The Socioeconomic Status of Young Male Veterans, 1964–1984*

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From a cohort-aging perspective, this paper assesses the socioeconomic status of young male veterans in comparison to that of young male nonveterans. It is found that veterans gradually come to have higher educational attainment and earn more than nonveterans. The advantages of being a veteran come late and only after the veteran's exit from the military. For socially disadvantaged groups, veteran status has an additional premium either because military experience provides a "bridging environment" or because employers use veteran status as a "screening" device.

A large fraction of U.S. men are veterans by their mid-thirties. For the cohorts born between 1928 and 1933 about two-thirds were veterans as they aged to 35 years old; for the cohorts born between 1934 and 1950 the corresponding proportion declined to almost 40 percent (see Table 1). For them, military experience is an important component in the process of status attainment. Unfortunately, empirical research concerning the impact of military experience upon veterans' socioeconomic status is sparse and inconclusive, although the importance of such studies was stressed many years ago by Duncan and Hodge (1963:642–43) and Duncan, Featherman, and Duncan (1972:14).

The present paper assesses, first of all, the socioeconomic status of young male veterans in comparison to that of young male nonveterans. If a difference in status is found between the two groups, the next question is whether

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TABLE 1

Percentage of Veterans in the U.S. Male Civilian Population by Cohort and Age

Birth Cohort	Age								
	18–19	20–21	22–23	24–25	26–27	28–29	30–31	32–33	34–35
1928–29									64.3
1930–31								63.2	61.9
1932–33							63.1	66.1	66.4
1934–35						51.2	51.8	52.9	52.1
1936–37					45.0	46.5	48.7	46.9	47.6
1938–39				38.1	43.0	46.9	45.6	46.5	46.1
1940–41			23.3	31.5	37.9	40.9	40.2	40.5	41.1
1942–43		10.9	25.6	34.8	39.7	42.3	41.6	40.1	39.2
1944–45	2.5	8.8	28.5	38.3	42.2	44.4	43.6	43.0	41.8
1946–47	1.7	13.5	36.8	46.6	47.9	47.5	45.9	46.3	44.6
1948–49	1.6	12.5	32.2	35.3	37.9	36.1	37.4	36.9	37.4
1950–51	1.2	10.3	18.2	23.7	24.4	24.8	25.2	24.9	
1952–53	1.6	6.6	13.3	16.5	16.9	17.2	18.4		
1954–55	1.6	5.9	10.9	12.8	13.0	13.5			
1956–57	1.9	5.5	8.9	11.8	11.6				
1958–59	1.4	3.9	7.4	9.0					
1960–61	1.0	3.4	5.9						
1962–63	0.9	2.9							
1964–65	0.9								
Total	1.4	6.9	17.2	24.5	29.4	34.4	39.1	43.6	47.2

SOURCE: March Current Population Surveys, 1964–84. Population is limited to civilian males between the ages of 18 and 35.

the difference is due to veterans' experience in the military or to the effects of background factors for which military service is selective. Also, for most veterans, military experience is relatively short, and postmilitary life still dominates. It is reasonable, therefore, to hypothesize that the effect of being a veteran should attenuate as the veteran leads a normal civilian life after his exit from military service.

Previous research has not reached an agreement on how military service affects one's socioeconomic status. Some scholars have argued that military service has a negative effect for two obvious reasons (Miller and Tollison, 1971). First, military service interrupts one's civilian (or regular) career path; second, it shortens one's life span for accumulating wealth. The conclusion of Miller and Tollison's theoretical reasoning is that military personnel pay an implicit tax for serving in the military.

Many empirical researchers, however, find that veterans often obtain higher education (Mason, 1970; Villemez and Kasarda, 1976) and earn more (Browning, Lopreato, and Poston, 1973; Villemez and Kasarda, 1976; Little and Fredland, 1979; Martindale and Poston, 1979; De Tray, 1982) than do nonveterans. Several explanations have been offered to account for the positive effect of veteran status. The first explanation is the human capital theory (Little and Fredland, 1979; Goldberg and Warner, 1987). Scholars holding this view argue that veterans have obtained more education and acquired more technical skills in the military than their civilian counter-

parts. This theory is particularly applicable to veterans who can transform technical skills learned in the military into skills useful for civilian jobs (Goldberg and Warner, 1987). A different version of the human capital explanation is that veterans obtain more education after their discharge from the military either because they receive government benefits in the form of the G.I. Bill (Fligstein, 1976) or because they are more motivated through military experience (Mason, 1970). Given that the causal effect of education on earnings is well understood, the higher educational attainment of veterans constitutes an "indirect" effect of veteran status on earnings (Villemez and Kasarda, 1976). Another explanation has been maintained by one group of sociologists (Browning, Lopreato, and Poston, 1973; Martindale and Poston, 1979). They asserted that military service provides a "bridging environment" in which members of racial and ethnic minorities are able to acquire knowledge, skills, and experiences essential to their integration into mainstream American society. Poston, Segal, and Butler (1983) argued that the "bridging environment" theory explains higher earnings of female veterans than those of female nonveterans. A revised version of the "bridging environment" hypothesis was offered by Lopreato and Poston (1979), who shifted the focus of the argument from the net difference in earnings to different rates of monetary return to education. They found that black veterans are better able than black nonveterans to convert their educational attainment into earnings. Yet there is another alternative explanation: the "screening device" theory. This theory was suggested by Little and Fredland (1979) and was fully articulated by De Tray (1982). It views the problem from the viewpoint of the employer, arguing that veteran status is a screening device used by employers to separate more productive from less productive workers. Being a veteran is a signal that the person in question has a minimum of education and a fair understanding of bureaucratic hierarchies. When other credentials, such as a college degree, are lacking, veteran status serves as a screening device.

