The 1978 Selected Reserve Reenlistment Bonus Test

Executive Summary

David W. Grissmer, Burke K. Burright,
Zahava D. Doering, Jane Sachar

Rand

The research described in this report was sponsored by the Office of the Assistant Secretary of Defense/Manpower, Reserve Affairs and Logistics under Contract MDA-903-80-C-0652

Library of Congress Cataloging in Publication Data
Main entry under title:

The Selected Reserve reenlistment bonus test.

"R-2864-MRAL."
1. Selected Reserve Reenlistment Bonus Test.
I. Grissmer, David W. (David Waltz).
II. United States. Office of the Assistan Secretary of Defense (Manpower, Reserve Affairs, and Logistics)
III. Rand Corporation.
UA42.S44 1982 355.2'2362 82-9073
ISBN 0-8330-0404-2 AACR2

The Rand Publication Series: The Report is the principal publication documenting and transmitting Rand's major research findings and final research results. The Rand Note reports other outputs of sponsored research for general distribution. Publications of The Rand Corporation do not necessarily reflect the opinions or policies of the sponsors of Rand research.

Published by The Rand Corporation

R-2864-MRAL

The 1978 Selected Reserve Reenlistment Bonus Test

Executive Summary

David W. Grissmer, Burke K. Burright,
Zahava D. Doering, Jane Sachar

April 1982

Prepared for the
Office of the Assistant Secretary of Defense/
Manpower, Reserve Affairs and Logistics

APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED

PREFACE

This executive summary describes two forthcoming Rand reports evaluating the congressionally mandated 1978 Selected Reserve Reenlistment Bonus Test. The evaluation was conducted for the Office of Reserve Affairs under Task Orders 78-III-1, 79-III-1, and 80-III-1, as part of Rand's Manpower, Mobilization, and Readiness Program, sponsored by the Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics)—OASD(MRA&L). The Rand study program seeks to develop broad strategies and specific solutions for dealing with present and future defense manpower problems.

The 1978 Selected Reserve Reenlistment Bonus Test was initiated as part of an effort to stem a severe decline in Army Selected Reserve strength. The test consisted of offering a bonus to nonprior service reservists with less than eight years of service who faced a reenlistment decision in 1978. The Rand Corporation helped to design the test, monitored its implementation in the Army Reserve and National Guard, and evaluated the effects of the bonus offer.

Five publications will document the results of the Rand evaluation of the 1978 Selected Reserve Reenlistment Bonus Test. The first, this executive summary, presents an abridgment of the forthcoming second and third reports: *The Design, Administration, and Evaluation of the 1978 Selected Reserve Reenlistment Bonus Test*, R-2865-MRAL, which will focus on the effect of a bonus offer on the reenlistment decision and on actual years served, and *A Model of Reenlistment Decisions of Army National Guardsmen*, R-2866-MRAL, which will present the results of a model developed to describe the factors underlying a reservist's decision to separate from or reenlist in the reserve. Two Rand notes will complete the documentation: *Data Bases for the 1978 Selected Reserve Reenlistment Bonus Test* will provide the technical documentation for the data bases used for all the analyses, and *A Follow-up of Participants in the 1978 Selected Reserve Reenlistment Bonus Test* will analyze the attrition of the test sample during subsequent years.

ACKNOWLEDGMENTS

This report reflects the work, guidance, and dedication of many individuals. The authors would like to thank Col. John R. Lilley II, USMC, Director of Manpower, ODASD (Reserve Affairs), for his guidance, patience, and humor throughout the implementation and analysis phases of the 1978 Bonus Test. John R. Brinkerhoff, Acting Deputy Assistant Secretary of Defense, ODASD (Reserve Affairs), provided helpful criticism and advice. Members of the Reserve Compensation System Study, ODASD (Reserve Affairs), helped in the initial design phases.

Lt. Col. John Hillen, chief, and Maj. Stephen Renner, information officer, Enlisted and Special Activities Branch, Personnel Division, National Guard Bureau, assisted in the design and data collection efforts in the Army National Guard. Lt. Col. Eugene A. Venzke, personnel staff officer, Military Strength Programs Division, Office of the Deputy Chief of Staff for Personnel, Department of the Army, and Lt. Col. Earl Drane, Office of the Chief of the Army Reserve, Department of the Army, provided similar support in the Army Reserve. Numerous individuals in the Office of the Adjutant General in the participating National Guard states, the Office of the Commander of the Army Reserve Commands, and the Office of the Commander, United States Army Forces Commands, assisted in monitoring the test.

Many Rand colleagues contributed technical expertise and comments. Sharon Matyskiela developed the file management system for the Bonus Test and prepared the administrative and analytic files. At various stages of the work, Corazon Francisco, Betty Mansfield, Paul Norton, and Jack Seinfeld provided programming assistance. Winston Chow and James Hosek gave us many valuable methodological suggestions. Cheryl Cook, James Hosek, and Paul Hill critically reviewed the report and made many helpful suggestions. Barbara Eubank, Jeannette Richardson, and Maureen David typed the report.

