Research Report 1371

THE ARMY ENLISTMENT DECISION: AN OVERVIEW OF THE ARI RECRUIT SURVEYS, 1982 and 1983

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PERSONNEL UTILIZATION TECHNICAL AREA
MANPOWER AND PERSONNEL RESEARCH LABORATORY

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This paper describes a program of research on enlistment decision making. Our program goal is to provide usable information to Army recruiting policy makers and to establish a better understanding of the dynamics in a young man or woman's decision to join the Army. Our initial efforts--surveys of recruits about the factors that encourage, discourage, and drive their enlistment decision--are described in detail. Two surveys of over 25,000 recruits have been conducted by the Army Research Institute's Manpower and Personnel Research Laboratory. These are the first surveys of this scope since the 1979 DoD survey. Comparative

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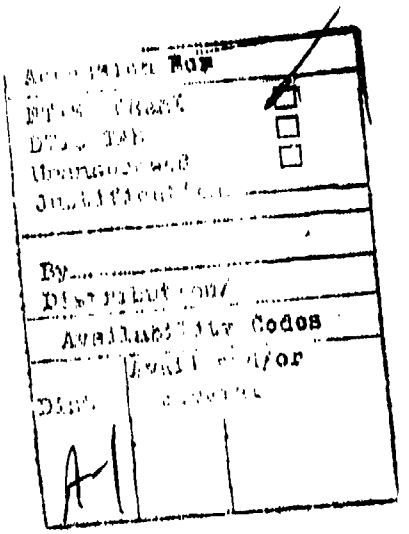
ARI Research Report 1371 (cont'd)

18. Supplementary Notes (continued)

Other related reports are Research Products 84-01 and 84-02 for the 1982 DA Survey, and Research Products 84-09 and 84-10 for the 1983 ARI Survey.

20. Abstracts (continued)

results from these three surveys are discussed. Highlighted are survey results on enlistment motivation, enlistment incentives, and advertising. The Army Recruiting Information System (ARIS), an innovative, computer-based information system used to share survey results with Army policy makers is also described. Further efforts to develop individual decision and microeconomic prediction models are outlined.



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FOREWORD

This report documents survey efforts undertaken by ARI in support of the Office of the Deputy Chief of Staff for Personnel and the U.S. Army Recruiting Command. It provides an overview of research on the individual enlistment decision process that was undertaken in 1982 by the Army Research Institute (ARI). Initial efforts are described in detail and the place of survey in future efforts is discussed.

This work was initially requested by GEN Thurman, then Deputy Chief of Staff for Personnel (Memorandum for Directors, ODCSPER, dated 16 Apr 82, Subject: Directors' Meeting - 16 April 1982; and letter (DAPE-ZBR), dated 28 Apr 82, Subject: Managing Success).

Edgar M. Johnson

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Technical Director

ACKNOWLEDGEMENTS

ARI acknowledges the cooperative efforts in fielding the 1982 DA Survey of Personnel Entering the Army of CPT Larry Davis of the Human Resources Development Directorate (ODCSPER, Department of the Army) and Mr. Richard Thompson of the Soldier Support Center -- National Capital Region (TRADOC). Mr. Thompson's efforts in developing drafts of the survey are greatly appreciated. ARI also acknowledges the support of the project officers for the 1983 ARI Survey of Army Recruits, LTC Jim Simon and MAJ(P) Steve Bauman, Programs Branch, Directorate of Military Personnel Management, ODCSPER, Department of the Army. This survey effort could not have succeeded without the cooperation of the personnel of the US Army Reception Stations; their efforts in administering this survey are greatly appreciated.

The 1982 DA Survey and the 1983 ARI Survey are partially based on the 1979 DoD Survey of Personnel Entering Military Service (Doering, Grissmer, & Morse, 1980a, 1980b). ARI especially wishes to thank Dr. Zahava Doering of the Defense Manpower Data Center for sharing her expertise. Dr. Doering's review of early drafts of the 1982 DA Survey were extremely helpful.

ARI also wishes to thank those who reviewed drafts of the 1982 and 1983 surveys. Several people reviewed the original form of the 1982 DA Survey and suggested revisions or additional topic areas for the Revised Forms of the Survey. Reviews by LTC George Thompson of the Programs, Analysis and Evaluation Directorate at USAREC, CPT Larry Davis of ODCSPER, and Mr. Richard Thompson of Soldier Support Center were especially helpful. Mr. Tom Evans, Deputy Director of Advertising and Sales Promotion at USAREC, was very helpful in providing topic areas and information on advertising and for arranging input from the Army's contract advertiser, N. W. Ayer. Mr. Lee Bucklin of 6th Army Headquarters was very helpful in providing sample questions for Reserve recruiting. ARI also wishes to thank LTC Tom Fagan and CPT Tom Daula of the Military Academy for their suggestions on economic background data.

We also wish to thank those who reviewed drafts of the 1983 ARI Survey. Members of the 1983 Research Advisory Panel for Recruit Surveys were very helpful and timely. The project officers for 1983 began their contributions with service on this panel. Also serving on this panel from the Office of the Deputy Chief of Staff for Personnel were COL Zaldo, Director of Manpower and Personnel Management, and LTC Arrington, Chief of the Programs Branch. We especially appreciate the help of COL Cato for his contributions and for arranging and coordinating input from the various directorates at the US Army Recruiting Command (USAREC). COL Graf and Mr. Evans, Director and Deputy Director of Advertising and Sales Promotion at USAREC, were very helpful in providing updated information needs for Army advertising.

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THE ARMY ENLISTMENT DECISION:

AN OVERVIEW OF ARI RECRUIT SURVEYS, 1982 AND 1983

EXECUTIVE SUMMARY

REQUIREMENT:

Military recruiting in the 1980s is dramatically improved from military recruiting in the late 70's. The high standards of FY 82 and FY 83 Army recruits -- with no loss in numbers -- is unprecedented under a draft or all-volunteer policy. To maintain these standards in an improving economy and with a shrinking youth-population, personnel policy planners need to know more about these recruits and why they decided to enlist, as well as how advertising and recruiting practices are related to the upturn.

FIRST STAGE EFFORTS:

We have surveyed Army recruits at all US Army Reception Stations in the late spring and summer of 1982 (N=12000) and of 1983 (N=15000). These surveys were designed to collect information about the enlistment decision in several specific areas: enlistment motivation, reactions to enlistment processing, enlistment incentive programs, advertising reach, personal history, and personal background.

The last survey of this scope was conducted for the Department of Defense in 1979, a particularly disappointing year for Army recruiting. We incorporated crucial questions from the earlier, Department of Defense survey into our surveys so that the data could be compared.

FINDINGS:

This paper provides an overview of ARI's 1982 and 1983 research on the enlistment decision. As such, we focus on the primary Army recruit market -- high-quality male, Regular Army non-prior-service recruits. Highlights of previously unpublished results are given in three areas.

1) Enlistment motivation:

- In relative terms from 1979 to 1982, motivation for "chance to better myself" and to get skill training decreased, while motivation for money to attend college and for an escape from unemployment increased.

- "Chance to better myself" and skill training also decreased from 1982 to 1983, while the only increase in this period was in motivation to earn more money than as a civilian.

- "Chance to better myself" was found to represent to recruits personal, not economic, self-improvement.

2) Incentive programs

- Net Army gains from every 100 2-year enlistments is estimated to be 71 years of service.

- Net Army gains from every 100 Army College Fund enlistments is estimated to be enlistments in hard-to-fill MOSs of 35 high-quality males who would otherwise not have enlisted plus MOS shifts by 13 other high-quality males.

3) Advertising

- College football may be a better advertising selection to target the high-quality market than is NFL football.

Previously published results are also reviewed and referenced.

UTILIZATION OF FINDINGS:

The data collected in our survey efforts have proven to be useful in monitoring a variety of policies. The staff of the US Army Recruiting Command (USAREC) and the Office of the Deputy Chief of Staff for Personnel (ODCSPER) have used specific data for internal planning and in response to inquiries from Congress. Findings have been utilized in the development and placement of ads oriented to bring more highly-qualified soldiers into the Army. Findings have also been used in market analyses of the potential for expanding the Army market to older -- 20 to 25 — Americans in general and to community college students in particular. This analysis was used in the development of Project HIGRAD — USAREC's program to target recruiting efforts toward students graduating from community colleges.

The utility for the Army of the results presented in this paper are indicative of how this information can be used for a) monitoring current policy, b) hypothesis testing and generation and c) the beginning of a longitudinal data base for both individual decision making and microeconomic forecast modeling.

THE ARMY ENLISTMENT DECISION:

AN OVERVIEW OF THE ARI RECRUIT SURVEYS, 1982 AND 1983

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INTRODUCTION

This paper provides an overview of our research on the individual enlistment decision process that was undertaken in 1982 by the Army Research Institute (ARI) at the direction of the Deputy Chief of Staff for Personnel. Initial efforts are described in detail and the place of surveys in future efforts is discussed.