A number of scholars have remained skeptical of the validity of the statement that veterans necessarily earn more than nonveterans. Cutright (1974), for example, criticized the work of Browning, Lopreato, and Poston (1973) on methodological grounds. One of Cutright's most forceful arguments was the necessity of the statistical control of age: veterans tend to be older than nonveterans in the low age bracket and thus tend to earn more. Several researchers (Villemez and Kasarda, 1976; Martindale and Poston, 1979; Berger and Hirsch, 1985) found that veterans from the Vietnam era do not earn more than their nonveteran peers. A recent study based on data from Social Security Administration records (Angrist, 1990) reported that the earnings of white veterans of the Vietnam War are about 15 percent less than those of comparable nonveterans. Cohany (1990) also revealed that some Vietnam-era veterans are disadvantaged in the civilian labor market. To explain the different experience of Vietnam veterans, Berger and Hirsch (1985) proposed that veterans from World War II and the Korean

War were more able than nonveterans, whereas veterans from the Vietnam era were less able than nonveterans. This hypothesis seems to be supported by Griliches and Mason's (1972) study, which indicated that length of military service has a negative effect on postservice earnings after ability and other relevant variables are taken into account. Griliches and Mason's study is also unique in that it considered the separate effects of preservice schooling and postservice schooling on veterans' earnings.

The present research, from a cohort and aging perspective, aims at describing the socioeconomic status of veterans in comparison to that of nonveterans in the civilian male population. Socioeconomic status includes both educational attainment and earnings. One main objective of the research is to provide an accurate description of the differentials in educational attainment and earnings between veterans and nonveterans. It does not adopt a prescribed theoretical stand. This research does not explicitly control for the effects of unmeasured characteristics, such as ability. Nonetheless, the descriptive results from the analysis of a series of the March Current Population Surveys (CPS) are useful for ascertaining the existence of differentials between veterans and nonveterans. In particular, they trace the changes in the differentials between veterans and nonveterans as a function of age.

Data

The data were extracted from the 1964–84 March CPS. I selected civilian males of ages 18 to 35 at the time of survey who provided complete information on the variables to be listed in the following. After thus narrowing the scope, I still had a total of 369,471 cases. A data set of this size is very difficult to process in a multivariate analysis. There were two options for data reduction. The first was to take a subsample from the original data set; the second was to group the data into a tabular form. I chose the second option because the loss of information is small if I can maintain that the cases grouped together are homogeneous. Based on this principle, I classified the data into 15,222 cells according to the following variables:

Age: 18–35, 18 categories. From Table 1, it is evident that the proportion of veterans increases rapidly with age. As Cutright (1974) demonstrated, an adequate control of age is crucial for the comparison of veterans to nonveterans. If I had grouped the data into two-year age intervals (as in Table 1) or more roughly, I would have created the bias of veterans being older than nonveterans within cells. For example, for cohorts born 1944–45, 2.54 percent were veterans at ages 18–19 (see Table 1); but most veterans in this cell were 19 years old. The percentages of veterans among 18 and 19 years olds were 0.95 and 3.45, respectively.

Race: nonblack versus black. I combined whites with "others" and contrasted them with blacks.

Cohort: 19 categories. The cohort variable was constructed from the

respondent's age and the year of survey. As shown in Table 1, 19 synthetic birth cohorts were made with two-year intervals.

Education: 5 categories; 0–8, 9–11, 12, 13–15, and 16 or more. The values refer to the actual years of schooling completed by the respondent.

Enrollment: not enrolled in school versus enrolled in school.[1]

Veteran: nonveteran versus veteran.[2]

Hour: 4 categories; 0, 1–19, 20–34, and 35 or more. The values refer to the actual number of hours that the respondent had worked during the week prior to the time of survey.

For each of the nonzero cells cross-classified according to the above variables, I attached the following measures to be used to form the dependent variables:

Number of respondents who have definable weekly wages (n_1). One's weekly wage for the last year is definable if the respondent reports positive earnings and a positive number of weeks he worked last year.

Number of respondents whose weekly wages are not definable (n_2); n_2 is complementary to n_1: $n_1 + n_2 = n$, where n is the cell size.

LOGWAGE: the average of the logarithm of weekly wages (adjusted into 1977 constant dollars) of those with definable wages in each cell. It is the principal variable for the analysis of the earnings status of veterans.

GRADE: the average years of schooling completed by respondents in each cell. It is different and cannot be inferred directly from the independent variable education (except for third category of education, i.e., twelfth grade).

