THE DETERMINANTS OF ENLISTMENT IN THE ARMED FORCES DURING THE VIETNAM ERA[*]

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INTRODUCTION

The study of military enlistment is of special policy concern because it is the current method of staffing the U.S. armed forces. Previous research efforts (2, 4, 5) that have utilized aggregate data have focused upon economic explanatory factors such as civilian-military earnings differentials and a youth unemployment rate. In almost every instance, earnings differentials were found to be significantly related to voluntary entry into military service. However, Johnston and Bachman (8), utilizing panel data and controlling for sociological and psychological factors, found no relationship between economic variables and enlistment.

Within a multivariate framework this study examines the relationship between enlistment and several economic, sociological and institutional variables. The data utilized permit generalizations across both a broad spectrum of individuals and a substantial time period (1966-1973). The results of this study will help determine whether economic variables are related to enlistment. Furthermore, unlike previous research, this study is able to perform multivariate analyses separately by race.

CONCEPTUAL FRAMEWORK

Throughout the 1950's and until the early 1970's the draft was one of the prime enlistment motivators (2, 4, 8). In addition, many youth viewed the armed forces as a career or as an avenue to increase their human capital through training (8). Hence, a study of enlistment during the Vietnam era must include both relational properties which relate the individual to the institutional--environmental setting and integral properties which are linked to enlistment independent of the influence of the draft.

Concepts used in this model are divided into two broad categories: (1) Selective Service and other military demand factors and (2) personal characteristics associated with the enlistment decision. The Selective Service established minimum eligibility requirements for health and mental ability as well as a deferment system that enabled a young man temporarily or completely to avoid the draft and/or the consequent pressure to enlist.

During the Vietnam era, as the level of the fighting fluctuated, so did the need for recruits. Armed forces manpower demand was reflected in the level of draft calls. Enlistment increased during periods of high draft calls because entering as a volunteer was a way to fulfill an obligation and simultaneously to avoid some of the costs of the draft (i.e., a relatively higher probability of exposure to combat). Independent of the draft and its influence, theories have been advanced to explain

the enlistment decision. Among the factors hypothesized to be associated with enlistment are family background, environment, unemployment, and earnings. Drawing upon these theories, the explanatory variables used in this study are education, mental ability, health, dependents, draft pressure, socioeconomic status (SES), region and urbanicity of residence, duration of unemployment, potential average hourly earnings and race.

Both high and low levels of education and mental ability are expected to be negatively related to enlistment. High values on these variables are associated with the student deferment, while low values correspond to the mental ability exemption. On the other hand, noncollege youth who meet the minimum IQ standards, e.g., those with 10 to 12 years of school, are expected to enlist at higher than average rates. The health exemption and the hardship deferment leads us to hypothesize a negative relationship between enlistment and both poor health and the presence of dependents. We also hypothesize a negative relationship between parental SES and enlistment. First, there was a popular notion that the student deferment placed the responsibility of the war on the poor. In addition, lower and middle class youth may have seen enlistment as a chance to increase their skills through training and the GI Bill.

It is well established that individuals enlisted to avoid the draft.| Indeed, many enlistments occurred between the time that a youth received notification that he would be drafted and his scheduled induction date. Hence, we hypothesize a positive relationship between the likelihood of enlistment and becoming liable for the draft during periods of high draft calls. We expect a negative relationship between enlistment and residence in the rural South and a positive relationship between enlistment and residence in the urban South. Past research suggests that the military held a traditional appeal to urban Southerners, while rural Southerners entered at lower rates due either to agricultural deferments or to a disproportionately high rate of failure to achieve minimum mental ability requirements (9, 12). In addition, a negative relationship between residence in the Northeast and enlistment is hypothesized. This is attributed to the high level of antiwar protest in Northeastern universities (1, 12).