Background and Objectives

Military recruiting in the 1980s is dramatically improved from military recruiting in the late 70's. The high quality/1 of FY 82 and FY 83 Army recruits -- with no loss in numbers -- is unprecedented under a draft or all-volunteer policy. To maintain these standards in an improving economy and with a shrinking youth-population, personnel policy planners need to know more about these recruits and why they decided to enlist, as well as whether any advertising and recruiting practices are related to the upturn. Four specific requests were included in the general research requirement given ARI in 1982:

- Who is enlisting in the Army and why?
- Who are the Category I-IIIa's, where do they come from?
- Why have recent recruits joined and what is their propensity to remain in the service?
- What recruiting practices/advertising are proving the most successful and why?

FIRST STAGE EFFORTS: RECEPTION STATION SURVEYS

The 1982 DA Survey of Personnel Entering the Army was developed to answer questions concerning the demographics and enlistment motivations of new Army recruits. This effort has been continued in the 1983 ARI Survey of Recruits.

These two surveys are the first stage in a program of research on the enlistment decision process. Further programmed efforts focus on earlier steps of the enlistment process. Information collected in the early survey stages of the effort are being used for a) monitoring of current policy, b) hypothesis generation and testing, and c) the beginning of a longitudinal data base for both individual decision making and microeconomic forecast modeling.

Survey Development and Content

Our 1982 survey was based largely on the last survey of this scope/2 that was conducted for the Department of Defense in 1979 — a particularly

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/1 We use here the generally accepted definition of 'quality' in military service applicants (i.e., high scores on the AFQT and having completed high school and received a diploma).

/2 See Boesel & Richards, 1982, for a review of major surveys on enlistment motivation since the end of the draft.

disappointing year for Army Recruiting. We incorportated into the ARI surveys crucial questions from the 1979 DoD Survey (Doering, Grissmer, & Morse, 1980a, 1980b) so that data from good and bad years could be compared. We modified many other items and added items that were more suited to our purposes. Our questionnaire began evolving even in 1982 when we used three different survey forms.

The 82 Original Form questionnaire was quickly developed and implemented in order to provide as much information as possible in as short a time as possible. After meeting the immediate needs of Army personnel policy planners, we revised our initial questionnaire. Differences between the Original and Revised (Forms 2 and 4) questionnaires resulted from a decision to collect more information and to refine items in the Original Form.

A research advisory panel was formed in the second quarter of FY 83 to review our 1982 efforts and guide our 1983 survey development. The 1983 survey was a replication and extension of the 1982 survey and as such, contains a great many items found in the 1982 survey. We also tripled the number of items to include more information, particularly on the demographics of the recruits and their families. Thus, the 1983 ARI Survey has continued the evolution from the 1979 DoD survey in terms of the sophistication and depth of demographic information collected on recruits.

Based on the success of the 82 survey effort there were a very large number of requests for information to be collected in the 83 survey. To accommodate as many of these requests as we could, we developed three forms of the 83 survey. A total of 218 questions were asked in at least 2 of the 3 forms. If only one form had been used, only 160 questions would have been

TABLE 1

Survey Content Plan for 1983 ARI Survey of Active Army Recruits

		FORM		
ITEMS	n =	A 2927	B 2864	C 2814
Core		X	X	X
Advertising		X	X	
Demographics & Reasons for Enlistment and for Contacting Recruiter		X		X
Education and Employment & Influencers			X	X

possible. Our multiple form design (see Table 1) allows all items to be correlated with all other items, while the amount of information collected in 1983 tripled from what was collected in 1982.

Survey Procedures and Sample

Technical aspects of the 1982 survey effort are documented in a User's Manual and Codebook (Elig, 1983) which summarizes the survey design and sampling procedures, as well as providing general technical information about the questionnaires and the data base. Technical aspects of the 1983 ARI Survey are also documented in a User's Manual and Codebook (Hertzbach & Elig, in preparation). While basic information from the User's Manuals is summarized below, readers are referred to these manuals for technical details.

The 1982 Survey

Personnel in all 7 U.S. Army Reception Stations administered the survey to Regular or Active Army (RA), Army Reserve, and Army National Guard recruits in initial-entry processing during 5 one-week periods -- about every third week, May through August, 1982. The Original Form was administered 2 weeks in May and 1 week in June. (Only 5 Stations participated in the first May week due to prior commitments). Revised Forms -- Form 2 for RA and Form 4 for reserve components -- were administered 1 week in July and 1 week in August.

The survey yielded 6,318 usable questionnaires from non-prior-service (NPS) RA recruits. (Since the focus of this paper is on NPS RA recruits, the results from the Reserve and Guard will not be described). Individual questionnaires were matched with accession records taken from the Military Entrance Processing Station Reporting System (MEPRS), thus allowing us to match questionnaire responses with demographic information, such as Armed Forces Qualification Test (AFQT) scores. Matching MEPRS records have been found for 96.9% of the Original Form RA sample and 98.6% of the Form 2 RA sample yielding a 1982 sample of 6,175 NPS RA respondents for whom matching records were available.

The 1983 Survey

As with the 1982 survey, questionnaires were completed by all Army component recruits in group settings at all Reception Stations during 5 one-week periods -- about every third week, May through August. All forms of the 1983 survey were used throughout the five weeks of the survey effort. Again, only the results for the Regular or Active Army are reported here. A total of 8,605 NPS RA recruits completed usable surveys. Successful matchings to MEPRS records were made for 96.9% of these respondents yielding a 1983 sample of 8,341 NPS RA recruits with MEPRS records.

As discussed above, three forms of the 83 survey were developed for Regular Army recruits. (These forms were randomly assigned to RA recruits). A set of 38 core items are included in all RA forms ($n = 8,605$). Sixty advertising items are asked in Forms A and B (n for these forms is 5,791). Sixty items of extensive demographics and reasons for contacting a recruiter and reasons for enlistment are in Forms A and C (n for these forms is 5,741). Sixty items on education and employment history are in Forms B and C (n for these forms is 5,678).

Sample Representativeness

The population to be sampled with these surveys was non-prior-service (NPS) accessions in the Regular Army and the Army Reserve. To reduce administrative burden on the Reception Stations, the survey was given to all personnel processing through the Stations for initial entry training. This directive for blanket administration was also intended to reduce the possibility of unwitting sample biasing by survey administrators untrained in sampling theory and design. However, in both 1982 and 1983 there was a possibility for sample biasing at the Ft. Jackson Reception Station. This station requested and received permission to sample recruit companies rather than survey everyone being processed at the station. This exception was granted because the large number of recruits processed by the Ft. Jackson Station during the summer requires extremely tight scheduling of recruit and station personnel time. Station personnel were instructed to survey by recruit processing company and in 1983 to favor Regular Army or Army Reserve recruit processing companies in the selection process, while 1982 sampling at Fort Jackson favored inclusion of infantry companies.

Both the 1982 and the 1983 samples may also be biased by the fact that the surveys were administered during the last half of the fiscal year. This potential seasonal bias is attenuated somewhat by the fact that the recruits sampled had signed enlistment contracts throughout the preceding year under the Army's Delayed Entry Program (DEP). However, while they may give biased estimates of an entire year's accessions, they are at least consistently biased toward the prime Army market of young men and women just out of high school.

The results of our accession samples are best interpreted as indicators of the relative strength of motivations for enlistment rather than as definitive percentages of accessions motivated in specific ways. The major strength of these surveys is in defining the motives of specific market segments. For example, the surveys can be used to study the characteristics of recruits motivated by a desire to fund a college education. The timing of the surveys is particularly good for the comparison of the motives of recruits recently graduated from high school with the motives of other recruits. This comparison is of particular importance for the Army's efforts to penetrate the high school market.

Survey Demographics

Table 2 compares the 1982 and 1983 NPS RA survey respondents on several demographic variables thought to influence answers to the survey questions: AFQT category, region, ethnic group, education, term of enlistment, gender, and age at which they signed a contract to enter the military. There are significant differences in the 2 samples. More AFQT category I-IIIA recruits came into the service and participated in the ARI survey in 1983 compared to the previous year. Fewer people from the southeast and more from the southwest, midwest, and western parts of the country participated in the survey in 1983. More of the survey respondents were whites and relatively fewer minorities were surveyed in 1983 compared to 1982. More non-high-school-graduates (NHSG), more 3-year enlistees, more 17-year-olds, and more women are included in the 1983 sample compared to the 1982 sample.

SURVEY DEMOGRAPHICS (NPS RA RECRUITS)

N (1982) = 6318 N (1983) = 8605

TABLE 2

AFQT

	82	83
I & II	31.0	36.0
IIIA	18.9	27.8
IIIB	26.6	30.4
IV	23.5	5.8
	100%	100%

REGION

	82	83
NE	20.9	20.1
SE	25.1	21.0
SW	15.2	16.4
MW	26.3	27.4
WEST	12.5	15.1
	100%	100%

ETHNIC GROUP

	82	83
WHITE (NOT HISPANIC)	65.9	73.8
BLACK (NOT HISPANIC)	26.4	19.6
HISPANIC	4.7	3.6
OTHER	3.0	3.0
	100%	100%

EDUCATION

	82	83
HSDG	91.9	83.9
NHSG	8.1	16.1
	100%	100%

TERM OF ENLISTMENT

	82	83
2	8.5	7.7
3	51.0	56.2
4	40.5	36.1
	100%	100%

AGE AT CONTRACTING

	82	83
17	33.1	39.9
18	26.4	22.4
19	13.0	12.4
20	8.8	7.4
21-23	12.4	11.0
24 OR MORE	7.3	6.9
	100%	100%

GENDER

	82	83
MALE	91.1	90.4
FEMALE	8.9	9.6
	100%	100%

SOURCE: MEPS REPORTING SYSTEM DATA FOR NPS RA RECRUITS IN 1982 AND 1983
ARI SURVEYS OF NEW RECRUITS

What Has Been Learned From the Surveys?