In my analysis the dependent variables were intended to measure educational attainment and earnings. Educational attainment was measured by GRADE, the average years of schooling in each of the cells. Earnings were measured by LOGWAGE, average of the logarithm of weekly wages of those with wages. I excluded respondents without definable wages rather than assign zeros or any other small values to them because these respondents are potentially nonzero wage earners. This is a problem of censoring (Maddala, 1983). Only a small fraction of the data ($1 - 0.906 = 0.094$) were excluded from my analysis of earnings as a result of censoring.

Characteristics of Veterans

Simple descriptive statistics reveal that on average veterans are better educated, older, less likely to be black, and less likely to be enrolled in school than nonveterans. This comparison, however, is crude and might be spu-

[1]The enrollment variable was constructed from questions pertaining to employment and major activity.

[2]For 1966, there were 7,478 cases miscoded on the veteran status variable out of a total of 21,798 cases. I believe that the miscoding was random and thus unbiased. Therefore, I handled this problem by excluding the invalid responses from my analysis.

rious because the association between veteran status and one of these variables might be due to their correlations with a third variable. For example, education is correlated with age, and veterans are on average older than nonveterans; then it is possible that veterans could appear to be more educated in the aggregate simply because of their older age composition. To disentangle these confounding factors, I conducted a multivariate analysis.

It has already been observed from Table 1 that the likelihood of being a veteran declines for recent cohorts after controlling for age. That is, a person of a given age born into a later cohort is less likely to be a veteran than a person of the same age but born into an earlier cohort. This decline was related to different eras. World War II involved a large mobilization. The Korean War was of a smaller scale but mobilized a large proportion of the Depression cohorts, which were small. In contrast, the Vietnam War drew a small proportion of the baby boom cohorts.

Given a cohort, the proportion of veterans ordinarily should progress monotonically with age unless we accept the implausible hypothesis that veterans reenter military service at late ages.[3] For most of the cohorts under the present study, the proportion reaches a plateau around age 27 (Table 1). In some cases, however, the proportion unexpectedly declines after age 27. This is due to either the age-specific immigration or age-specific sampling error, or both. In any event, it can safely be concluded that after age 27 only a few veterans are added to a cohort.

My multivariate analysis is an application of the probit model to predict the probability that a person is a veteran (Hanushek and Jackson, 1977; Maddala, 1983). The probit models that I estimated are not structural (or causal) models, for I do not believe that some of the independent variables (e.g., education) are truly exogenous to the event of being a veteran. Rather, the probit models should be viewed as providing a descriptive picture. It is as if all civilian males 18–35 years old were in a black box, and I am attempting to maximize the accuracy of predicting who is a veteran and who is not a veteran from other characteristics.

Table 2 presents two models. The dependent variable is the probit of being a veteran. A probability interpretation of probit coefficients can be made through a nonlinear transformation of the cumulative normal distribution function (Hanushek and Jackson, 1977:189). Model 1 specifies a step function for the age variable, letting 17 age intervals (from 19 to 35) have their separate effects (age 18 is the reference category). Model 2 approximates the age effects by a quadratic function. By a formal statistical test, model 2 is not superior to model 1.[4] However, the quadratic function of age approxi-

[3]I ignore mortality and immigration because they are rare events for the population under investigation.

[4]Models 1 and 2 are nested. A chi-square test statistic can be obtained by taking the difference in the log-likelihood ratio statistic (L^2) between the two models. In the present case the chi-square statistic is 1,453 for 15 degrees of freedom, indicating that model 2 does not fit the data very well.