CONTENTS

PREFACE iii

ACKNOWLEDGMENTS v

FIGURES AND TABLES ix

Section

I. PAY AND THE ARMY SELECTED RESERVE REENLISTMENT DECISION 1

II. ARMY SELECTED RESERVE MANNING IN AN ALL-VOLUNTEER ENVIRONMENT 4

III. TEST DESIGN 6

IV. EFFECTS OF THE BONUS 10

V. THE EFFECT OF RESERVE PAY 16

VI. THE INFLUENCE OF THE FAMILY, EMPLOYER, AND OTHER FACTORS 18

VII. CONCLUSIONS 21

FIGURES

1. Personnel Strength of Army Selected Reserve Components, 1974-1978 2
2. Bonus Test Sites for the National Guard 9
3. Bonus Test Sites for the Army Reserve 9
4. Attrition of Participants in the 1978 Bonus Test 12
5. Distribution of Lottery Numbers for Guardsmen and Reservists Who Entered in 1972 13
6. Personnel Strength of Army Selected Reserve Components, 1974-1980 15

TABLES

1. Number of Bonus Test Participants by Reserve Component and Area 8
2. Reenlistment and Term-of-Commitment Decisions for Reservists in the 1978 Bonus Test 10

I. PAY AND THE ARMY SELECTED RESERVE REENLISTMENT DECISION

Following the termination of the draft in January 1973, the number of enlisted personnel in the Army Selected Reserve components (the Army Selected Reserve and Army National Guard) declined for four successive years (see Fig. 1). Reserve ranks, which stood at 638,000 in June 1973, numbered only 527,000 in September 1978. This decline—although it was later reversed—raised serious concerns about the viability of the Army Selected Reserve in the All-Volunteer Force (AVF). Under the total-force policy, the success of the AVF depends on a strong reserve force supporting a smaller and less rapidly expandable active force. The failure of the Selected Reserve to meet strength goals might endanger the entire AVF concept, and, in fact, the decline of reserve strength triggered congressional recommendations to return to a draft.

Such drastic solutions as a draft were put forward at the time because the decline was not understood and therefore great uncertainty surrounded predictions about the results of policies to boost strength. This report describes the results of research that has furthered the understanding of the decline and the policies likely to prove effective in boosting reserve strength. The research was undertaken in response to a 1977 congressional authorization to evaluate the effect of a bonus on reenlistment in the Army National Guard and Army Reserve.

The 1978 Selected Reserve Reenlistment Bonus Test consisted of offering a bonus to nonprior service reservists who had less than 8 years of service and faced a reenlistment decision in 1978. The Rand Corporation helped to design the test, monitored its implementation in the Army Selected Reserve and Army National Guard, and evaluated the effects of the bonus offer. By collecting data from individual reservists at the point of deciding whether to reenlist, we were able both to evaluate the effectiveness of a reenlistment bonus and to investigate hypotheses concerning reservists' motives for staying or leaving.

The research focused primarily on the influence of reserve pay on reenlistment decisions. If reservists respond to small increases in pay, policies to rebuild reserve strength need not involve high costs. If, however, reservists required large financial inducements to reenlist,

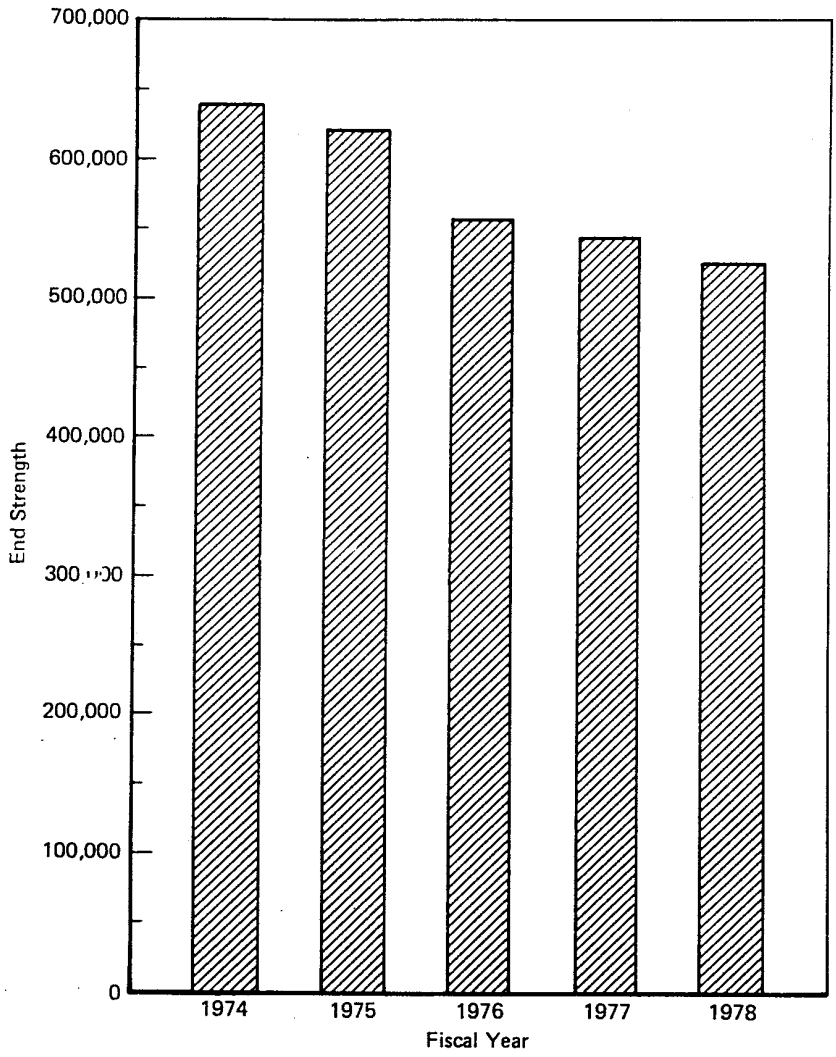

Fig. 1—Personnel strength of Army Selected Reserve components, 1974-1978

nonpay options should be thoroughly evaluated before moving to increased pay.

We concluded that reserve pay increases have much less effect on retention than was assumed during the planning of the All-Volunteer Force. Since increased pay was the primary policy initiated in moving to an AVF, this low responsiveness to pay might account for part of the significant decline in the manning of the Army National Guard and Army Reserve when the draft ended. A much larger reserve pay raise would have been required to stabilize reserve strength in the All-Volunteer Force.