Highlights of the survey results will be given here in three areas: a) enlistment motivation, b) enlistment incentives, and c) advertising.

Enlistment Motivation

Results are given here to show how reasons for enlistment have changed since 1979 as well as to show how we have improved the measurement of these reasons and thus increased understanding of enlistment motivation.

As can be seen in columns 1 and 2 of Table 3 the biggest percentage changes in NPS RA self-reports of motivation from 1979 to 1982 are decreases in motivation for a "chance to better myself" and "skill training" and increases in motivation for money to attend college and for an escape from unemployment. Chance to better myself and skill training also decreased from 1982 to 1983, while the only increase from 1982 to 1983 is in motivation to earn more money.

Table 3

1979/1982/1983 COMPARISON OF MOST IMPORTANT REASONS FOR ENLISTMENT

WHICH ONE OF THESE REASONS IS YOUR MOST IMPORTANT REASON FOR ENLISTING?	1979 DoD SURVEY OF APRIL CONTRACTS	SURVEY OF ACCESSIONS			
		SPRING		SUMMER	
		1982	1983	1982	1983
CHANCE TO BETTER MYSELF (NOT MEASURED IN JULY-AUG 82)	36	30	25	--	--
TO GET TRAINED IN A SKILL	26	22	19	35	30
MONEY FOR A COLLEGE EDUCATION	7	15	16	20	17
TO SERVE MY COUNTRY	10	9	9	10	12
I WAS UNEMPLOYED	4	10	9	10	10
TO PROVE THAT I CAN MAKE IT	4	6	7	9	10
TO BE AWAY FROM HOME ON MY OWN	5	4	5	5	7
EARN MORE MONEY	1	2	7	4	6
TRAVEL (NOT MEASURED IN MAY-JUN 82)	4	--	--	4	4
TO GET AWAY FROM A PERSONAL PROBLEM	1	1	2	2	2
FAMILY TRADITION TO SERVE	0.5	1	1	1	2
	100	100	100	100	100

*REGULAR ARMY, NON-PRIOR SERVICE ENLISTMENTS ONLY

While many types of questions can be used to measure enlistment motivation, the traditional measures have been forced-choice selection of the most important reason for enlistment supplemented by binomial true-false ratings. Data in Table 3 are from the traditional forced-choice measure. While this traditional measure is useful for cross-year tracking to the DOD studies (Doering et al, 1980a 1980b), it is psychometrically weak. For example, Boesel and Richards (1982) noted how sensitive it is to order effects -- reversing the order of the choices changes the results. Also, forced-choice measures cannot be changed to include other possible reasons without destroying comparability since each percent is dependent on all other percents in the measure. An example can be seen in Table 3: changing one choice from "chance to better myself" (Spring survey period) to "travel" (Summer survey period) drastically changes the ratings. Forced choice items are inflexible.

Forced choice items are also insensitive to the probable mixed nature of motivations. Most recruits probably have many reasons for enlistment and are not necessarily clear on exactly why they enlisted. True-false items are also relatively insensitive to the strengths of various motivations. Multinomial importance ratings introduced in the 1982 survey make enlistment motivation measures amenable to the most powerful statistical tools. For example, our multinomial measures allow us to answer questions about what "chance to better myself" means to recruits.

Because "skill training" is also declining with "chance" and because it gets the biggest increase when "chance" is not asked (see Table 3), "chance to better myself" is often interpreted as economic self-improvement. Support for this interpretation comes from order-effect research that found that "skill training" is the most frequently selected item when it is asked before "chance" while "chance to better myself" is the most frequently selected item when asked before "skill" (Boesel & Richards, 1982). An alternative explanation is that "chance to better myself" is just a nebulous phrase that sounds good and is all things to all people. However, we hypothesized a third alternative; we believe "chance to better myself" does have an exact, non-economic meaning. By using the powerful analyses available for our multinomial measures we think we are on the tract of finding that meaning.

Our multinomial measures of enlistment motivation are independent ratings of how important each enlistment motivation was in a recruit's decision to enlist. Importance ratings are made on a 4-point scale: 1) NOT AT ALL IMPORTANT; 2) SOMEWHAT IMPORTANT, 3) VERY IMPORTANT, and 4) I WOULD NOT HAVE ENLISTED EXCEPT FOR THIS REASON. Various indices -- including means as well as percentages of respondents -- can be derived from these measures. The utility of one of the most useful indices is shown in Figure 1. This figure shows the percentage of respondents in 4 AFQT categories who rated a reason so important that they would not have enlisted except for that reason. Each percentage can be subtracted from 100 to give the percent of recruits in that category for whom the reason was not that "all important" or essential. The nine reasons shown are the reasons most often selected in 1983 as being "all important". The most essential reason for enlistment given by the most trainable recruits (categories 1 & 2) is money for a college education while the most essential reason given by the least trainable recruits (category 4) is unemployment.

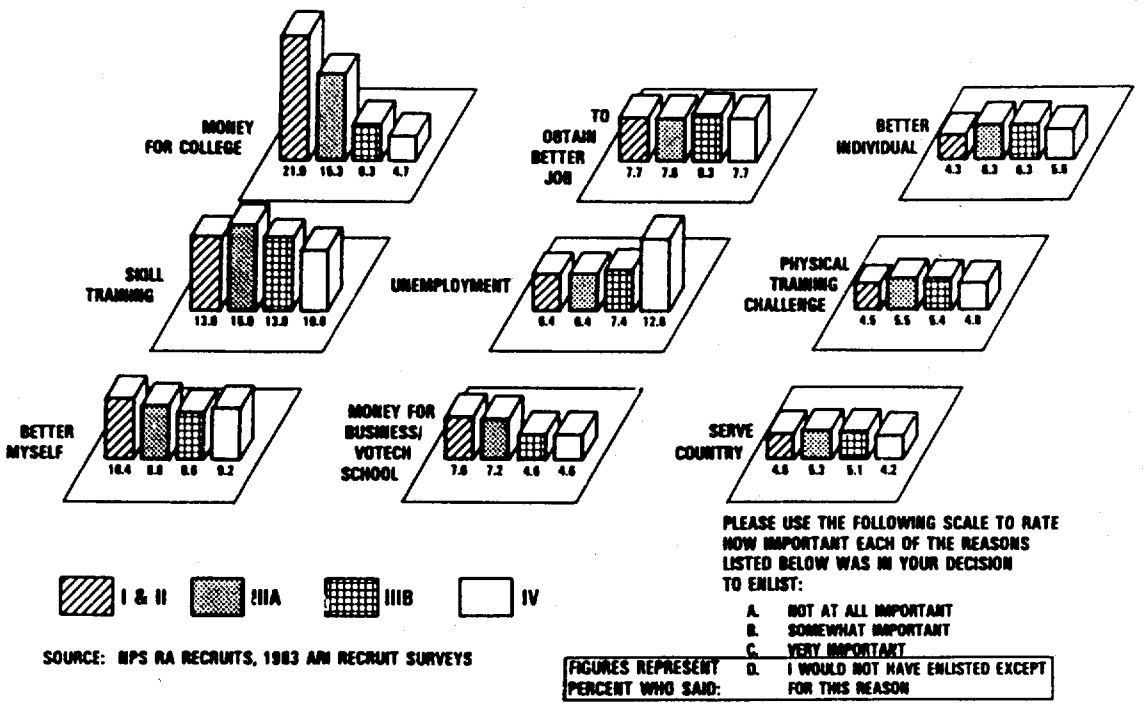


FIGURE 1.

Returning to "chance to better myself" we see that the essential appeal of this reason is approximately equal across AFQT categories (see Figure 1) but it does not seem to be the "most important" reason as the forced choice question had indicated (see Table 3). We used discriminant analysis to find out who rated "chance to better myself" as the most important of the 10 reasons possible to choose in the forced-choice question. Recruits were classified for picking "chance" as most important or not on the basis of their importance rating of the other 27 reasons. We correctly classified 63.5% of the 2548 recruits in the development sample and 61.4% of the recruits in a cross-validation sample. The classification functions indicate that a recruit is not likely to report "chance to better myself" as the most important reason for enlistment if he (she) rated as important for enlistment: money for a college education; earning more money than as a civilian; fringe benefits; and skill training. The functions also indicate that a recruit is likely to rate self-improvement as most important if he (she) rated as important: need to learn to be a responsible, mature person; wanting to become a better individual; need for discipline; and wanting to become more self-reliant. This analysis as well as factor analyses reported elsewhere (Pliske, Ellig, & Johnson, 1984) indicate that "chance to better myself" does have a precise meaning but not the economic one other investigators have proposed. We have found that "chance to better myself" can also be worded as "to become a better individual" and means personal, not economic, self-improvement.