TABLE 2

Probit Models of Veteran Status

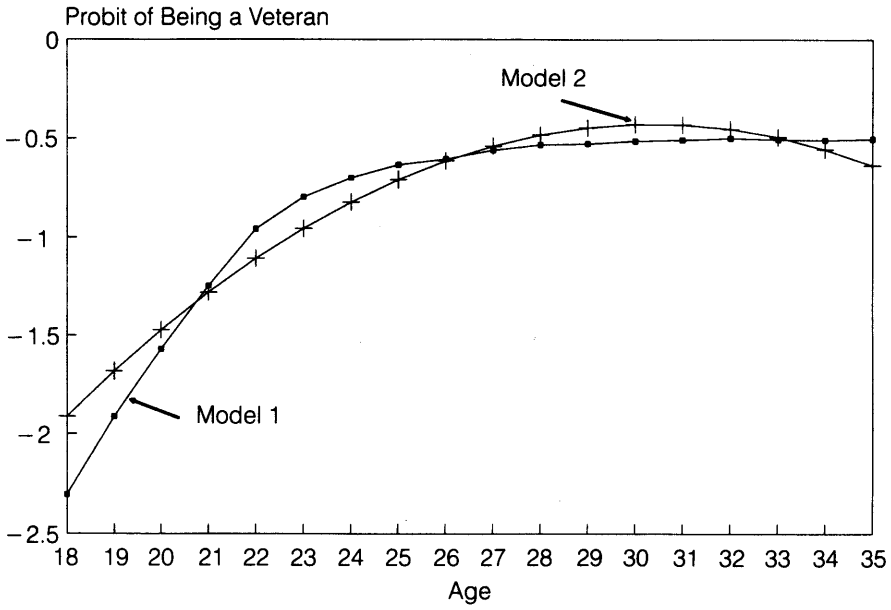
Independent Variables	Model 1 Coefficient (*SE*)	Model 2 Coefficient (*SE*)
Constant	−2.080 (0.047)	−9.051 (0.096)
Race (excluded: nonblack)		
Black	−0.154 (0.009)	−0.150 (0.009)
Cohort (excluded: 1928–29)		
1930–31	−0.067 (0.043)	−0.123 (0.043)
1932–33	0.023 (0.040)	−0.061 (0.040)
1934–35	−0.365 (0.039)	−0.473 (0.039)
1936–37	−0.511 (0.039)	−0.635 (0.038)
1938–39	−0.568 (0.038)	−0.686 (0.038)
1940–41	−0.735 (0.038)	−0.836 (0.038)
1942–43	−0.735 (0.038)	−0.826 (0.037)
1944–45	−0.676 (0.038)	−0.770 (0.037)
1946–47	−0.564 (0.037)	−0.665 (0.037)
1948–49	−0.787 (0.078)	−0.900 (0.037)
1950–51	−1.140 (0.038)	−1.261 (0.038)
1952–53	−1.389 (0.038)	−1.497 (0.038)
1954–55	−1.521 (0.039)	−1.601 (0.038)
1956–57	−1.548 (0.039)	−1.602 (0.039)
1958–59	−1.629 (0.041)	−1.674 (0.040)
1960–61	−1.646 (0.043)	−1.735 (0.043)
1962–63	−1.534 (0.050)	−1.770 (0.049)
1964–65	−1.378 (0.077)	−1.791 (0.075)
Years of schooling (excluded: 0–8)		
9–11	0.721 (0.013)	0.709 (0.013)
12	1.067 (0.012)	1.067 (0.012)
13–15	0.883 (0.013)	0.889 (0.013)
16+	0.444 (0.013)	0.441 (0.013)
AgeL		0.589 (0.007)
AgeL squared (× 100)		−0.970 (0.012)
Age (17 dummies)	(see Figure 1)	
L^2	334,064	335,517
Df	15,181	15,196

NOTE: Variable AgeL is a linear function of age, taking values from 18 to 35. L^2 is the likelihood ratio chi-square statistic. *Df* is the degrees of freedom associated with L^2.

mates the step function reasonably well (see Figure 1). In addition, the estimated coefficients of variables race and education are about the same across the two models. I draw a number of observations from the two models reported in Table 2. First, nonblacks are more likely to be veterans. The probability of being a veteran is 29.3 percent for nonblacks and 24.2 percent for blacks, while holding other variables at their sample means. The role of education is nonmonotonic; too much or too little education decreases one's likelihood of being a veteran. This can be explained by two factors operating in opposite directions: on the one hand entry into military service requires a minimum education, and on the other hand those with graduate education have pursued their education in a more or less continuous way and thus did not have opportunities for other competing activities such as enlistment (or,

FIGURE 1

Likelihood of Being a Veteran by Age (Probit Estimates)



alternatively, they remained in school or used other means in order to avoid being drafted).

The age profile of the likelihood of being a veteran is presented in Figure 1, where the probit of being a veteran is plotted against the age variable. The values shown in the figure are obtained from estimated coefficients for models 1 and 2, Table 2. Independent variables other than age in the models are fixed at their sample means. The shapes of the two lines in Figure 1 are similar. Both show that the probability of being a veteran increases monotonically with age. The increase stops around age 27, where the probability of being a veteran reaches a plateau.

Educational Attainment of Veterans

As mentioned earlier, veterans on average have more education than nonveterans, a phenomenon that has frequently been reported (e.g., Veterans Administration, 1978). However, veterans are concentrated in older age groups (Table 1), and thus the overall average can be misleading in that the crude difference might be due to the difference in age composition between veterans and nonveterans. Because physically it is not possible to stay in school and serve in the military at the same time, enlistment is a competing activity and should have some negative effect on educational attainment

(Mare and Winship, 1984). This negative effect of military experience on educational attainment should be particularly strong for young veterans because the time spent in the military is more valuable to the young than to the old for those intending to acquire further education.

Table 3 shows the difference in the average years of schooling between veterans and nonveterans for each of the cohort-age groups. The table is calculated from the individual (ungrouped) data files. An important finding of Table 3 is that the trend of the difference in educational attainment over

TABLE 3

Comparison of Years of Schooling between Veterans and Nonveterans by Cohort and Age