The research explained in part why reserve strength declined between 1973 and 1978 and why it has increased since 1978. The decline ended abruptly when the last of the draft-motivated youth, who entered in 1972, completed their 6-year terms in 1978. Analysis of data from the experiment revealed that the first-term reenlistment rates of draft-motivated youth was only one-half that of volunteers who entered after 1972. Most of those who faced a reenlistment decision in 1978 were draft-motivated and did not reenlist, whereas those who faced the decision in 1979 were volunteers and a higher percentage of them reenlisted. In effect, the influence of the draft on the reserve lasted until 1978, after which higher reenlistment rates contributed in large measure to an increase in reserve strength. Other factors contributing to the increase included the stepped-up recruitment and advertising, bonus payments, and training programs initiated in 1978 and 1979.

Although pay raises alone have little effect on reserve retention, we found that bonus payments that induce longer terms of commitment will significantly raise strength levels. Reservists making commitments to longer terms have markedly lower attrition rates than reservists who are offered annual decisions. Thus, an effective method of increasing pay is to couple pay increases to longer terms of commitment. We also found the decision to participate in the reserve to depend on several factors that have a stronger effect than pay on the reenlistment decision. These factors include military promotion opportunity, civilian job characteristics, and family circumstances. Thus, in shaping Reserve personnel policies, nonpay options should also be given prominence.

II. ARMY SELECTED RESERVE MANNING IN AN ALL-VOLUNTEER ENVIRONMENT

Manning the Selected Reserve was relatively easy during the draft era. Young men holding low lottery numbers were under draft pressure, and many joined the reserve to avoid active duty. Reserve units even had queues waiting to enter. When the draft ended, however, reserve units had to compete in the local civilian labor market for volunteers. For some units, the local labor market provided enough volunteers to maintain strength; for most, however, manning steadily fell below authorized strength.

This strength decline caused a significant deterioration in the personnel readiness of the Army Selected Reserve components. Readiness depends not only on overall strength levels, but also on the specific strength levels of particular units. Manpower shortages in early deploying units, for example, are more serious than shortages in later deploying units. And, unlike the active forces, the Selected Reserve cannot minimize the impact of localized shortages by reassigning individuals from low- to high-priority units. The reserve must fill each unit by recruiting only in the local labor market. Because local labor markets vary, the reserve must begin to provide resources to balance the differences and to take account of the wartime priority of units.

The decline in Army Selected Reserve strength during the early AVF period contrasts with a relatively stable strength in the active Army. The end of the draft did not affect the active Army and Army Reserve components in the same way. The Gates Commission, which planned the transition to the AVF, had assumed that raising entry-level pay for both active and reserve personnel would attract enough volunteers to replace draftees and draft-motivated enlistees. However, different levels of uncertainty surrounded the estimates of the effect of pay raises for the active force and the reserve. The Gates Commission conclusions that active force pay raises would effectively increase both enlistments and reenlistments were based on research conducted in the 1960s. Little research was available, however, on the reserve force, and the Gates Commission thus cautioned:

> Analysis of the Reserve problem, however, suffers seriously from a lack of data. Even though special care was taken to provide against error of estimation, the assessments of what is required to maintain an All-Volunteer Force are much more tenuous than for the Active Force.... Given the uncertainty which surrounds projections of Re-

> serve enlistments and losses, further steps beyond the recommended pay increase may be necessary. Any further steps should await the results of experience with higher pay during the first few years.[1]

Had the Gates Commission assumptions concerning the effect of pay been correct, both active and reserve strength should have met or exceeded the predicted AVF levels, because in 1971 and 1972, junior enlisted personnel in both the active and reserve forces were given pay increases that exceeded the recommendations of the Gates Commission. The 1971 and 1972 pay increases had close to the predicted effect on Army accessions, and enlisted strength did not decline. Reserve strength may have declined because the pay increases had a smaller effect than predicted on enlistments. Unfortunately, the effect of the 1971 and 1972 pay raises could not be measured for the reserve because of the quality of existing data. The FY 1978 defense appropriations bill, however, by funding a $5 million test reenlistment bonus for the reserve, provided another opportunity to test the responsiveness of guardsmen and reservists to monetary incentives.

---

[1]*The Report of the President's Commission on an All-Volunteer Force*, U.S. Government Printing Office, Washington, D.C., 1970.

III. TEST DESIGN

The Army Reserve received $2 million and the Army National Guard $3 million to conduct the reenlistment bonus test. Although guardsmen and reservists could reenlist or extend for 1, 2, 3, or 6 years, bonus payments were offered only for a reenlistment of 3 years ($900) and 6 years ($1800). Reenlistees were paid one-half of the bonus amount at the time of reenlistment and the remainder in $150 installments at the completion of each year of satisfactory service during the term.

The bonus program sought both to increase reenlistment rates and to lengthen the term of commitment of reservists. Before the bonus test, most reservists who did not separate extended their term for a single year. This policy of allowing 1-year extensions probably increased retention in the short run by making long-term commitments, with their attendant uncertainties, unnecessary. This gain in strength came at the expense of force readiness, however, and later led to turbulence.

Bonus payments were offered only to reservists with less than 8 years of service. These reservists were deciding either to reenlist for the first time after an initial 3-year or 6-year term, or whether to reenlist for a second or third term. They were thus at a critical career juncture. Among reservists with 8 or more years of service, the retention rate begins to increase dramatically, probably because of the attractiveness of reserve retirement benefits. Congress further restricted eligibility to reservists who had no previous active force experience. This restriction limited the utility of the test; had eligibility not been restricted, the test could easily have evaluated the effect of the bonus on both prior and nonprior service reservists.

