: A Longitudinal Analysis IV. Attrition Six Months After Recruit Training. Navy Personnel Research and Development Center. San Diego: 1981.

Laudau, Samuel B. and Arthur J. Farkas. <u>Selective Retention: A Longitudinal Analysis: I. Factors Related To Recruit Training Attrition</u>. Navy Personnel Research and Development Center. San Diego: 1978.

Landau, Samuel B., Arthur J. Farkas, Patricia L. Wagner. <u>Selective Retention--A Longitudinal Analysis: II. Experiences and Attitudes Of Recruit Training Graduates</u>. Navy Personnel Research and Development Center. San Diego: 1980.

Landau, Samuel B., Kevin I. McCabe, and Patricia L. Wagner.

Selctive Retention: A Longitudinal Analysis. V. A Comparison
Of The Attitudes, Perceptions and Experiences of Class "A" School
and Apprentice Training Personnel. Navy Personnel Research and
Development Center. San Diego: 1981.

Law, Alan W. Personal and Organizational Determinants of Enlisted Attrition. Navy Personnel Research and Development Center. San Diego: 1979

Lindell, M. K., J. T. Walsh, J. A. Drexler, Jr., and E. E. Lawler, III. Effects of Technology on Experienced Job Characteristics and Job Satisfaction. Battelle Human Affairs Research Centers, prepared for Office of Naval Research. Seattle: 1980.

Lockman, Robert F. Final Report of the Personnel Management in the All-Volunteer Force. Center for Naval Analyses, prepared for the Office of Naval Research. Alexandria, Va.: 1980.

Management of Enlisted Submarine Personnel. Naval Audit Service, Audit Report C37110. Falls Church, Va.: 1981.

Management and Use of Army Enlisted Personnel--What Needs To Be Done. United States General Accounting Office, FPCD-78-6. Washington: 1978.

Marine Corps Military Manpower Management. Naval Audit Service, Audit Report T30289. Falls Church, Va.: 1980.

Massell, Adele P. Reservation Wages And Military Reenlistments. The Rand Corporation. Santa Monica, Ca.: 1976.

Matthews, Warren T. Career Planning: Lessons Learned From Marines With A Break In Service. Center for Naval Analyses, prepared for Deputy Chief of Staff (RD&S), Headquarters, Marine Corps. Arlington, Va.: 1977.

Manager, Harold A., Jr. Military Pay as a Career Incentive. Air War College. Maxwell Air Force Base, Ala.: 1975.

McCall, John and Neil Wallace. Training and Retention of Air Force Airmen: An Economic Analysis. The Rand Corporation, prepared for United States Air Force Project Rand. Santa Monica, Ca.: 1967.

Mehl, Brigadier General Walter et al. Manning the Force: Final Task Force Report. Headquarters Department of the Army, Office of the Deputy Chief of Staff for Personnel. Washington: 1979.

Military Retention Incentives: Effectiveness and Administration. Report to the Congress by the Comptroller General of the United States, No. B-160096. Washington: 1974.

Millions Written Off in Former Service Members' Debts--Future Losses Can Be Cut. Report to the Congress by the Comptroller General of the United States, AFMD-81-64. Washington: 1981.

Mobley, Willam H., Herbert H. Hand, John E. Logan, and Robert Baker. Pre-Recruit Training Values, Expectations, and Intentions of Marine Corps Recruits. University of South Carolina, prepared for the Office of Naval Research. Columbia, S.C.: 1977.

Modernizing Military Pay Volume I Active Duty Compensation.
Report of the First Quadrennial Review of Military Compensation.
Washington: 1967.

Motowidlo, Stephan J., Benjamin E. Dowell, Michael A. Hopp, Walter C. Borman, Paul D. Johnson. Motivation, Satisfaction, and Morale in Army Careers: A Review of Theory and Measurement. Personnel Decisions, prepared for U.S. Army Research Institute for the Behavioral and Social Sciences. Minneapolis: 1976.

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

Muller, Walter. <u>Lateral Placement Study</u>. George Washington University, prepared for the Office of Naval Research. Washington: 1981.

Munch, Patricia. A Dynamic Model for Optimum Bonus Management. The Rand Corporation, prepared for Defense Advanced Research Projects Agency. Santa Monica, Ca.: 1977.

Nadel, Aaron B. and Jay B. Mowbray. Motivation And Retention In The U.S. Army. Tempo, General Electric Company, prepared for U.S. Army Personnel Research Office. Fairfield, Ct.: 1966.

Need to Better Inform Military Personnel of Compensation Changes. Report to the Congress by the Comptroller General of the United States, FPCD-78-27. Washington: 1978.

Need to Improve Reports for Monitoring Enlisted Personnel Bonus Programs. Report by U.S. General Accounting Office to the House of Representatives Armed Services Committee Chairman, FPCD-77-34. Washington: 1977

Nice, F. Stephen. A Longitudinal Analysis of Navy Family
Separation. Naval Health Research Center, Navy Personnel
Research Center, Navy Personnel Research and Development Center.
San Diego: 1981.