Birth Cohort	Age								
	18–19	20–21	22–23	24–25	26–27	28–29	30–31	32–33	34–35
1928–29									*11.9*
									10.4
1930–31								*12.4*	*12.5*
								10.8	*10.6*
1932–33							*12.7*	*12.6*	*12.5*
							11.0	*10.6*	*10.6*
1934–35						*12.6*	*12.5*	*12.6*	*12.7*
						11.2	*11.3*	*11.3*	*11.4*
1936–37					*12.3*	*12.5*	*12.5*	*12.5*	*12.7*
					11.6	*11.6*	*11.5*	*11.7*	*11.8*
1938–39				*12.1*	*12.3*	*12.5*	*12.6*	*12.8*	*12.8*
				11.5	*11.8*	*12.0*	*12.1*	*12.0*	*12.1*
1940–41			11.7	12.2	*12.4*	*12.7*	*13.0*	*13.0*	*13.2*
			12.3	12.3	*12.3*	*12.3*	*12.3*	*12.3*	*12.4*
1942–43		11.6	11.8	12.3	*12.6*	*12.8*	*13.1*	*13.3*	*13.4*
		12.1	12.1	12.4	*12.4*	*12.6*	*12.8*	*12.9*	*12.8*
1944–45	11.2	11.6	12.1	12.3	*12.8*	*13.1*	*13.3*	*13.6*	*13.6*
	11.2	12.0	12.5	12.6	*12.6*	*12.7*	*12.6*	*12.6*	*12.8*
1946–47	10.5	11.7	12.1	12.6	12.8	13.2	*13.4*	*13.5*	*13.4*
	11.3	12.4	12.8	12.9	13.0	13.3	*13.2*	*13.3*	*13.2*
1948–49	11.1	11.7	12.1	12.4	12.8	13.0	13.3	13.2	13.3
	11.2	12.4	12.9	13.2	13.3	13.4	13.5	13.3	13.5
1950–51	12.0	11.6	12.0	12.3	12.6	12.8	13.0	13.1	
	11.3	12.4	13.0	13.1	13.3	13.4	13.4	13.4	
1952–53	11.2	11.4	11.9	12.4	12.6	12.8	13.0		
	11.3	12.4	12.9	13.0	13.1	13.2	13.3		
1954–55	10.9	11.4	11.9	12.2	12.5	12.7			
	11.4	12.3	12.7	12.9	13.0	13.0			
1956–57	11.0	11.6	11.8	12.2	12.6				
	11.4	12.2	12.6	12.8	12.9				
1958–59	11.1	11.8	11.9	12.2					
	11.3	12.2	12.6	12.8					
1960–61	11.3	11.6	12.0						
	11.3	12.1	12.7						
1962–63	11.1	11.7							
	11.3	12.1							
1964–65	11.6								
	11.2								
Total	11.1	11.6	12.0	12.4	12.6	12.8	13.0	13.0	12.9
	11.3	12.2	12.7	12.8	12.9	12.9	12.8	12.6	12.4

NOTE: Years of schooling for veterans are in heavy type; years of schooling for nonveterans are in light type.

cohorts is unfavorable to veterans. In the upper right part of Table 3, as indicated with italicized entries, veterans have more education than nonveterans; in the lower left part, nonveterans have more education. For cohorts born in 1938–39, veterans had more education than did nonveterans at ages 24–25 and thereafter. However, the point of demarcation indicating the crossover for veterans to have more education has markedly moved to later ages for more recent cohorts. I offer three explanations. First, as the average level of educational attainment rose over cohorts, fewer and fewer people had difficulty qualifying for military service due to the lack of a minimum education; therefore the difference between new entrants and their civilian counterparts has diminished. Second, as overall educational attainment increases, the time constraint for schooling is increasingly more stringent. This means that there is a demand for investing more time in education early in one's fixed span of life. Veterans now lose more potential education by having entered the military than previously. Finally, as other financial resources for higher education in the civilian sector became available after the Korean War, the G.I. Bill became an ineffective channel to higher education (Cohen, Segal, and Temme, 1986).

Veterans of a given cohort surpass nonveterans in educational attainment sometime in their late twenties and early thirties. This result supports my contention that the adverse effect of enlistment on education is more serious for the young than for the old. At later ages, the educational attainment of veterans exceeds that of nonveterans. Not only could military life inspire veterans' educational aspiration (Mason, 1970), veterans could also directly benefit from the G.I. Bill (Fligstein, 1976). Another possibility is that veterans are selectively more ambitious. Once having left the military, they continue their education. Clearly, there is a catch-up pattern for veterans to have education equivalent to or more than that of nonveterans. This is true either because veterans were selectively more motivated before having entered military service or because they benefit from having served in the military.

For a quantitative assessment of the effect of veteran status on educational attainment, I conducted a weighted least squares (WLS) regression analysis with the mean years of schooling (GRADE) as the dependent variable. I used WLS instead of ordinary least squares (OLS) because the number of cases in each cell of the grouping scheme varies and the assumption of homoscedasticity for OLS is violated. Since the variance of a mean is inversely proportional to cell size, I used cell size ($n_1 + n_2$) as weights in order to preserve efficiency and obtain correct standard errors of estimates.

Two models are presented in Table 4. Model 1 is an additive model with race, cohort, age, veteran status, and enrollment as independent variables. Model 2 includes the interactions between veteran status and age. In both models the effects of race and enrollment are estimated to be statistically significant from zero. Controlling for other things, the penalty for being a black is almost one year of education. Respondents who were enrolled in school at the time of survey had 1.5 more years of education.