Enlistment is hypothesized to be inversely related to civilian average hourly earnings. Theoretically, a young man has a choice of either entering the armed forces or remaining in the civilian labor market. Other things being equal, the larger a youth's potential civilian wage the less likely he is to enlist. The duration of unemployment is thought to influence the enlistment decision by decreasing expected civilian

earnings (4) and decreasing the returns to job search (6). Hence, a direct relationship between duration of unemployment and enlistment is hypothesized.

Since the military traditionally has been viewed as an avenue which blacks have used to escape racial discrimination, one might expect whites to have lower enlistment rates, other things being equal. However, service during the Vietnam era may have departed from historical experience insofar as controversy over the war reduced the positive consequences associated with participation in the armed services. Hence, the relationship between race and enlistment is unclear.

DATA AND METHODOLOGY

The data used in this study are based upon information collected in the National Longitudinal Surveys (NLS) of the labor market and educational experiences of young men. The sample is a multistage probability sample selected from the civilian noninstitutionalized population of young men aged 14 to 24 when first interviewed in the fall of 1966. Data on all variables other than ability were obtained through personal interviews conducted by the Bureau of the Census.[1]

The universe for this study is a subset of the total NLS sample--young men who were (1) 14 to 20 years of age in 1966, (2) not permanently exempted from the armed services, and (3) not veterans when they entered the sample in 1966. This universe was chosen in order to obtain preservice characteristics rather than relying on retrospective information. In keeping with previous research we examine the determinants of enlistment among those who were "eligible," where eligibility is defined in terms of health and mental ability.[2] Generalizations for the entire Vietnam era are possible because the interviews were conducted annually[3] (1966-1973) during a period that corresponded closely to Vietnam era (1964-1973).[4]

One of the objectives of the NLS was to obtain enough sample cases to make possible separate, reliable statistics for black youth. This was accomplished by oversampling blacks so that they represent 30 percent of the sample even though they represent only about 12 percent of the population. For this reason and because unweighted sample cases are used in this analysis, results are presented separately by race.

The enlistment decision is explored utilizing Multiple Classification Analysis (MCA), a version of multiple regression analysis with all the explanatory variables expressed in categorical form. The MCA technique permits one to calculate the mean value of the dependent variable for each category of a particular explanatory variable, "adjusted" for the effects of all other variables in the model.

The dependent variable, enlistment, was constructed, where possible, utilizing the

respondent's self-reported method of entry. However, since method of entry was not obtained direclty for some respondents,[5] duration of service was used to determine enlistment status. If a young man served more than 26 months, he was coded as having enlisted. This method of determining enlistment status tends to understate the true proportion who enlisted because some enlistees were discharged prior to serving their full terms (e.g., for helath problems).[6]

In developing the independent variable set, it is important to examine individual characteristics from a common preservice life cycle referent. Preservice characteristics are necessary to insure the correct causal sequence. Education is the life cycle dimension chosen to pool cross-sectional information because it links directly to the student deferment. Preservice educational level is measured as of the year the respondent stopped full-time, continuous enrollment. Theoretically, this is the first year of draft eligibility. For those who did not receive post high school education, preservice characteristics are measured as of the year corresponding to their eighteenth birthday. Preservice characteristics such as health (1 = health limits school or work),[7] dependents (1 = dependents other than wife), duration of unemployment, region of residence, and draft pressure (1 = draft eligible in 1966, 1967 or 1968)[8] are measured as of the year defined above.

The mental ability measure was constructed using pooled data obtained from a 1968 survey of the young men's high schools, and it represents ability as of about the 10th grade. The family background measure is an index of socioeconomic status when the respondent was an adolescent. The index was based on five sources: (1) father's education, (2) mother's education, (3) father's occupation, (4) oldest older sibling's education, and (5) the availability of reading material in the home.[9] Since many young men of this era went directly from school into the military, potential wage is utilized instead of the actual average hourly earnings. Again, this variable corresponds to the year of draft elibility. Exact specification of the equation from which the potential wage is "predicted" is shown in Table A-1 of the Appendix.