O'Neill, Richard Patrick and Anthony Henry Mirra, III. <u>Indentification of Variables Related to the Reenlistment Intentions of Navy Cryptologic Technicians (Maintenance)</u>. Naval Postgraduate School. Monterey, Ca.: 1979.

Orend, Richard J., Robert N. Gaines, Kenneth W. Stroad, and Marsha J. Michaels. Measuring the Quality of Navy Life. Human Resources Research Organization. Alexandria, Va.: 1978.

Orend, Richard J. and Richard E. Kriner. Assessing Reenlistment Eligibility: A Preliminary Examination of Some New Reenlistment Criteria. Human Resources Research Organization, prepared for U.S. Army Research Institute for the Behavioral and Social Sciences. Arlington, Va.: 1975.

Perry, Wayne D. First-Term Reenlistment Intention of Avionics Technicians: A Quantitative Analysis. The Rand Corporation, prepared for Defense Advanced Research Projects Agency. Santa Monica, Ca.: 1977.

Plog, Stanley C. and Otto I. Kahn. Reenlistment and Retention of Effective Women in the Women's Army Corps: An Exploratory Research Investigation. U.S. Army Research Institute for the Behavioral and Social Sciences. Washington: 1974.

Polich, J. Michael, Richard L. Fernandez, and Bruce R. Orvis. Enlistment Effects of Military Educational Benefits. A Rand Note, prepared for Office of the Asst. Secretary of Defense, Manpower, Reserve Affairs and Logistics. Santa Monica, Ca.: 1982.

Putt, Captain Joseph W., and Captain Scott K. Williams.

Furnover of Air Force Enlisted Aircraft Maintenance Personnel.

Air Force Institute of Technology. Wright-Patterson Air Force

Base, Ohio: 1979.

Reenlistment Programs. Air Force Audit Agency. Norton Air Force Base, Ca.: 1977.

Report on the Review of DOD Debt Collection Programs for Former Military Personnel. Defense Audit Service, No.80-119. Arlington, Va.: 1980

Report on the Review of the DOD Enlisted Bonus Program. Defense Audit Service, No.82-101. Arlington, Va.: 1982.

Report of the Secretary of the Navy's Task Force on Navy/Marine Corps Personnel Retention, Summary. Office of the Secretary of the Navy. Washington: 1966.

Resources for Defense: A Review of Key Issues for Fiscal Years 1982-1986. Congressional Budget Office. Washington: 1981.

Revising Medical Fitness Policies Could Provide Additional Quality Recruits at Less Cost than Enlistment Incentives.

Report by the U.S. General Accounting Office to the Secretary of Defense, FPCD-82-13. Washington: 1982.

Royle, Marjorie H. and David W. Robertson. Job Satisfaction Measures as Predictor of Retention for Navy Enlisted Personnel. Navy Personnel Research and Development Center. San Diego: 1977.

Rueter, Frederick H., R. Gregg Hillman, and Thomas R. Bell.

Design of a National Skills Market Model For Air Force Enlisted

Personnel. Conrod Research Corporation, prepared for Air Force

Human Resources Laboratory. Pittsburgh, Pa.: 1979.

Sample Survey of Military Personnel (RCSAG-366) as of 31 May 1969.

Survey Estimate of Retention of Army Personnel. Office of Personnel Operations (Army). Washington: 1969.

Saving, Thomas R., Raymond C. Battalio, Arthur S. De Vang, Gerald P. Dwyer, and John K. Kagel. Air Force Enlisted Personnel Retention-Accession Model. Resources Research Corporation, prepared for Air Force Human Resources Laboratory. College Station, Tx.: 1980.

Sawyer, Ronald E. The Impact of Unit Rotation on Retention. Center for Naval Analyses, prepared for Deputy Chief of Staff (RD&S), Headquarters, Marine Corps. Arlington, Va.: 1978.

Sheridan, J.A. and J.O. Monozhan. Navy Attrition and Turnover In Private Industry: Concepts, Measurement, and Management. Paradigm Consultants, prepared for the Office of Naval Research. Arlington, Va.: 1980.

Sinaiko, Wallace H. First Term Enlisted Attrition. Smithsonian Institution, prepared for the Office of Naval Research. Arlington, Va.: 1977.

Skinner, Mary J. and William E. Alley. <u>Performance of Pretrained Airmen in Air Force Technical School</u>. Air Force Human Resources Laboratory. Brooks Air Force Base, Tx: 1980.

Smith, Roberta J. A Description of the Enlisted Service Rotation System. A Rand Note, prepared for the Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics. Santa Monica, Ca.: 1979.