TABLE 4

WLS Regressions of Years of Schooling (GRADE)

Independent Variables	Model 1 Coefficient (*SE*)	Model 2 Coefficient (*SE*)
Constant	8.299 (0.353)	8.195 (0.353)
Race (excluded: nonblack)		
Black	−0.981 (0.070)	−0.971 (0.070)
Cohort	(18 dummies)	(18 dummies)
Veteran status (excluded: nonveteran)		
Veteran	0.097 (0.050)	0.583 (0.900)
Enrollment (excluded: not enrolled)		
Enrolled	1.506 (0.065)	1.489 (0.065)
Age	(17 dummies)	(see Figure 2)
Veteran status × age		(see Figure 2)
R^2	10.56%	11.08%

NOTE: The number of cells used in regression analysis was 15,222. See text for details.

The estimated coefficient of veteran status in model 1 is a small positive number (0.097) and almost statistically significant from zero at the conventional 5 percent α level (t ratio is 1.94). This means that on average veterans obtain slightly more education than nonveterans. However, this overall comparison obscures the age pattern in the veteran-nonveteran differential. Model 2 allows the effect of veteran status to change with age. The interactions between veteran status and age are statistically significant.[5] Figure 2, based on the estimated coefficients of model 2, shows that the educational attainment of veterans surpasses that of nonveterans only after age 28. Before that, veterans have less education than do nonveterans.[6] Considering the fact that few veterans are added to a given cohort after age 27, we can infer that the higher educational attainment of veterans is obtained after their exit from the military.

Earnings of Veterans

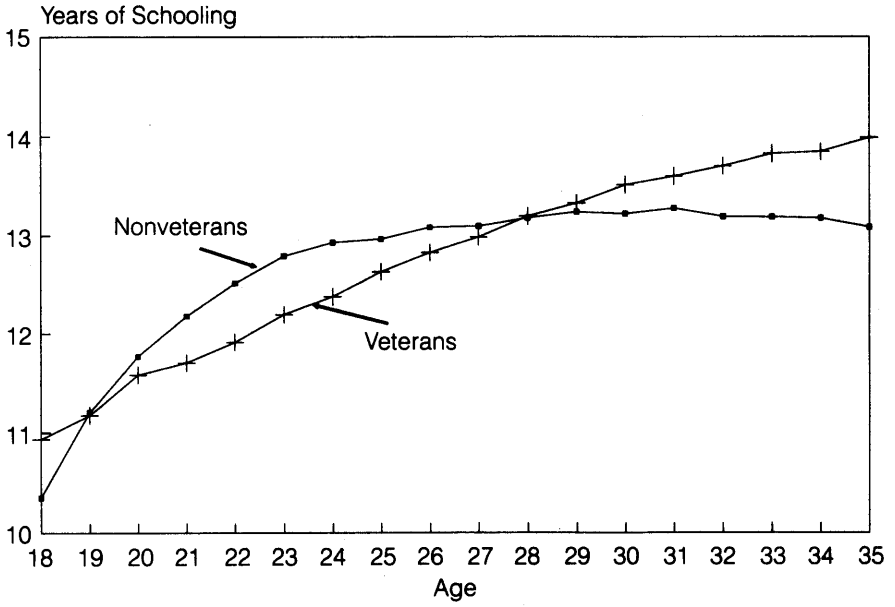
Several explanations have been offered to account for the empirical evidence that veterans earn more than nonveterans: (1) military service adds additional human capital to veterans (Little and Fredland, 1979; Goldberg and Warner, 1987); (2) military service provides a "bridging" environment that enhances the earnings capacities of those in socially disadvantaged groups (Browning, Lopreato, and Poston, 1973; Lopreato and Poston,

[5]The F-test statistic is 5.22 for 17 and 15,166 degrees of freedom.

[6]The only exception to this is for age 18, where veterans seem to have more education than nonveterans. The estimated difference is 0.584 with a standard deviation of 0.900. It is not statistically significant from zero and could be attributed to sampling error.

FIGURE 2

Educational Attainment by Age and Veteran Status
(Weighted Least Squares Estimates)



1979); and (3) in the labor market employers use veteran status as a screening device in job hiring and wage setting for those lacking other credentials (De Tray, 1982). The adverse effects of military service in one's earnings capacity are self-evident and widely accepted, even by those who find positive effects of veteran status. The question is whether there is enough benefit in entering the military to sufficiently compensate or even overcompensate for the loss.

A correct specification of the earnings function needs to include, among other things, the effects of schooling and work experience (Mincer, 1974; Hauser, 1979). In the CPS data file used here, however, a direct measurement of work experience is not available. What makes things more difficult is the lack of information on the timing of the veteran's exit from military service. Thus we do not know for how long a veteran respondent has been in the civilian labor force. A veteran who has been out of the military for many years is very much like a nonveteran and hence should be different from a veteran who has just been discharged.

Nevertheless, an analysis of earnings is still possible. When we lack information at the individual level, we can make certain inferences from aggregate data. Although we do not know for how long a veteran respondent has been in the labor force, we know many other things about him such as birth

cohort and age, which can help us predict, or approximate, the amount of work experience. Moreover, it has convincingly been argued that age, like experience, is also a very important determinant of one's human capital profile (Klevmarken and Quigley, 1976).