RESULTS

Approximately 19 percent of the eligible respondents enlisted throughout the Vietnam era (Table 1). On the whole, the findings of the MCA model for whites support the hypotheses presented in the previous section. However, there are some interesting results that merit highlighting. Contrary to popular belief, the student deferment did not significantly deter enlistments among white college youth. However, high school graduates enlisted in significantly greater than average numbers, while the opposite was true for high school dropouts. Although, respondents with a 4-F draft classification (permanent health or mental ability exemption) were excluded from analysis, self-reported health

limitations curiously were inversely related to enlistment. Perhaps those who reported health problems but were not eligible for a permanent exemption avoided the armed forces by a series of temporary (1-Y) health-related deferments. Potential wage exhibited the expected inverse relationship for whites. This finding supports former enlistment studies using aggregate data. Hence, controlling for the draft and a host of other variables, civilian wage influences enlistment behavior. However, problems with the unemployment variable (high NA rate correlated with enlistment) make unclear conclusions concerning the relationship between duration of unemployment and enlistment. Finally, contrary to the hypothesis, SES was found to be unrelated to enlistment when SES-related characteristics (e.g., education, ability, race) were held constant.

Although overall enlistments were identical for the two racial groups, some curious patterns emerge for black youth. Enlistment seems to have been used as an avenue to gain valuable training, experience and/or to escape racial discrimination. Contrary to the white experience, blacks with a college degree and/or who lived in areas traditionally seen as less discriminatory (North and West) enlisted at significantly lower-than-average rates. However, blacks with high ability and/or who lived in the South were significantly more likely to enlist. Unlike the findings for whites, among black youth SES was significantly inversely related to enlistment; however, neither the potential wage nor the presence of dependents was associated with enlistment.

A rather straightforward interpretation follows from putting together the following findings for blacks: (1) low enlistment among college graduates, (2) high enlistments among Southerners, and (3) high enlistments among the lower SES group. That is, among those who did not see the labor market as rich in job opportunities (Southerners and those of lower SES), the military was a logical substitute for the civilian sector. Clearly, the draft may have prompted this choice. However, enlistment rates two-and-a-half times higher in the South than in the rest of the country (25 versus 10 percent) indicate that there was more than conscription motivating enlistment. The military experience, in concert with postservice benefits (GI Bill), probably was viewed as a feasible avenue of economic advancement and (temporary) avoidance of racial discrimination.

CONCLUSION

The findings of this study support previous enlistment studies which found a significant relationship between civilian earnings and enlistment among whites. As anticipated, the draft was found to be a key enlistment motivator. Finally, the findings suggest that certain segments of the eligible black population enlisted to avoid, at least temporarily, discrimination in the civilian sector.

FOOTNOTES

[1] For a detailed description of the data, see Kohen, et al. (11).

[2] If a young man was classified "IV-F" or "Registrant not qualified for any military service," he was omitted from the sample (13).

[3] There was no interview conducted in 1972.

[4] It should be noted that the initial NLS survey does not account for youth in this age cohort who were in the armed forces in 1966. This omission tends to bias results by understating the true proportion who entered the armed forces. However, by imposing an upper age limit of 20 as of the initial interview in 1966, many of the problems were overcome; i.e., a large majority of these youth—those under 18—were not eligible for the draft in 1966. Nevertheless, the most serious underrepresentation of the population lies with the 19 and 20 year olds.

[5] Method of entry was asked in the 1966, 1969, and 1971 surveys. Hence, entry method is unknown for respondents who returned to the sample in 1973 and those not interviewed in 1973.

[6] Reason for noninterview is known for respondents who had not returned to the sample in 1973. If reason for noninterview was "armed forces" in three consecutive years, the respondent was coded "1" on the enlistment variable.

[7] While individuals with permanent health-related exemptions are excluded from the analysis, those with temporary health deferments are not excluded.

[8] 1966, 1967, and 1968 were the years of highest draft calls (12).

[9] Both measures, SES and IQ, are more fully described in (10), Appendixes A and B.