Enlistment Incentives

The Army uses many incentives to "sell" enlistment to prospects who might not otherwise enlist. Incentives are also used to sell hard-to-fill Military Occupational Specialties (MOSs) and to attract high-quality recruits to certain MOSs. Some incentives are primarily MOS distribution tools (e.g., guaranteed location of first duty assignment) while other are primarily enlistment oriented (e.g., short tours). While most incentives are available in at least one other U. S. Armed Service, two incentives are exclusively available to the Army. These incentives are short (2-year) tours and the Army College Fund (ACF).

The 2-year option. The standard tour of service is 3 years active duty, with 4 years active duty required for a training-intensive MOS such as one requiring language training. The Army can offer AFQT category 1-3A, high school diploma graduates (HSDGs), a short enlistment of 2 years in selected MOSs. Normal enlistment tours in these hard to sell — especially to highly qualified applicants -- MOSs are 3 years.

Figure 2 shows the responses of male, 2-year enlistees when asked what they would have done if they could not have enlisted for a short tour. (Note that Figure 2 shows a small percent of respondents marked "not applicable" while enlistment records indicate they did enlist for 2 years; these responses

EFFECT OF NO SERVICE HAVING TWO YEAR OPTION
MALE TWO YEAR ENLISTEES

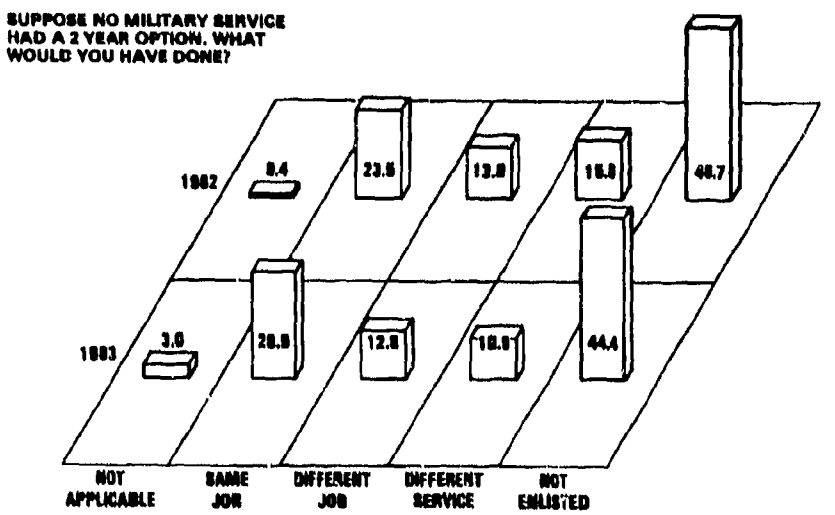


FIGURE 2.

are probably marking errors on the answer sheet -- we consider them as missing responses in calculations reported in this paper). Our 1983 survey results (when excluding "not applicable" responses) show that 57 of every 100 applicants who enlisted for the 2-year option report they would not have enlisted in the Army if that option had not been available. The remaining 43 of every 100 applicants report they would have enlisted in the Army for 3 years if the 2-year option had not been available.

What do these figures mean to the Army? The Army gains 114 years of service (57 applicants x 2 years) while loosing 43 years of first-term service (43 applicants x 1 year of additional service under the usual 3-year contract) for every 100 2-year contracts. The net effect is that the Army gains 71 years of service for every 100 applicants enlisted under the 2-year option! And the 2-year option probably saves the Army money in reduced recruiting costs, since the 2-year enlistment is easier to sell to the best-qualified applicants. The net gain of 71 person years is for active-duty time and may be reduced to take into account the relative increase of training time as a percentage of active-duty service time -- but remember that the 2-year option is only offered to more trainable recruits who are likely to respond better to training and to require recycling less frequently. In addition, since total military obligation is 6 years (for those enlisting before 1 June 1984 and 8 years for those enlisting thereafter), it could be argued that gains in total years of service should not be reduced by training time. Since the Army components hardest to fill since the end of the draft are the US Army Reserve and Individual Ready Reserve and since these components benefit from obligated service time not spent on active duty, total Army gains are considerable from the 2-year option. From these results it appears that the Army 2-year option is a bargain.

Educational incentives. The Veterans Educational Assistance Program (VEAP) has been available to recruits in all U.S. military services since the end of GI Bill educational benefits. Under VEAP, the services match 2 for 1 a recruit's contribution of up to $2,700 with a service contribution of up to $5,400 for a total educational savings package of $8,100 to be used after a 3- or 4-year enlistment. The maximum contributions are $2,400 for the soldier and $4,800 for the services for 2-year tours. In addition to this basic, all military service program, the Army offers the ACF to AFQT category 1-3A, HSDG recruits. For enlistment in selected MOSs, the Army adds an additional incentive of $8,000 for short-tour recruits and $12,000 for 3- or 4-year tour recruits; this incentive is paid only if the recruit continues to qualify for VEAP and if the recruit completes training and first-tour service in an ACF MOS. The services contribute nothing under VEAP - or ACF - if the recruit either makes no contribution or withdraws his (her) contribution in a lump sum rather than as educational benefits.

Because the ACF incentive is a program of delayed benefits, it is difficult to calculate its cost. Until the Army has experienced a full cycle of ACF enlistments and expirations of term of service (ETS) for 2-, 3-, and 4-year recruits, hard figures on the cost of the ACF cannot be calculated. Surveys of service members can be used to update projected costs as well as to look at the impact of ACF on individual decision making. (Even with experience through one enlistment-to-ETS cycle, surveys will be needed to monitor the impact of societal changes -- such as increases or decreases in motivation to get higher education -- and of changes in other programs, such as college tuition assistance).

EFFECT OF NO SERVICE HAVING KICKER
MALE I-IIIA HIGH SCHOOL GRADUATES ELIGIBLE FOR ACF

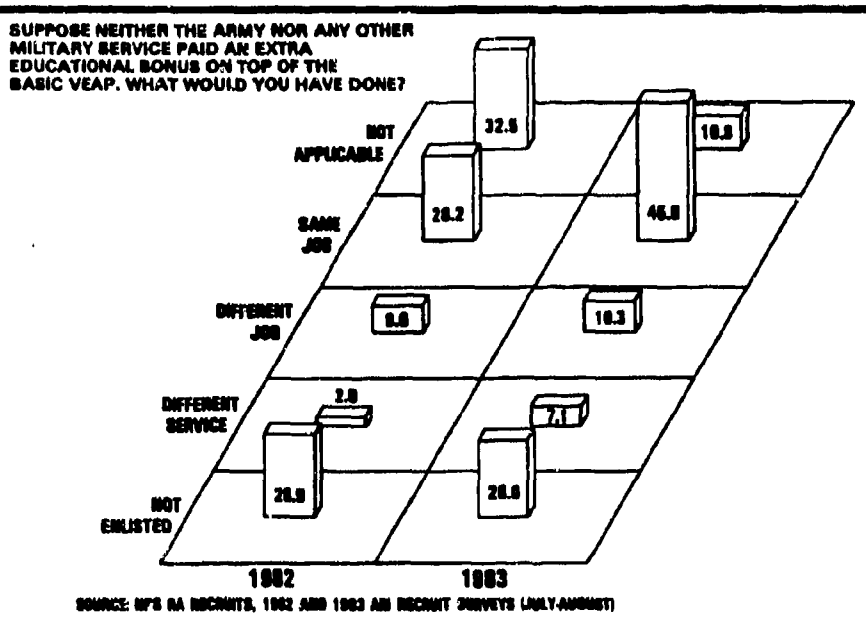


FIGURE 3.

Figure 3 presents the survey responses of males eligible for the ACF — these males are AFQT category 1-3A, HSDG recruits in ACF MOSs. Many eligible recruits were not aware of the program in 1982 — the first year of its availability nationwide -- and said the question did not apply to them; recruits were better informed in 1983 of their potential benefits. (While we could argue that the "not applicables" should be counted as not influenced by the incentive but also unlikely to use it, we choose the more conservative course of excluding them from further consideration -- calculations including this group are not substantially different from those presented here). At first glance it appears that for 1983, of every 100 ACF-eligible male recruits to whom the Army is liable to pay ACF benefits, 67 would have enlisted without ACF; however, many recruits who are eligible for ACF benefits are unlikely to use them. Recruits most unlikely to use the benefits are those who do not plan to leave the Army to go to college or civilian vocational/technical school after the first term of service.