The analysis described in this section excluded respondents (9.4 percent of the sample) with either zero earnings or zero weeks of work in the last year. The dependent variable for the regression analysis was LOGWAGE, the average natural logarithm of weekly wages. The sample mean of LOGWAGE was 6.185 for nonveterans and 6.744 for veterans. As in the previous section, WLS was used for estimation. However, the weight for this section was the number of people with definable weekly wages in the cell, i.e., n_1. I was also interested in differences in the age pattern between veterans and nonveterans. Table 5 presents three models.

Model 1 is an additive model; model 2 includes the interactions between veteran status and age. In both models the variables race, education, enrollment, and hours have their expected effects. Blacks make less than nonblacks. The estimated effect for being a black is -0.284; expressed another way, the weekly wage of a black person is 75.3 percent that of a nonblack person.[7] Education has for the most part a monotonic effect.[8] The number of working hours of the respondent is included in the models as a control variable. Measuring the number of hours worked in the week prior to the time of survey, the hour variable is a crude measurement of the varying degree of labor force participation. The excluded category for the hour variable is zero hours. Respondents who reported zero hours did not work during the week prior to the time of survey; they may have worked during other weeks. As expected, the estimated effects of the hour variable are monotonically increasing. Enrollment expectedly has a negative effect because schooling necessarily takes time from work. Students who are enrolled in school do not fully participate in the labor force and their part-time jobs are often temporary and thus low-paid.

A small but significant positive effect of veteran status on earnings is detected in model 1. In the original scale, the effect is 0.013; alternatively, veterans on average make 1.3 percent more than nonveterans. To determine the source of this difference, model 2 estimates age functions separately for veterans and nonveterans. The results are displayed in Figure 3. Surprisingly,

[7]The scale of the dependent variable is in the natural logarithm of weekly wage. Taking the natural exponential function of the coefficient for race converts the estimated effect into the ratio of wages between races. That is, exp $(-0.284) = 0.753$, which means that, everything else being equal, a black's wage is 75.3 percent of a white's wage. The same interpretation applies to other coefficients reported in Table 5.

[8]The only exception is for respondents with 13 to 15 years of schooling. They earn less than respondents with 12 years of schooling. This anomaly could be attributed to the lack of control for experience in the models. Respondents with 13 to 15 years of schooling have less experience than those with only 12 years of schooling. Yet the former have not completed college education and thus do not possess certified credentials (as in the case of those with 16 years of schooling) that would increase their earnings capacity.

TABLE 5

WLS Regressions of the Average Logarithm of Weekly Wage (LOGWAGE)

Variables	Model 1 Coefficient (*SE*)	Model 2 Coefficient (*SE*)	Model 3 Coefficient (*SE*)
Constant	4.522 (0.039)	4.515 (0.039)	4.493 (0.039)
Race (excluded: nonblack)			
Black	−0.284 (0.008)	−0.284 (0.008)	−0.298 (0.009)
Cohort	(18 dummies)	(18 dummies)	(18 dummies)
Years of schooling (excluded: 0–8)			
9–11	0.237 (0.010)	0.236 (0.010)	0.248 (0.011)
12	0.455 (0.009)	0.453 (0.009)	0.489 (0.010)
13–15	0.410 (0.010)	0.407 (0.010)	0.414 (0.011)
16+	0.547 (0.010)	0.544 (0.010)	0.555 (0.011)
Veteran status (excluded: nonveteran)			
Veteran	0.013 (0.005)	0.141 (0.106)	0.143 (0.025)
Enrollment (excluded: not enrolled)			
Enrolled	−0.535 (0.009)	−0.535 (0.009)	−0.530 (0.009)
Hours (excluded: 0)			
1–19	0.146 (0.011)	0.146 (0.011)	0.147 (0.011)
20–34	0.474 (0.009)	0.474 (0.009)	0.474 (0.009)
35+	0.686 (0.007)	0.685 (0.007)	0.685 (0.007)
Age	(17 dummies)	(see Figure 3)	(17 dummies)
Veteran status × age		(see Figure 3)	
Veteran status × race			
Black, veteran			0.064 (0.019)
Veteran status × education			
Veteran, edu. = 9–11			−0.099 (0.029)
Veteran, edu. = 12			−0.188 (0.026)
Veteran, edu. = 13–15			−0.089 (0.027)
Veteran, edu. = 16+			−0.103 (0.028)
R^2	89.72%	89.75%	89.81%