Table 1   The Likelihood of Enlisting in the Armed Forces during the Vietnam Era

MCA Results[c]

(F-ratios in parentheses)

Characteristic	WHITES			BLACKS		
	Number of respondents	Unadjusted percent	Adjusted[b] percent	Number of respondents	Unadjusted percent	Adjusted[b] percent
Total or average	2,467	19	19	953	19	19
Education[a]			(6.36)***			(2.88)**
0-8 years	94	14	14	95	8	10@@
9-11 years	322	16	13@@	253	17	19
12 years	996	25	24@@	407	21	22@@
13-15 years	562	20	17	140	21	17
16 years	363	12	18	48	10	7@@
17-18 years	130	5	14	10	d	d
Mental ability			(2.40)**			(5.73)***
Below average	175	23	19	202	16	15
Average	1,018	22	21@	202	25	25@@
Above average	616	18	20	20	45	44@@
NA	658	15	16@@	529	16	17
Socioeconomic status			(1.69)			(3.85)**
Lower SES	397	19	18	456	20	21@
Middle SES	900	20	18	303	20	19
Higher SES	1,095	19	20	75	17	14
NA	75	19	28	119	13	9
Health condition[a]			(39.54)***			(3.07)*
No health problems	2,217	21	21@@	904	19	19@
Health problem	250	4	5@@	49	6	9@
Dependents[a]			(10.24)***			(1.58)
None	2,307	20	20@@	845	20	19
Some	160	4	10@@	108	11	14
Residence[a]			(3.42)***			(7.84)***
Northeast	591	20	21	123	11	9@@
North central	767	18	19	181	14	10@@
South-urban	333	23	23@	311	25	25@@
South-rural	399	18	14@@	291	20	23@@
West	377	18	19	45	4	5@@
Draft pressure[a]			(103.09)***			(7.89)***
High	870	30	29@@	372	22	23@@
Low	1,597	13	14@@	581	16	16@@
Potential wage[a]			(20.34)***			(2.77)**
Low 0-$1.80	228	21	28@@	289	18	14
Middle $1.81-$2.50	1,499	24	22@@	406	22	20
High $2.51+	627	8	10@@	126	14	19
NA	113	17	13	132	14	24
Unemployment[a]			(23.16)***			(4.87)***
Less than 10 weeks of work experience	94	20	17	68	13	14
0 weeks	1,188	17	15@@	385	16	15@@
1-10 weeks	374	13	14@@	191	19	18
10+ weeks	148	13	15	88	14	16
NA	663	28	31@@	221	27	28@@
Grand mean			19			19
$\hat{R}^2$			.12			.07
F-ratio			14.05			3.74

Table 1   Continued

UNIVERSE: Mentally and physically eligible respondents 21-27 years old in 1973 who were not discharged
           from the armed forces prior to 1966.
a   The characteristic is measured as of the year of draft eligibility.
b   Adjusted by multiple regression techniques of holding constnat all other variables shown in the
      table.
c   Clearly, logit analysis would overcome some of the statistical problems with the MCA, e.g.,
      heteroscedasticity. However, at the time of writing logit runs were not available.
d   Percentage not shown when there are fewer than 20 sample cases.
*   Statistically significant at .10 level.
**   Statistically significant at .05 level.
***   Statistically significant at .01 level.
@   Significantly different than the grand mean at the .05 level.
@@   Significantly different than the grand mean at the .05 level.

APPENDIX

Table A-1   Regression Results for the Potential Wage Equation, by Race

(t-value)

Explanatory[c] variables	Dependent variable: WAGE[a,b]			
	WHITES		BLACKS	
EDUCATION[a]	13.47	(9.02)***	5.42	(2.11)**
TRAIN P/M[a]	26.10	(3.30)***	23.66	(1.55)*
TRAIN S/C[a]	31.13	(3.05)***	2.28	(0.14)
EXPERIENCE[a]	21.97	(3.59)***	10.12	(1.26)
TENURE[a]	0.33	(1.29)*	-0.06	(-0.15)
KOWW	1.17	(3.11)***	2.15	(3.62)***
HEALTH[a]	-4.69	(-0.65)	-16.16	(-1.18)
SES	-0.11	(-0.71)	0.22	(0.88)
SMSA[a]	19.11	(3.62)***	14.18	(1.44)*
SOUTH[a]	-25.16	(-4.44)***	-46.03	(-5.19)***
CONST.	-5.28	(0.23)	71.16	(2.16)**
$\hat{R}^2$	0.16		0.18	
F-ratio	25.37		11.99	
Number of respondents	1,283		500	
Dependent vbl. (Mean, std. dev.)	232.13	95.69	206.43	92.95