The accurate measurement of the effects of the bonus test on reenlistment rates and the term of commitment required an experimental design in which bonus payments were given to part of the eligible reserve population (test population) but withheld from another part (control population). If the test and control populations were well matched, that is, if their reenlistment rates in the absence of a bonus were similar, a comparison of the reenlistment rates and length of terms would provide an accurate measurement of the bonus effect.

In the Department of Defense, responsibility for the test was assigned to the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics)—OASD(MRA&L)—who would maintain control over the design, monitoring, and evaluation of the test and draft ad-

ministration guidelines for the Army National Guard and Army Reserve. OASD(MRA&L) asked Rand to participate in the design, monitoring, and evaluation.

Bonus payments were offered in six National Guard states and four Army Reserve regions. For each of these, a matching state or region did not offer bonus payments (see Table 1 and Figs. 2 and 3). The control regions were chosen to match the test region on the basis of estimates of past retention behavior and economic characteristics of the region. Approximately 15,000 guardsmen and reservists took part in the test and control states and regions. Each participant reached the end of his term of service (ETS) in 1978. Researchers monitored the reenlistment decisions of all 15,000 and asked each to complete a questionnaire at the time of his decision.

The data collected during the experiment allowed two separate analyses. The first, more narrowly focused, simply compared behavior in test and control groups to determine the effect of the bonus on reenlistment rates, the choice of term of service, and subsequent attrition behavior. The second analysis used survey data to differentiate the characteristics of those who separate from those who stay. The survey collected data on the type of civilian job, the civilian job wage rate, hours of work, employer characteristics, personal and family characteristics. military history, and reserve pay. The four sections (IV-VII) that follow summarize the results of these analyses. Section IV discusses the bonus effects on reenlistment rates; V describes the effect of differences in regular reserve compensation on reenlistment rates; VI discusses the effect of the family, employer, and other factors on reserve retention; and the final section summarizes the results.

Table 1

NUMBER OF BONUS TEST PARTICIPANTS BY RESERVE COMPONENT AND AREA

Bonus States	No. of Participants	Control States	No. of Participants
United States Army National Guard			
Kansas	641	Iowa	835
New Jersey	1081	New York	1660
Michigan	972	Pennsylvania	1733
Georgia	732	North Carolina	1084
North Dakota	277	Idaho	297
Oregon	639	Washington	432
West Virginia[a]	0	South Carolina	911
Total	4342	Total	6952
United States Army Reserve			
Connecticut Maine Massachusetts New Hampshire Rhode Island Vermont 94th ARCOM 76 TRAINING DIV	845	Pennsylvania Ohio West Virginia 79th ARCOM 99th ARCOM	1748
Colorado Idaho Montana New Mexico Utah Wyoming 96th ARCOM	478	Kansas North Dakota Nebraska South Dakota 89th ARCOM	437
Iowa Minnesota Wisconsin 205 INF BDE	177	Pennsylvania 157 INF BDE	213
Massachusetts 187 INF BDE	121		
Total	1621	Total	2398

[a]West Virginia withdrew prior to the initiation of the test.