Figures 4-7 show the effects on enlistments (of AFQT category 1-3A, male HSDGs who are eligible for ACF) by plans after expiration of the first term of service. From these figures we can calculate the impact and cost of the ACF, if we are willing to make certain assumptions. We know that the plans of adolescents and young adults are changeable; however, our post-first-term intention data are the best available data on likely ACF use until 1982 accessions have gone through a full ETS cycle -- which will be in 1986 for those who enlisted for 4 years. We are assuming that the percent who intend to go to college or votech school is the maximum percent who really will use ACF. This assumption appears to be safe since more people will give a socially acceptable response that they intend to get further education than will ever get it (see Snider, 1979). We are also assuming that 1983 data is more representative than 1982 data since the first year of a program may be unsettled and non-representative of a mature program.

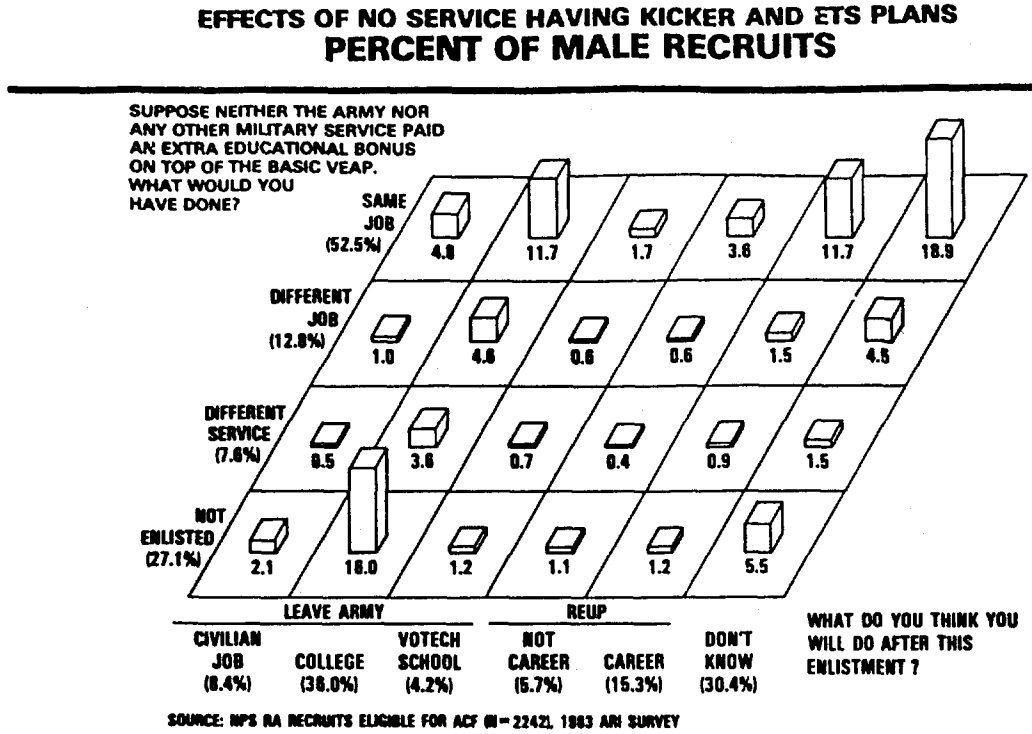


FIGURE 4.

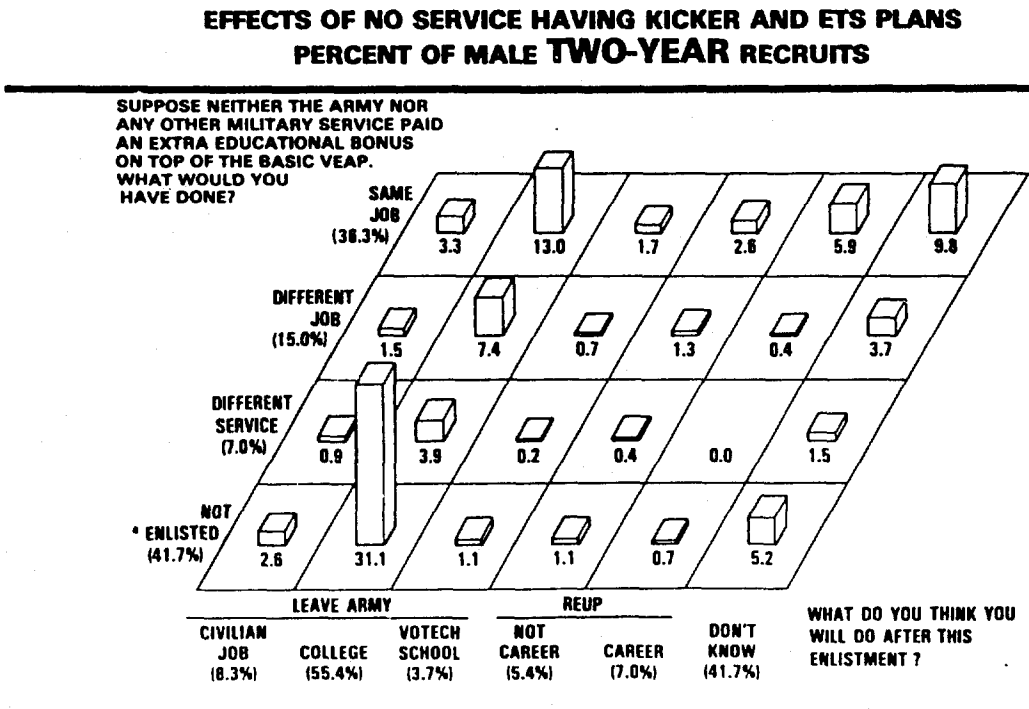
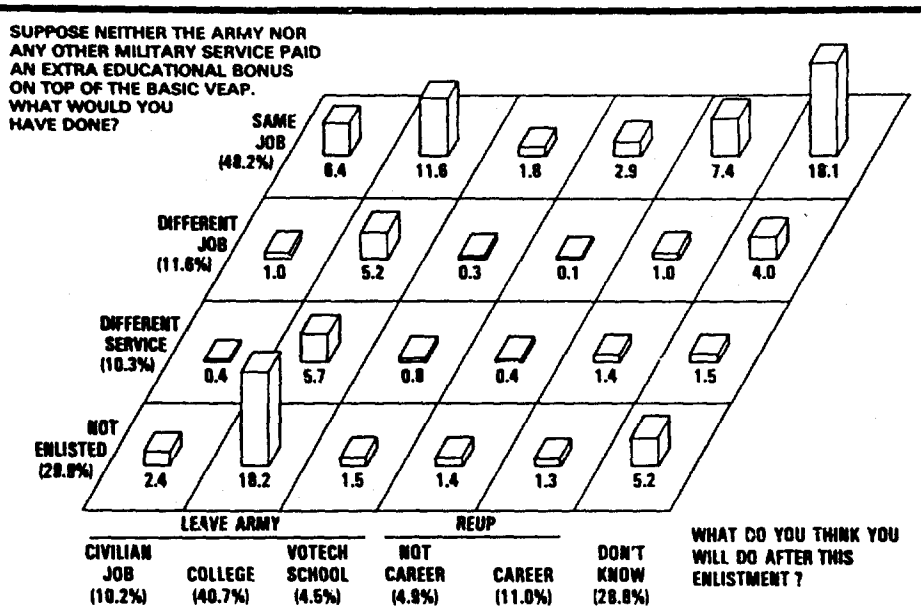


FIGURE 5.

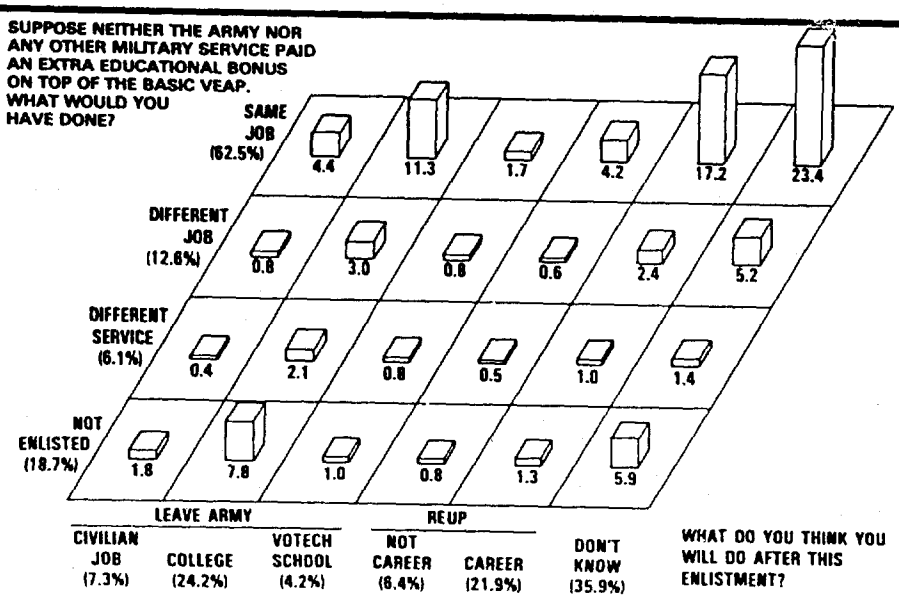
EFFECTS OF NO SERVICE HAVING KICKER AND ETS PLANS
PERCENT OF MALE THREE-YEAR RECRUITS



SOURCE: NPS RA RECRUITS ELIGIBLE FOR ACF (N=718), 1983 ARI SURVEY

FIGURE 6.