UNIVERSE: Males 21 to 27 years of age in 1973, who were not enrolled and employed in the year
           of draft eligibility.
a   This variable was measured in the year of draft eligibility.
b   Wage or hourly rate of pay was deflated to constant 1967 dollars.
c   Definition of the variables: TRAINP/M--Training professional or managerial = 1; TRAINS/C--
      Training skilled manual or clerical = 1; EXPERIENCE--number of years since leaving school;
      TENURE--measured in months; KOWW--a test of occupational information; HEALTH--health
      problem limits school or work = 1; SES--an index of socioeconomic status of parental family;
      SMSA--respondent lived in an SMSA = 1; SOUTH--respondent lived in the South = 1.
*   Significant at the .10 level.
**   Significant at the .05 level.
***   Significant at the .01 level.

REFERENCES

(1) Altman, Stuart H., and Barro, R.J.
"Model of Officer Supply Under Draft and No
Draft Conditions." Studies Prepared for the
President's Commission on an All-Volunteer Armed
Force. Washington: U.S. Government Printing
Office, 1970, II-10.

(2) Altman, Stuart H., and Fechter, Allen
E. "The Supply of Military Personnel in the
Absence of a Draft." American Economic Review
Proceedings 57 (1967):19-31.

(3) Cook, Alvin A. "Supply of Air Force
Volunteers." Studies Prepared for the
President's Commission on an All-Volunteer Armed
Force. Washington: U.S. Government Printing
Office, 1970, II-4.

(4) Fisher, Anthony C. "The Cost of the
Draft and the Cost of Ending the Draft."
American Economic Review 59 (1969):239-54.

(5) Gray, Burton C. "Supply of First-
Term Military Enlistees: A Cross-Sectional
Analysis." Studies Prepared for the President's
Commission on an All-Volunteer Armed Force.
Washington: U.S. Government Printing Office,
1970, II-2.

(6) Hause, J.D. "Enlistment Rates for
Military Service and Unemployment." Journal of
Human Resources 8 (1973):98-109.

(7) Helmer, J. Bringing the War Home
The American Soldier in Vietnam and After? New
York: The Free Press, 1974.

(8) Johnston, J., and Bachman, J.G.
Youth in Transition. Vol. 5. Ann Arbor:
Institute for Social Research, University of
Michigan, 1972.

(9) Karpinos, B.D. "The Mental
Qualifications of American Youth for Military
Service and its Relationship to Educational
Attainment." 1966 Social Statistics Section,
Proceedings of the American Statistical
Association, pp. 92-111.

(10) Kohen, Andrew, I. "Determinants of
Early Labor Market Success Among Young Men:
Race, Ability, Quantity and Quality of
Schooling." Ph.D. dissertation, The Ohio State
University, 1972.

(11) Kohen, Andrew I.; Grasso, John T.;
Myers, Steven C.; and Shields, Patricia M.
Career Thresholds, Volume 6. Columbus: Center
for Human Resource Research, The Ohio State
University, 1977.

(12) Kohen, Andrew I., and Shields,
Patricia M. "Determinants and Consequences of
Service in the Armed Forces During the Vietnam
Era." In Kohen, et al. (11):155-89.

(13) National Advisory Commission on
Selective Service. In Pursuit of Equity: Who
Serves When Not All Serve? Washington: U.S.
Government Printing Office, 1967.

(14) Wool, Harold. The Military Specialist:
Skilled Manpower for the Armed Forces.
Baltimore: The Johns Hopkins Press, 1968.