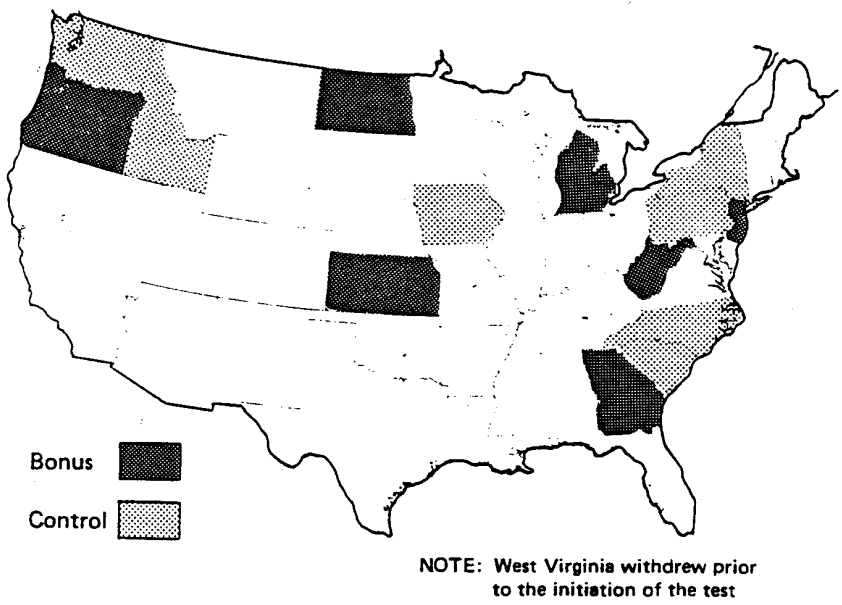

Fig. 2—Bonus test sites for the National Guard

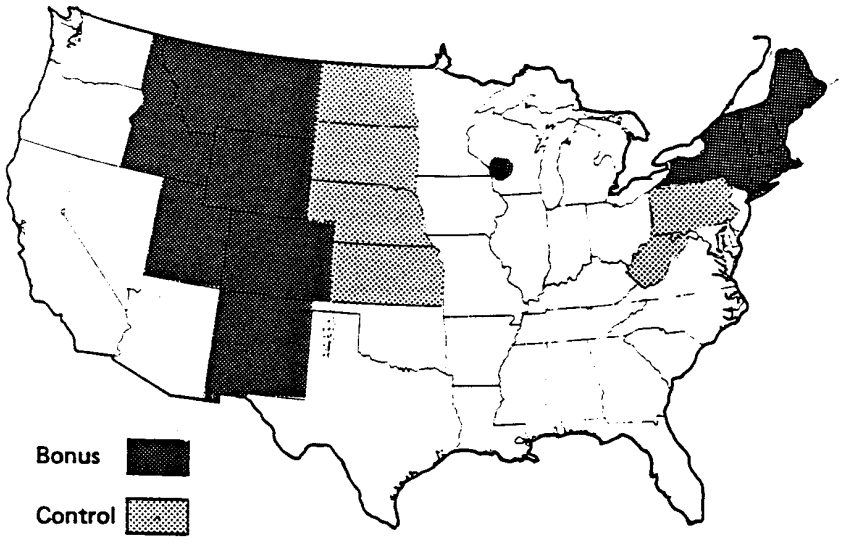

Fig. 3—Bonus test sites for the Army Reserve

IV. EFFECTS OF THE BONUS

Bonus payments offered in the 1978 Selected Reserve Reenlistment Bonus Test had a small, but statistically significant effect on reenlistment rates. Although the bonus boosted reserve income during the term for those accepting by more than 30 percent, it increased reenlistment rates only from 38 percent in control regions to 40 percent in bonus regions (see Table 2). However, the bonus definitely encouraged longer terms of commitment. Among reservists who reenlisted, 82 percent of those in test regions selected 3-year or 6-year terms, while only 12 percent of those in control regions did so. The average term of commitment amounted to 4.4 years for the test region and 1.3 years for the control region.

Table 2

REENLISTMENT AND TERM-OF-COMMITMENT DECISIONS FOR RESERVISTS IN THE 1978 BONUS TEST

Decision	Bonus Group[a]		Control Group[a]	
	Number	Percentage	Number	Percentage
Reenlistment				
Separated	3496	59.4	5134	61.6
Reenlisted or extended	2390	40.6	3201	38.4
Total	5886	100.0	8335	100.0
Term of commitment				
1 year	436	18.2	2801	87.5
3 years	571	23.9	333	10.4
6 years	1383	57.9	67	2.1
Total	2390	100.0	3201	100.0

[a]Adjusted for small differences in the composition of the bonus and control groups.

Longer terms of commitment, however, do not automatically translate into higher strength levels. Strength levels depend on whether those choosing shorter terms in control regions stay as long as those with longer commitments in test regions. For instance, those who reenlisted for only 1 year may continue to reenlist for 1 year at a time, or those who reenlisted for 3 or 6 years may leave before completing their commitment. To find out whether longer terms of commitment

result in additional man-years, participants in the test were tracked 1½ years after their initial decision.

The test and control groups exhibited significant behavioral differences. Of those in the original sample, 37.3 percent of the test group, but only 30.4 percent of the control group, remained in the reserve 1½ years later (see Fig. 4). Providing incentives to choose longer terms resulted in higher strength levels. Given an *annual* choice to reenlist or separate, many reservists left, perhaps influenced by new situations arising in their civilian work or family lives. The bonus incentive, however, apparently encouraged those who had made longer commitments to honor those commitments.

Thanks mainly to reduced attrition, the bonus will leave an imprint on reserve strength over the entire career span of the participants. Evaluating the effects of the bonus, in theory, entails following up the participants over this career span. However, the major attrition effects will occur over a 6-year period—the longest term induced by the bonus. Beyond 6 years, the differences in participation between bonus and nonbonus groups will likely remain stable. Thus, as Fig. 4 indicates, the total bonus effect may be estimated by tracking attrition behavior for 6 years.

Longer terms of commitment have other benefits for the reserve. They result in lower administrative costs associated with record keeping and retention counseling. Furthermore, longer commitments may improve the credibility and reliability of reserve units in mobilization situations. Longer terms of commitment, by decreasing the opportunity to separate during premobilization phases of international crises, may improve readiness.

Despite the incentive of a bonus, 62 percent of the reservists in the total sample separated from the National Guard or Army Reserve at the end of their term. The presence of men who entered the reserve under draft pressure contributed to this high separation rate. Most guardsmen and reservists in the sample who entered in 1972, the last year of the draft, had low lottery numbers (see Fig. 5) and would have been drafted if they had not entered the reserve. Not unexpectedly, their reenlistment rate was significantly lower than that of first-term nondraft-motivated individuals in the sample. Only 21 percent of the draft-motivated individuals, but 45 percent of the nondraft-motivated first termers, reenlisted.

These differences in reenlistment rates help to explain the decline in Army Selected Reserve component strength during the early AVF years. Part of the decline was apparently a temporary transition phenomenon associated with the large number of draft-motivated personnel remaining in the Army Selected Reserve components after the draft ended. These draft-motivated men depressed reenlistment rates