EFFECTS OF NO SERVICE HAVING KICKER AND ETS PLANS
PERCENT OF MALE FOUR-YEAR RECRUITS



SOURCE: NPS RA RECRUITS ELIGIBLE FOR ACF (N=1062), 1983 ARI SURVEY

FIGURE 7.

Of the male recruits eligible for ACF in our 1983 sample, 40.2% are "intended users", that is they intend to leave the Army after the first enlistment to attend college or votech school. Of the same sample, 34.7% would not have enlisted in the Army without ACF and another 12.8% enlisted in a difficult-to-fill MOS just to get ACF. Thus (based on our assumptions) the Army is likely to pay ACF benefits to no more than 40 of 100 males eligible for ACF to gain the enlistment of 35 high-quality males in difficult-to-fill MOSs, and to shift 13 other high-quality males to hard-to-fill MOSs.

Projections of ACF costs. Since benefits differ by term of service and since people with different intentions select different terms of service, we calculate the likely cost of ACF separately by term of service. ACF is likely to be paid to "intended users" of no more than 59.1%, 45.2%, and 28.4% of 2-year, 3-year, and 4-year recruits respectively. If each of these recruits makes the maximum contribution and uses it for education -- an unlikely assumption -- then the cost of the ACF for the Army will be -- maximums of -- $472.8K for every 100 2-year ACF accessions (8K x 59.1 intended users), $542.4K for every 100 3-year ACF accessions (12K x 45.2 intended users), and $340.8K for every 100 4-year ACF accessions (42K x 28.4 intended users). Of course, ACF eligibility is not equally likely across term of service. Of our 1983 sample of male ACF eligibles, 21% enlisted for 2 years, 32.8% for 3 years, and 46.2% for 4 years. So the cost per hundred accessions can be calculated by summing over term of enlistment, the cost per recipient multiplied by the probability of use multiplied by the number of recruits, each of which differs by term of enlistment. Based on our assumptions and our 1983 sample, 100 accessions by high-quality males in difficult-to-fill MOSs are likely to cost the Army ACF benefits of no more than $434.6K (8K x .591 x 21 2-year recruits, plus 12K x .452 x 32.8 3-year recruits, plus 12K x .284 x 46.2 4-year recruits).

Since the probability of using ACF and the incentive value of ACF differs across term of enlistment, the marginal cost of each enlistment added by ACF differs by term of enlistment. Dividing the cost of 100 2-year ACF eligibles ($472.8K) by the expected number of these 100 2-year ACF eligibles who would not have enlisted in the Army otherwise (48.7) gives the marginal cost of an added male 2-year ACF accession, $9,708, which is slightly more than the face value of the incentive ($8K). Marginal costs calculated in this way for adding a 3-year or 4-year male ACF eligible are $13,493 and $13,742, respectively, also slightly more than the face value of $12K. Given our sample of 1983 male ACF eligible recruits, 100 ACF-eligible accessions (21 for 2 years, 32.8 for 3 years, and 46.3 for 4 years), the average marginal cost of an added ACF accession would be $12,843.

What does ACF buy the Army? In Figure 4 we saw that of every 100 male recruits eligible for ACF, 35 would not have enlisted without ACF and another 13 would enlist in a hard-to-fill MOS just to get ACF eligibility. Benefits to the Army from the ACF can also be calculated in terms of gains in years of active-duty service, reserve-duty service, and numbers of senior NCO's likely from reenlistment. Benefits also accrue to the Army from service in hard-to-fill MOSs by service-members who would otherwise have enlisted -- if they enlisted at all -- in MOSs where their service is less needed.

The following Army enlisted strength gains from the ACF count as Army benefits (a) additional active-duty from high-quality males who would not have

enlisted without ACF, (b) reserve obligation from those who would not have enlisted except for ACF and who say that they do not plan to reenlist or who do not know what they will do at ETS, and (c) potential high-quality NCOs from those who would not have enlisted without ACF but who are planning on reenlisting:

Strength gains from every 100 2-year ACF accessions of males are:

- 97.4 years active duty (2 years x 48.7 recruits)
- 186 years reserve obligation (4 years x 46.5 recruits)
- 2.2 potential NCOs

Strength gains from every 100 3-year ACF accessions of males are:

- 120.6 years active duty (3 years x 40.2 recruits)
- 107.1 years reserve obligation (3 years x 35.7 recruits)
- 4.5 potential NCOs

Strength gains from every 100 4-year ACF accessions of males are:

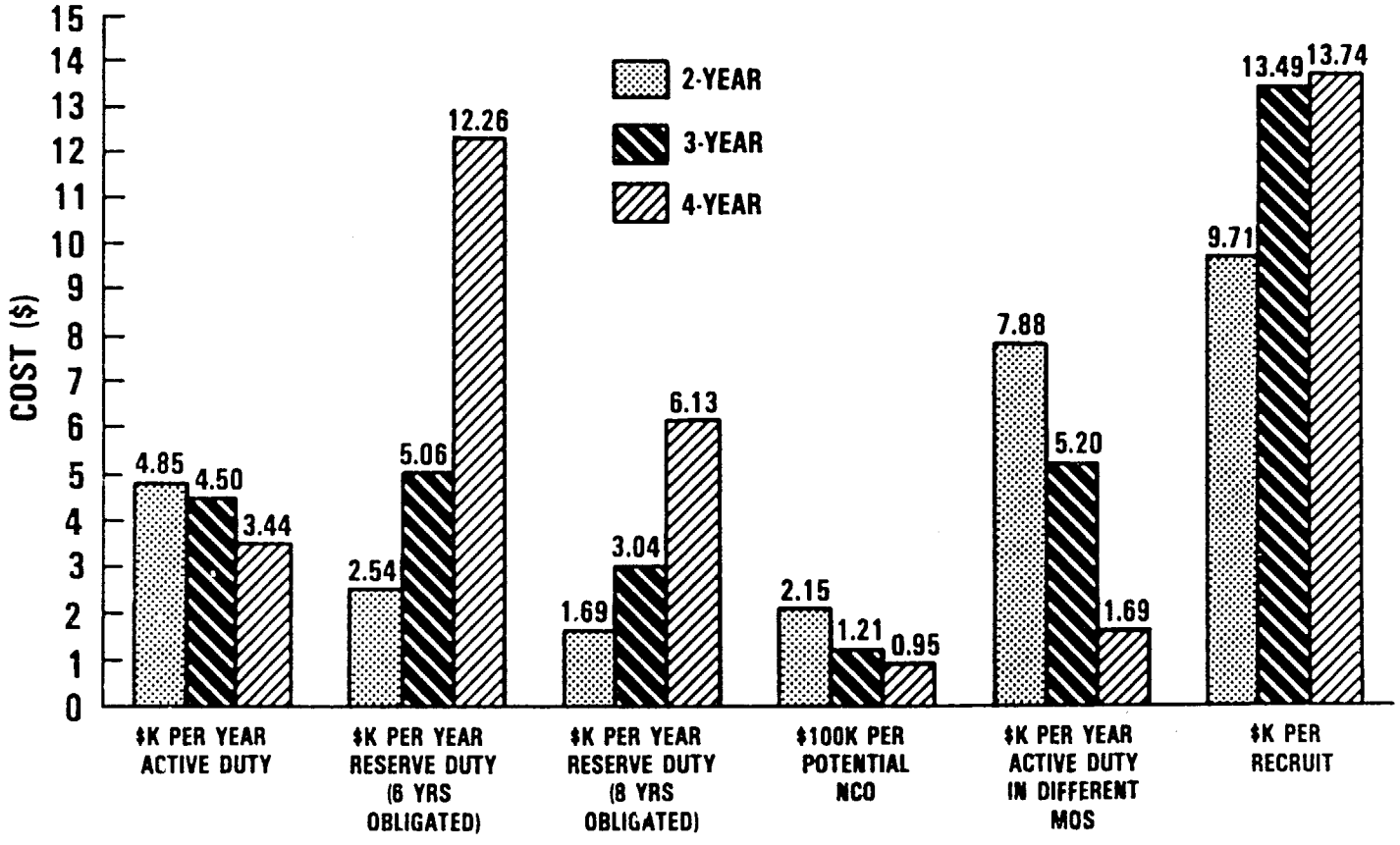
- 99.2 years active duty (4 years x 24.8 recruits)
- 27.8 years reserve obligation (2 years x 13.9 recruits)
- 3.6 potential NCOs.

This is not counting in either reserve time or active-duty time recruits who say they plan to reenlist but who also say they would not have enlisted at all if the ACF had not been available. (All figures based on males in the 1983 sample, subject to assumptions outlined above, do not include the impact of ACF-eligible females or the effects of first-term attrition, and are based on 6-years obligated service -- calculations based on 8-years obligated service are at Appendix A).