Special Pays, Report of the 1971 Quadrennial Review of Military Compensation. Office of the Assistant Secretary of Defense, Manpower and Reserve Affairs. Washington: 1971.

Spence, Phillip James. Contract Employment--What Are the Alternatives? Naval Postgraduate School. Monterey, Ca: 1975.

Stewart, Charles T., Jr. <u>Jobs, Occupations, Careers</u>. George Washington University, prepared for the Office of Naval Research. Washington: 1976.

Taylor, James Edward and David Marvin Thalman. An Examination of Skill Deterioration and Retraining in the United States
Navy. Naval Postgraduate School. Monterey, Ca.: 1977.

The Third Quadrennial Review of Military Compensation Staff Studies and Selected Supporting Papers Volume X. Office of the Secretary of Defense. Washington: 1977.

Thomason, James S. Manpower/Personnel Policies in the All Volunteer Force Study. Center for Naval Analyses, prepared for Office of the Chief of Naval Operations. Alexandria, Va.: 1980

Thompson, Captain Thomas N., USAF. A Study of Job Satisfaction in the United States Air Force, Air Force Institute of Technology. Wright-Patterson Air Force Base, Ohio: 1975.

Thompson, James S. Rating Assignments to Enhance Retention. Center for Naval Analyses, prepared for Office of Chief of Naval Operations. Washington: 1980.

Titsworth, William L. <u>Differences Between Crosstrainees and Non-Crosstrainees on Grade Level, Job Satisfaction, and Assignment Characteristics</u>. Air Force Human Resources Laboratory. Brooks Air Force Base, Tx: 1979.

Urgent Need For Continued Improvements In Enlisted Career Force Management. Report to the Congress by the Comptroller General of the United States. FPCD-77-42. Washington: 1977.

Using Civilian Personnel For Military Administrative And Support Positions--Can More Be Done? Report to the Congress by the Comptroller General of the United States. FPCD 78-69. Washington: 1978.

Urooman, Captain Roger M. An Analysis of Factors Associated with the Job Satisfaction and Career Intent of Air Force Personnel with Less than Six Years of Service. Air Force Institute of Technology. Wright-Patterson Air Force Base, Ohio: 1976.

Warner, John T. Alternative Military Retirement Systems:
Their Effects on Enlisted Retention. Center for Naval
Analyses, prepared for Office of Asst. Secretary of Defense
for Manpower, Reserve Affairs and Logistics. Alexandria,
Va.: 1979

Warner, John T., <u>Issues In Navy Manpower Research And Policy:</u>
<u>An Economist's Perspective</u>, Center for Naval Analyses.
<u>Alexandria</u>, Va.: 1981

Wermuth, Anthony L. An Armored Convertible: Shuffling Soldiers and Civilians in the Military Establishment.
U.S. Army War College. Carlisle Barracks, Pa.: 1979.

Woelfel, John C. and Joel M. Savell. Marital and Job Satisfaction and Retention in the Army. U.S. Army Research Institute for the Behavioral and Social Sciences. Washington: 1979.

Young, Robert A. Multivariate Modelling of the Career Intent of Air Force Personnel: Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio: 1980.

LITERATURE SEARCHES

GAO used five literature search services to identify studies relevant to the purposes of this report. Each search was based on several key words (such as "career," "enlistment bonus," "critical skill," "military pay," "military attrition," personnel retention" and many others). The searches identified over 1,500 study titles. Many were either outdated or unrelated to the purpose of this report. The 150 selected for review appeared to be those most closely related to this study's objectives. The search services used were:

Defense Logistics Studies Information Exchange, Fort Lee, Va.

Defense Technical Information Center, Defense Logistics Agency, Cameron Station, Alexandria, Va.

Research and Development Information System, Navy Research and Development Center, San Diego, Cal.

U.S. General Accounting Office Document Handling and Information Services Facility, Gaithersburg, Md.

National Technical Information Service, U.S. Department of Commerce, Springfield, Va. APPENDIX VI APPENDIX VI

EXAMPLE OF REENLISTMENT BONUS COMPUTATION

Computation Formula

Monthly Designated No. of

Х base X bonus years of = BONUS multiple 1/ pay reenlistment

1/1 to 6 based on criticality of skill

Zone A Example

E4 (3 years of service) Air Traffic Control Operator,

Air Force Specialty Code 272X0

SRB = $$705.00 \times 4 \times 4 = $11,280.00$

Zone B Example

E6 (6 years of service) Operations Specialist,

Navy Rating Code OS

SRB = $$1,023.00 \times 6 \times 4 = $16,000.00 \text{ (maximum)}$

Zone C Example

E7 (10 years of service) Counterintelligence Agent,

Army Military Occupational Specialty Code 97B

SRB = $$1,236.00 \times 2 \times 6 = $14,823.00$

NOTE:

Zone A - 21 months to 6 years of service

Zone B - 6 to 10 years of service Zone C - 10 to 14 years of service

(967015)