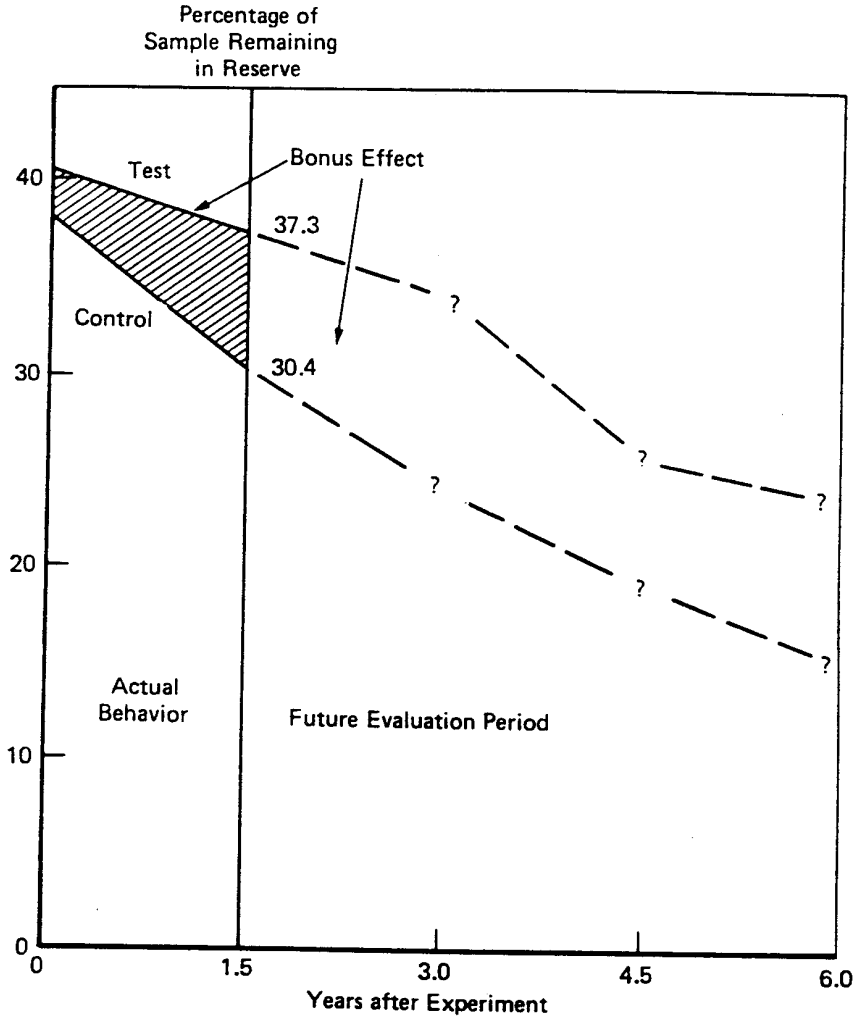

Fig. 4—Attrition of participants in the 1978 bonus test

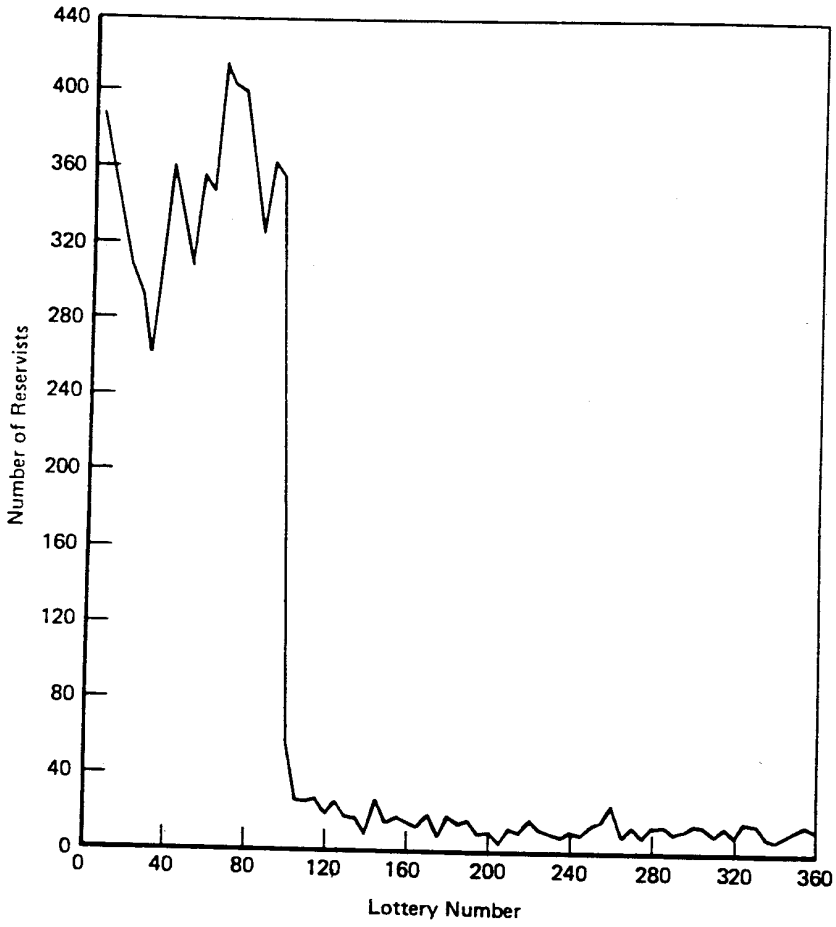

Fig. 5—Distribution of lottery numbers for guardsmen and reservists who entered in 1972

—thus causing high losses at first-term reenlistment. These high loss rates occurred through 1978, the last year that first-term draft-motivated youths were still present in the reserve. After 1978, those reaching first-term reenlistment decisions were all volunteers, who reenlist at much higher rates. As a result, strength should rise sharply. In fact, the downward trend in Army Selected Reserve component strength was reversed in 1979 (see Fig. 6); however, since reserve strength increased again in 1980, the absence of draft-motivated youth can explain only part of this reversal. The 1980 strength gain probably reflects the effectiveness of accession and attrition control programs and expanded reenlistment bonus programs. The Selected Reserve, for instance, now offers enlistment bonuses and expanded educational incentives.