All service gained from ACF is of course in hard-to-fill MOSs. Active-duty time in hard-to-fill MOSs is increased over what is outlined above by those who would have enlisted in a different MOS if the ACF were not available. For every 100 ACF accessions for 2 years, for 3 years, and for 4 years, additional active-duty service in hard-to-fill MOSs is, respectively, 30 years (2 years x 15 recruits), 34.8 years (3 years x 11.6 recruits), and 50.4 years (4 years x 12.6 recruits).

In each case, these are the marginal benefits from high-quality male recruits who would not have enlisted otherwise or who, if enlisted, would have enlisted in a different MOS. We have already calculated the marginal cost per recruit; marginal cost per benefit to the Army can also be calculated. Marginal costs displayed in Figure 8 are all calculated as if each benefit were the only benefit being bought. That is, the entire cost of ACF is being charged to each benefit. A summary cost calculation of all derived benefits would need a metric to add the apples and oranges of active-duty time, reserve

ACF COSTS AND BENEFITS (MALES ONLY) BY TERM OF ENLISTMENT



SOURCE: NPS RA RECRUITS (N=2242), 1983 ARI SURVEY

service, and potential NCOs. It can be seen in Figure 8 that the ACF is least costly in gaining reserve duty from 2-year enlistments while it is least costly in gaining active duty from longer enlistments. Cost per recruit assumes equal value for active and reserve duty time, and shows the most value gained by the shorter, 2-year enlistment.

Are the programs working? Both the 2-year option and the ACF appear to be effective ways to increase Army enlistments of top prospects into critical MOSs. Paying benefits to people who would enlist without them will probably never be stopped entirely; for example, there are some people who would enlist if base pay were only $100 per month. However, it is doubtful that enough would enlist. To get enough people to enlist the Army has to give benefits to some people who would enlist without them. Analyses are proceeding on whether it is possible to refine eligibility criteria for benefits to reduce the number of unnecessary benefits paid. See Gade, Elig, and Shields (1982) for analyses of Army-incentive draw from other Armed Services.

Advertising

The Army advertising slogan "Be All You Can Be" captures powerful, positive reasons for Army enlistment. As we have seen, self-improvement is a dominant motive for enlistment. This theme is also compatible with motivation for college education and skill training. Army advertising campaigns of the 70's emphasized joining, in particular "Join the People Who've Joined the Army," a theme that was incompatible with the major motivators for enlistment. Joining old friends or making new friends are rated very low in importance by recruits, particularly by better qualified recruits. Based on our 1983 survey data, "making new friends" was rated 'not at all important' or only 'somewhat important' as reasons for enlistment by 60% of all recruits and by 86% of male, AFQT category 1 & 2, HSDG recruits; "Joining old friends" was rated this low by 96% of all recruits.

However, no matter how good a theme is and how impressively it's executed, the advertising message does not get through if the media are misaimed. The media may not be the message, but it does determine who receives the message. Media selection for most advertisers is based on factors such as numbers reached and the disposable income of those reached; for the Army this is only the beginning. Conventional market research often reports audience age, income, gender, and education, but does not report an audience's qualifications for military service. Surveying Army recruits is an economical way to get some of the needed information.

Table 4 shows (by AFQT category) self-reported TV viewing of several programs and programming types which are actual or potential Army advertisers. Results are reported separately for whites and blacks because of very large cultural differences in viewing. One of the most striking results in this table concerns football. National Footbal League (NFL) games are a good advertising bet because of large appeal across most market segments. But college football may be a better advertising selection -- its overall appeal is almost as good as NFL football and is skewed toward the higher mental category viewers. Given the probable difference in advertising cost, more advertising on college football broadcasts should be considered. Further analyses are underway to make sure that there are no other differences between NFL and college football viewers that would make this a poor move.

Table 4

TV SELF-REPORTS OF MALE POST/HSDG RECRUITS BY ETHNIC GROUP BY AFQT

	PROGRAMS	WHITES BY AFQT 4A4B	3B	3A	1&2	TOTAL	BLACKS BY AFQT 4A4B	3B	3A	1&2	TOTAL
	ITEM T137 n =	127	786	721	1289	2923	121	420	156	92	789
	NOT THESE/NO REGULAR TV	39.4	29.4	30.7	30.9	30.8	31.4	27.4	23.1	29.3	27.4
*	SOLID GOLD	18.1	18.8	17.3	12.7	15.7	27.3	37.4	39.7	28.3	35.2
*	SOUL TRAIN	5.5	6.0	5.1	2.3	4.1	43.0	44.0	50.0	41.3	44.7
*	AMERICAN BANDSTAND	11.0	12.8	9.7	5.4	8.7	11.6	21.7	19.9	15.2	19.0
*	DANCE FEVER	6.3	6.0	5.3	2.6	4.3	14.0	21.4	25.0	14.1	20.2
	MOVIES ON NETWORK TV	30.7	33.0	37.2	36.9	35.6	28.1	36.0	38.5	31.5	34.7
*	LIKE SAT. NIGHT LIVE	16.5	27.2	31.5	34.8	31.2	25.6	36.4	39.1	39.1	35.6
*	CABLE TV PROGRAMS	29.9	33.8	32.2	38.6	35.4	34.7	37.9	43.6	41.3	38.9
# *	NIGHTLY NETWORK NEWS	17.3	19.3	22.6	29.7	24.6	20.7	24.3	24.4	37.0	25.2
	LOCAL NEWS	26.8	28.9	30.8	34.8	31.9	30.6	38.1	39.1	45.7	38.0
	ITEM T138 n =	126	783	716	1283	2908	120	418	157	91	786
	NO REGULAR TV SPORTS	38.1	33.5	34.9	34.9	34.7	17.5	16.7	13.4	19.8	16.5
	PRO BOWLING	13.5	13.3	10.9	12.6	12.4	13.3	12.9	12.7	11.0	12.7
	NFL SEASON GAMES	54.0	53.1	51.8	52.8	52.7	60.0	66.3	75.2	65.9	67.0
	PLAYOFFS/SUPERBOWL	26.2	31.0	28.5	32.5	30.8	25.8	29.4	34.4	26.4	29.5
# *	COLLEGE FOOTBALL	39.7	42.8	46.6	49.3	46.5	49.2	53.3	66.9	60.4	56.2
*	BASEBALL SEASON GAMES	26.2	28.4	28.2	34.5	30.9	35.8	41.6	47.1	42.9	42.0
*	PLAYOFFS/WORLD SERIES	27.0	30.1	33.1	37.5	34.0	32.5	31.8	38.9	30.8	33.2
	NBA BASKETBALL	23.0	24.5	23.3	26.2	24.9	51.7	59.6	67.5	61.5	60.2
*	COLLEGE BASKETBALL	17.5	19.5	21.1	27.0	23.1	40.0	49.3	56.1	52.7	49.6
	NHL HOCKEY	14.3	14.0	14.0	14.7	14.3	6.7	6.7	9.6	8.8	7.5
	ITEM T139 n =	123	782	718	1274	2897	120	418	154	91	783
*	NO REGULAR TV SPORTS	34.1	30.6	37.0	39.3	36.2	14.2	20.6	15.6	27.5	19.4
	WIDE WORLD OF SPORTS	36.6	38.1	40.1	36.3	37.7	43.3	45.2	50.0	40.7	45.3
	SPORTS WORLD	33.3	29.5	29.9	25.0	27.8	42.5	38.8	43.5	38.5	40.2
	SPORTS SUNDAY	35.0	28.0	26.9	24.7	26.6	40.0	43.3	41.6	36.3	41.6
	SPORTS SATURDAY	28.5	21.2	21.4	19.7	20.9	30.8	36.6	33.8	31.9	34.6
	MONDAY NIGHT FOOTBALL	34.1	38.2	36.9	40.7	38.8	55.0	51.4	60.4	51.6	53.8
	WTBS (TURNER SYSTEM)	12.2	11.3	11.7	14.8	13.0	11.7	16.0	18.2	15.4	15.7
	ESPN (CABLE SPORTS)	15.4	23.5	20.6	24.7	23.0	30.8	25.8	35.7	31.9	29.2
	USA NETWORK SPORTS	9.8	12.5	9.6	12.5	11.7	16.7	16.7	22.7	19.8	18.3

Note: Respondents are male HSDG/Post NPS RA recruits surveyed by the 1983 ARI Survey of Army Recruits.

* $p < .01$ for whites. # $p < .05$ for blacks.

UTILIZATION OF FIRST STAGE EFFORTS

The data collected in these survey efforts have proven to be useful in monitoring a variety of policies. The staff of the US Army Recruiting Command (USAREC) and the Office of the Deputy Chief of Staff for Personnel (ODCSPER) have used specific data for internal planning and in response to inquiries from Congress.

The utility for the Army of the results presented in this paper are indicative of how this information can be used for a) monitoring current policy, b) hypothesis testing and generation, and c) the beginning of a longitudinal data base for both individual decision making and microeconomic forecast modeling.