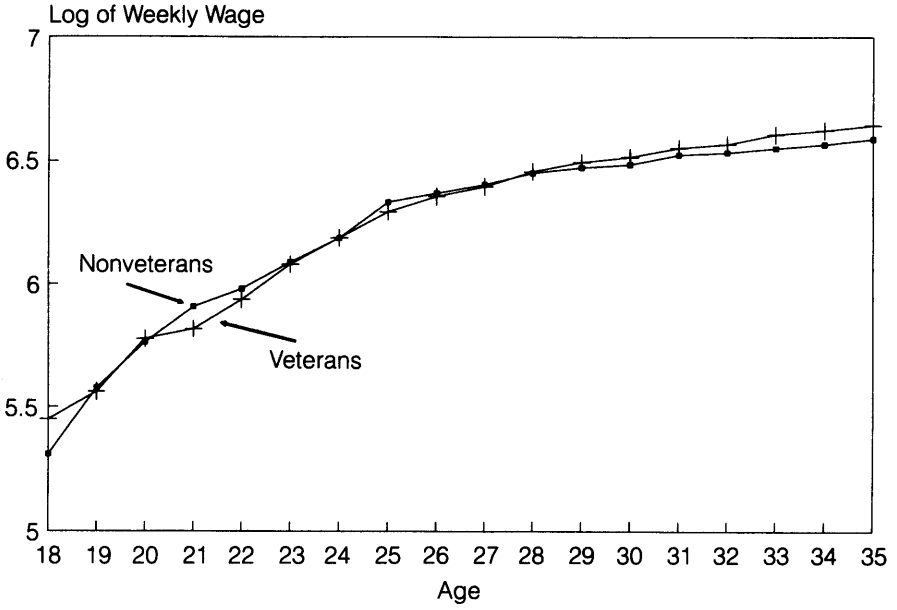
NOTE: The number of cells used in regression analysis was 15,222. See text for details.

the difference between veterans and nonveterans is very small across the whole distribution of age. It is nevertheless true that the average wage of veterans is consistently higher than that of nonveterans after age 29.

Model 3 tests for the interactions between veteran status and race and between veteran status and educational attainment. From model 3 it is observed that earnings differentials between veterans and nonveterans depend on race and educational attainment. There is an additional premium for black veterans, a finding consistent with other research (Browning, Lopreato, and Poston, 1973; Villemez and Kasarda, 1976; Little and Fredland, 1979; De Tray, 1982). The earnings ratio between blacks and whites is 74.2 percent among nonveterans and 79.1 percent among vete-

FIGURE 3

Average Logarithm of Weekly Wage by Age and Veteran Status (Weighted Least Squares Estimates)



rans, respectively. Model 3 also reveals that the veteran premium is the highest among people with less than 8 years of schooling. For them, being a veteran increases one's wage by 15.4 percent. However, the effect of veteran status is slightly negative for those with 12 years of schooling. For others, the effect of veteran status is small (between 4.1 and 5.5 percent). Therefore, the interaction terms between veteran status on the one hand and race and education on the other support the notion that veteran status helps those in low social strata, i.e., blacks and the less educated. This is so either because military experience provides a "bridging" environment (Browning, Lopreato, and Poston, 1973) or because veteran status is used as a screening device by employers (De Tray, 1982).

Conclusion

Based on pooled 1964–84 March CPS data, this study has examined the socioeconomic status of young male veterans from the cohort-aging perspective. The richness of the data has permitted the age patterns for veterans and nonveterans to be displayed both in descriptive statistics and in regression analysis. Before I summarize the findings, let me first note some limitations of the study.

The first limitation is that I did not observe the dynamic process of enlistment into and discharge from military service. Because military service can affect a person's civilian life only after the person leaves the military, an ideal study should follow the person's entire history. To make things worse, the data employed do not cover draftees currently in the military. A nonveteran in one year could well disappear into the military the next year and become a veteran a couple of years later. The data did not indicate the time of a veteran's entry into the civilian population. To remedy the problem, I made inferences from aggregate statistics in Table 1. This limitation restricts the study to describing the socioeconomic status of veterans in the civilian population rather than analyzing the causes and effects of military service.

The second limitation is that the results are subject to potential biases due to omission of relevant information. For example, the data do not contain any information about ability and health. It is well known that ability and health are related to veteran status through drafting practices because those of low ability and poor health are screened out as ineligible (Cutright, 1974). Ability and health, in turn, affect one's earnings. Thus the effect of veteran status could be partially explained by this selectivity. The inclusion of education in the earnings equations (Table 5) improves the situation, but the problem persists. Due to this limitation, it might be safer to interpret the results of this study as "descriptive" than as "causal."

With the preceding caveats, let me draw some conclusions from this study. From aggregate data, I find that the proportion of veterans at a specific age declines over cohort. Someone born into an earlier cohort is more likely to be a veteran than someone at the same age but born into a later cohort. I view this as resulting from a variety of factors, including cohort size and war era. Most young veterans leave the military and enter the civilian population early in their lives, say before age 27. The rate of veterans' entering the civilian population decreases with age within a given cohort.

Veterans lose valuable time for continuing education. It takes years for veterans to show their advantage and to catch up with nonveterans. In the aggregate, veterans eventually obtain more education than nonveterans. Yet this occurs late, somewhere around age 28. Therefore, veterans' loss of potential education during military service is compensated, either because government policies encourage them to continue education or because veterans are more motivated. The trend over birth cohorts is a decline in educational advantage accruing to veterans.

I also find evidence that veterans earn slightly more than nonveterans after controlling for other variables such as education and age. As in educational attainment, the veteran premium in earnings comes late in life. It is more likely to be a result of postmilitary civilian experience than a result of skill-related training in the military. For socially disadvantaged groups, veteran status has an additional premium either because military experience pro-

vides a "bridging environment" or because employers use veteran status as a "screening" device. SSQ

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