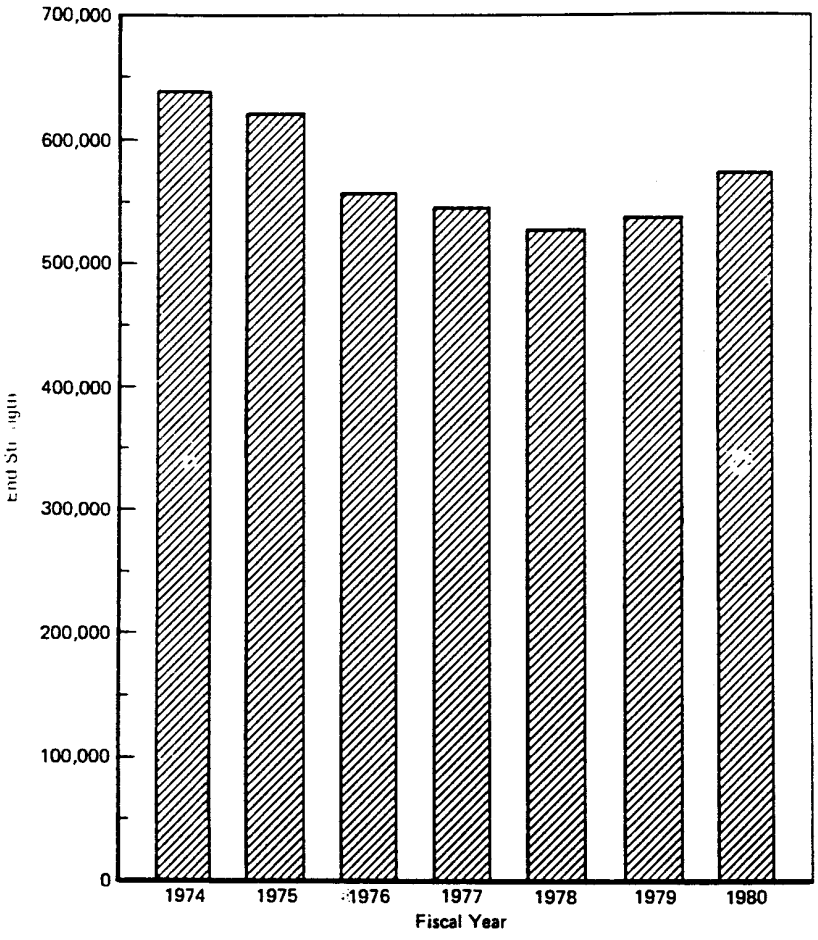

Fig. 6—Personnel strength of Army Selected Reserve components, 1974-1980

V. THE EFFECT OF RESERVE PAY

A reenlistment bonus differs from a pay increase in that a bonus is paid over a single term of service and an individual must reenlist for a longer term to qualify for it. Thus, although reenlistment rates rose slightly in response to a sizable bonus, we cannot extrapolate this effect to a pure reserve pay increase. However, by using survey data where reserve income is reported, we can estimate the effect of reserve pay increases.

The level of reserve pay does not strongly affect retention decisions in the Army Selected Reserve components. Whereas the Gates Commission had assumed that a 10 percent reserve pay increase would induce an 8 percent increase in first-term reenlistments, our results would predict only a 1 or 2 percent increase. One explanation is that the net, after-tax income actually derived from reserve pay is much smaller than commonly perceived and thus less effective as an incentive to reenlist.

The difference between gross and net, after-tax reserve pay is significant. Based on our sample, in 1978 the average reservist who attended summer camp and 48 drills received $1400 in gross reserve pay. Two costs in addition to taxes reduced the net earnings: transportation to and from drills and income lost from civilian jobs during annual training. The average reservist in our sample lost income as a result of attending annual training; he would have earned more by working at his civilian job than he received by attending reserve training. Reservists who lost the most had relatively higher civilian incomes and employers whose summer camp policy provided no civilian income. Personnel in our sample lost an average of $430 of income as a result of annual training participation and commuting costs in 1978. Accounting also for the taxation of reserve pay at a marginal rate that includes both civilian and military income, the net after-tax reserve income for the average individual in our sample was $725, or a little more than half the annual gross reserve pay of $1400.

Reserve income also tends to constitute a relatively small portion of reservists' income overall. For the typical reservist in our sample, net annual after-tax reserve income represented only 7 percent of total annual after-tax income. Increasing reserve pay by 50 percent would raise the total income of a guardsman or reservist by only 3 or 4 percent. Our analysis shows that a 50 percent increase in reserve income would raise reenlistment rates only from 38 to 42 percent

Clearly, large increases in reserve pay are required to markedly affect retention rates.

Further evidence suggestive of small pay effects comes from evaluating competitive opportunities available to reservists. The reserves compete with other moonlighting job opportunities, and most civilian moonlighting opportunities provide more income than reserve participation, chiefly because civilian moonlighters, on the average, work 13 hours a week in their secondary job, while reservists average only 4 hours a week. Because the hourly wages of the average moonlighter and reservist are approximately the same, the average civilian moonlighting job will provide three times more income than reserve service. Thus, if income were their primary goal, many reservists could probably find civilian secondary jobs that would increase their annual income substantially more than reserve participation.

Reserve participation may be considered less attractive than civilian moonlighting jobs because the latter offer greater flexibility in schedules and hours and thus conflict less with the primary civilian job and family. Civilian moonlighters usually do not sign contracts for terms of commitment, nor attend periods of full-time training. Nor are civilians subject to call-up or mobilization.

Other differences between reserve participation and a civilian moonlighting job may, however, partially compensate for the small annual income, lack of flexibility, requirement for contracts, and period of full-time training. The reserve has certain benefits that are unique to moonlighting jobs. Retirement, insurance, education, and commissary benefits can significantly increase the return from reserve participation. The reserve job can also provide training that is transferable to a civilian job. Less tangible factors, such as the fraternal and social aspects of reserve participation, may encourage participation. In fact, the absence of a strong pay effect points to the potential importance of benefits and these less tangible factors in the reenlistment decision.