Traditional Data Utilization

Several reports have already been prepared or are being prepared which examine specific portions of the survey results and which are oriented to policy implications and/or hypothesis testing or generation. Reasons for enlistment were briefly examined for the 1982 results by Elig (1983) and Elig, Gade, and Shields (1982). A policy oriented paper on enlistment incentives based on 1982 results (Gade, Elig, & Shields, 1982) examined from a policy perspective, the hypothesis of Lockman (1982) that exclusively Army incentives took recruits from the other Armed Services rather than encouraging enlistments from those who would not otherwise have enlisted. Gade et al. found that our survey results were in line with results from the DoD educational incentive experiment -- both indicate that exclusively Army educational incentives were a market expander for DoD rather than a detractor to other services (Polich, Fernandez, & Orvis, 1982). Dale and Gilroy (1984) report that a third methodology -- macroeconomic modeling -- also found no negative impact on other services' recruiting resulting from the Army College Fund. We are currently analyzing enlistment incentive items in the 1982 and 1983 surveys and a summary report of their effects should be available soon.

While it is beyond the scope of this paper to fully explore the question of the costs and benefits of ACF, we want to point out that suitable methods do exist to calculate summary statistics; one method we are applying is Multi-Attribute Utility Theory (MAUT). MAUT techniques are being used to develop a utility-metric for adding across different benefits from this incentive.

In addition to results in this paper and in the forthcoming summary report, 1983 enlistment incentive and motivation results are also available in Gade, Elig, Nogami, Hertzbach, Weltin, and Johnson (1984). Gade et al (1984) combine data from the 1982 and 1983 reception station surveys, the 1983 Exit Survey, and the 1983 ARI/USAREC High School Survey to test the hypothesis advanced by Moskos that the Army would benefit from a basic force restructuring that would have dual-tract enlistments for citizen soldiers and potential career soldiers.

Media recall and advertising recognition items in the 1982 survey were briefly examined for Regular Active Army recruits (Elig, Johnson, & Gade, 1983) and for USAR recruits (Hertzbach, Johnson, & Elig, 1983). Even this brief examination of Regular Army advertising based on 1982 data has been

credited with saving the Army nearly $500,000 (Simon, letter, 1983). The analyses of advertising items reported in this paper are from an extensive look at active Army advertising and marketing based on the 1983 survey (Elig, Weltin, Hertzbach, Johnson, & Gade, 1984).

Nontraditional Data Utilization

ARI researchers have already addressed some topic areas known to be of special concern to the Army -- as noted in the report citations above -- and we are continuing to use these data to address other specific research questions of special Army concern (e.g., analysis of the older -- 20 to 25 -- recruit market; individual-decision and econometric-forecast models of first-term attrition based on enlistment motives as well as educational and occupational plans and aspirations; also see Johnson, 1983). In addition, general reference volumes containing tabular descriptions of 1982 and 1983 recruits have been prepared for the Army manpower and personnel community. Survey results are also being made available through a management information system. These nontraditional products are described below.

Reference Volumes

Two tabular description volumes serve as an overview of the NPS RA results from the 1983 ARI Survey of Army Recruits (Elig, Hertzbach, & Johnson, 1984a, 1984b). Volume 1 presents the responses to each question in the survey by gender, education, ethnic group, AFQT, and high school graduate and senior markets. Volume 2 reports breakdowns of each question by age at contracting, geographic regions corresponding to the five recruiting brigades, rural/urban background, term of enlistment, and enlistment incentive (Army College Fund, Cash Bonus, Both, Neither). Two volumes with identical breakouts for the 1982 DA Survey are also available (Elig, Johnson, Gade, and Hertzbach, 1984 a & b).

As reference books these reports should serve to provide recent information on who is enlisting in the Army. These tabular descriptions are among the most useful survey products provided to Army advertising program managers; the demographic descriptions contained in the tabular volumes were expressly designed to establish a base line standard to use in judging the appropriateness of potential advertisers. These volumes are also intended to stimulate interest in further analyses of policy concerns.

Management Information System

In addition to the traditional publications described above, the data from the surveys are being used to develop a computer-based decision support system for the US Army Recruiting Command. Data from the 1982 and 1983 ARI Surveys of Army Recruits are stored in Statistical Analysis System (SAS) data files on the National Institutes of Health Computer Utility (NIHCU). Analyses of these data bases can be initiated through an interactive program, the Army Recruiting Information System (ARIS), developed by ARI. ARIS will guide the user step by step in setting up the analysis or, if requested, directly apply user-prepared SAS statements to initiate the analysis. ARIS is in an early stage of development and is currently more oriented to use by analysts than to direct use by policy makers. As warranted by user requests ARIS can be expanded to be a decision support system that will access other data in addition to the recruit surveys.

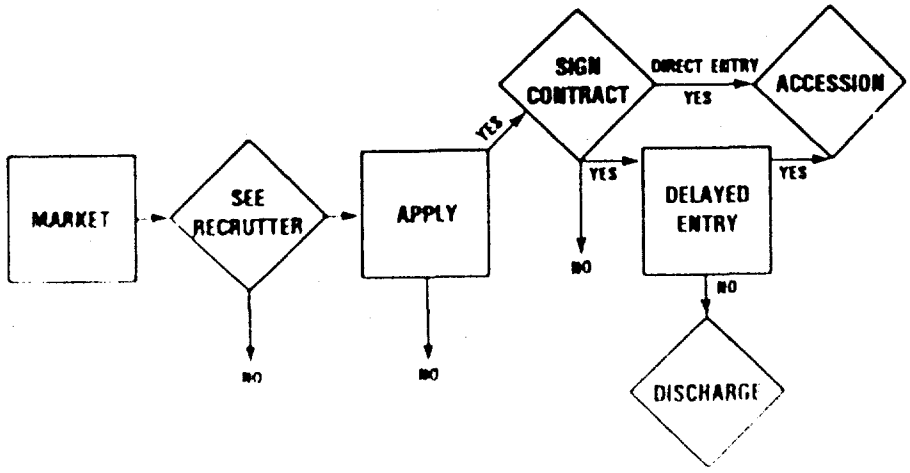
ARE MORE SURVEYS NEEDED?

We recognize the limitations of surveys in studing Army enlistments, particularly when the surveys are completed at accessioning rather than contracting. Doering and Grissmer (1984) provide policy makers -- and researchers -- with well-needed cautions on uses and abuses of survey data.

Within the limits of large scale survey efforts we can tell what commercials people are watching on television, hearing on the radio, and reading in magazines and newspapers. We can also find out from the survey efforts how they responded to this advertising (e.g., by contacting a recruiter), what monetary or job incentives were popular and so on. What we cannot determine from these survey results is a complete picture of the process by which the individual aggregates all of the influences that play on the enlistment decision, to finally arrive at a decision. If we could identify a set of decision strategies/models that tend to be used by selected segments of the Army target population, the Army could then tailor influencer campaigns and plans, to optimize the effects of a particular bit of information on a particular decision style. Johnson (1983) examines the enlistment decision process and how existing theories and models of decision and judgement behavior -- developed in the psychological and business-oriented disciplines -- can contribute to our understanding of the enlistment decision process. We hope to further this effort not only with surveys but also with other research methods developed for studying decision making.

Further research efforts are needed to expand understanding of the enlistment decision process at the various decision points (Figure 9). Survey data play a necessary role in these efforts, particularly if appropriate sample frames are developed for (decision) choice-based samples (see Hosek & Peterson, 1983). Our reception station surveys provide information on the end point of the enlistment process and serve to link this information to the starting point of the reenlistment decision process. We are currently expanding our information collection efforts to include decision points earlier in the enlistment process.

THE ENLISTMENT PROCESS



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APPENDIX A

ARMY ENLISTED STRENGTH GAINS FROM THE ARMY COLLEGE FUND

BASED ON EIGHT YEARS OBLIGATED SERVICE

The following Army enlisted strength gains from the ACF count as Army benefits (a) additional active-duty from high-quality males who would not have enlisted without ACF, (b) reserve obligation from those who would not have enlisted except for ACF and who say that they do not plan to reenlist or who do not know what they will do at ETS, and (c) potential high-quality NCOs from those who would not have enlisted without ACF but who are planning on reenlisting:

Strength gains from every 100 2-year ACF accessions of males are:

- 97.4 years active duty (2 years x 48.7 recruits)
- 279 years reserve obligation (6 years x 46.5 recruits)
- 2.2 potential NCOs

Strength gains from every 100 3-year ACF accessions of males are:

- 120.6 years active duty (3 years x 40.2 recruits)
- 178.5 years reserve obligation (5 years x 35.7 recruits)
- 4.5 potential NCOs

Strength gains from every 100 4-year ACF accessions of males are:

- 99.2 years active duty (4 years x 24.8 recruits)
- 55.6 years reserve obligation (4 years x 13.9 recruits)
- 3.6 potential NCOs.

This is not counting in either reserve time or active-duty time recruits who say they plan to reenlist but who also say they would not have enlisted at all if the ACF had not been available. (All figures based on males in the 1983 sample, subject to assumptions outlined above, do not include the impact of ACF-eligible females or the effects of first-term attrition, and are based on 8-years obligated service -- calculations based on 6-years obligated service are on page 15).