VI. THE INFLUENCE OF THE FAMILY, EMPLOYER, AND OTHER FACTORS

According to data collected by the survey from those separating, reservists leave primarily because of conflicts with their work and family life—conflicts that increase the personal cost of reserve participation—rather than because of a dislike of the reserve. These conflicts are probably either not perceived or not foreseen at the time of enlistment. Circumstances in the lives of reservists change between enlistment and reenlistment: The average reservist in our sample enlisted at the age of 20; by the time he faced the reenlistment decision at 27, he may have changed jobs, married, and had children. The most common reasons given by separating reservists for leaving, and the frequency with which they were given, were as follows:

	Percent
Conflict with family or leisure	31.6
Conflict with civilian job	30.8
General dislike of the military	11.4
Dislike of unit's training practices	7.1
Not eligible for 1978 reenlistment bonus	4.5
Moving to take new job	2.9
Insufficient pay	2.0
Disagree with personnel and pay policies	1.9
Moving, job transfer to another area	1.9
Distance to guard or reserve unit	1.7
Conflict with educational program	1.7
Call-up and mobilization	.8
Extra income not needed	.6

The influence of certain characteristics of a reservist's civilian job—characteristics identified as having a substantially significant effect on reserve reenlistment—was predictable from research on civilian moonlighting decisions.[1] Higher wages and longer hours worked in the primary job and greater opportunities for civilian work overtime deter reserve participation. These same factors have also been shown to deter civilian moonlighting but appear to be much more decisive for civilian than reserve decisions.

[1]Bernard Rostker and Robert Shishko, "The Economics of Multiple Job Holding," *American Economic Review*, June 1976, adapted from their *Air Reserve Personnel Study: Volume II. The Air Reserve Forces and the Economics of Secondary Labor Market Participation*, The Rand Corporation, R-1254-PR, August 1973.

The attitude of the employer toward reserve participation, as perceived by the reservist, strongly influenced the reenlistment decision. Reservists reported their employers' pay and military policies to be as follows:

	Percent
Permits two weeks' leave without pay	35.7
Permits two weeks' leave but pays me only the difference between my civilian and military pay	25.7
Permits two weeks' extra vacation leave with pay	22.2
Does not permit special leave without pay, I must use my regular vacation	9.2
Does not apply—I am self-employed	7.1

Unfavorable employer attitudes were most prevalent among small, private sector employers with fewer than 100 employees. These employers generally had less flexibility than public sector or large, private sector employers in handling scheduling problems arising from drill or annual training participation. Their negative attitude deterred participation, and reservists who worked for employers with restrictive civilian pay and military leave policies during annual training had lower reenlistment rates.

The age of the reservist at entrance also influenced reenlistment behavior. Reservists who were older when they entered reenlisted at higher rates than those who were younger. The higher rates among older reservists may reflect the greater stability in job, family, and geographical location that tends to occur with age.

Other things equal, women, blacks, and those who did not graduate from high school reenlist at higher rates than their counterparts. However, these differences, perhaps caused by poorer economic opportunities in the civilian sector, are not large.

Among all factors analyzed, promotion to higher grades had the strongest association with retention. Guardsmen and reservists who achieved higher grades reenlisted at significantly higher rates than those not promoted. It is not clear, however, that a simple, causal relationship runs directly from pay grade to reenlistment probability. Reservists who for reasons other than promotion opportunity decide early in their term not to reenlist may not work for promotion, or the unit commander may not consider them for promotion because they are leaving. Thus, a proportional change in promotion opportunity may not achieve as high a retention response as our analysis suggests. Another hypothesis, however, would support a strong promo-

tion effect. Higher grades bring additional present income, improved prospects for future promotion, increased retirement benefits,[2] and status. Since additional present income alone appears not to have a marked effect, both future income and status may be important factors. In fact, reserve units have often been compared to voluntary organizations in their service and fraternal aspects. Within such organizations, the achievement of positions of responsibility seems also to be a strong motivation for staying.

---

[2]Reserve retirement benefits start at the age of 60 and are indexed. Among other factors, they are based on the highest pay grade achieved.

VII. CONCLUSIONS

Reenlistment bonus payments in exchange for long contracts significantly increase strength levels for reservists with less than 8 years of service. This increase results not from significantly higher reenlistment rates, but rather from the lower subsequent attrition rate achieved by longer-term commitments. The bonus increased the reenlistment rate only from 38 to 40 percent. However, the deterrence of subsequent attrition, thanks to the longer terms, led to an overall retention after only 1½ years of 37 percent in bonus areas, compared with 30 percent for control areas. This difference represents a significant gain in current strength; it may also represent a permanent gain in strength until the cohort reaches retirement.

The measured effect of differences in reserve pay on retention was much smaller than that assumed by the Gates Commission. Thus, additional reserve pay over that recommended for the reserve force would have been required to stabilize reserve strength at pre-AVF levels. Additional pay and benefits have been authorized since 1978 for enlisting and reenlisting reservists, and their effects are beginning to be seen. The decision to participate in the reserve does not, however, seem to be dominated by any single factor, such as pay. Reserve manpower policy must thus be sensitive not only to pay but also to reserve benefits and to the less quantifiable, but perhaps equally effective policies of organizational development and to employer and family support.

One of the objectives of the bonus study was to improve understanding of what motivates reserve participation. Reserve service may be viewed as a moonlighting job with income as the primary motivation. Or, the reserve may be seen as an organization fulfilling leisure time and fraternal needs in which individual status and affiliation are emphasized. We have found some support for both perspectives. For reservists, the decision to participate in the reserve is not strictly a trade-off between additional income and leisure time. Rather, the reserve seems to attract those who want both additional income and the job satisfaction achieved through the special opportunities for service and association provided by reserve participation. For some, reserve service probably provides a partial substitute for fraternal and service organizations. Reserve personnel policies thus should address both economic and noneconomic motives for participation.

RAND/R-2864-MRAL