# CENTER FOR LABOR ECONOMICS 

UNIVERSITY OF CALIFORNIA, BERKELEY
WORKING PAPER NO. 46

# Did Draft Avoidance Raise College Attendance During the Vietnam War? 

David Card
University of California Berkeley
Thomas Lemieux
University of British Columbia
February 2002


#### Abstract

The rise in college attendance rates in the mid-1960s is often attributed to draft avoidance behavior. Throughout most of the Vietnam war men who were enrolled in college could obtain deferments that delayed their eligibility for conscription. Anecdotal and quantitative evidence suggests that these deferments were an effective though imperfect way to avoid military service. We use data on enrollment and completed education of cohorts of men and women born between 1935 and 1959 to estimate the effect of draft avoidance behavior on the schooling choices of men who faced the highest risk of service during the Vietnam-era draft. We assume that in the absence of the draft the relative schooling outcomes of men and women would have followed a smooth inter-cohort trend. We find a strong link between the risk of induction faced by a cohort of men and their enrollment and completed education relative to women. We estimate that draft avoidance raised college attendance rates by 4-6 percentage points in the late 1960s, and raised the fraction of men born in the late 1940s with a college degree by up to 2 percentage points.


[^0]Between 1965 and 1975 the enrollment rate of college-age men in the United States rose and then fell abruptly. Many contemporary observers (e.g., Davis and Dolbeare, 1968) attributed the surge in college attendance to draft avoidance behavior. Under a policy first introduced in the Korean War, the Selective Service issued college deferments to enrolled men that delayed their eligibility for conscription. ${ }^{1}$ These deferments provided a strong incentive to remain in school for men who wanted to avoid the draft. As illustrated in Figure 1, the rise in college entry rates of young men between 1964 and 1968 coincided with the rise in the number of men drafted into military service. ${ }^{2}$ Moreover, the drop in the number of inductions between 1968 and 1973 was followed by a decline in college entry rates. Although the parallel trends in Figure 1 are suggestive, they do not necessarily prove that draft avoidance raised the education of men who were at risk of service during the Vietnam war. Such an inference requires an explicit specification of the "counterfactual" - what would have happened to schooling outcomes in the absence of the draft.

In this paper we use trends in enrollment and completed schooling of men relative to those of women to measure the effects of draft avoidance behavior during the Vietnam war. Our maintained hypothesis is that in the absence of gender-specific factors such as the draft, the relative schooling outcomes of men and women from the same cohort would follow a smooth trend. In light of the sharp discontinuity in military induction rates between 1965 and 1970, we look for similar patterns in the relative enrollment rate of men, and in the relative college graduation rate of men from cohorts that were at risk of induction during this period. Our key finding is that the Vietnam-era draft led to a rise in male college attendance rates between 1965 and 1970, and a corresponding rise in college completion rates for men born between 1945 and 1950, with a peak impact of about 2 percentage points for men born in 1947 .

[^1]The timing of the rise in college attendance rates suggests that the effect of the Vietnam war arose through draft avoidance behavior, rather than through an effect of GI-Bill benefits on post service college attendance. Moreover, unlike cohorts who were at risk of service in World War II, only a small fraction of Vietnam-era veterans returned to complete a college degree after their military service. Thus, we believe that draft avoidance was the main causal mechanism at work during the Vietnam era.

## I. The Draft and College Deferments

Table 1 presents a brief summary of key events in the Vietnam-era draft. ${ }^{3}$ During most of the war the draft operated under procedures similar to those used in World War II and the Korean war (National Advisory Commission on Selective Service, 1967, pp. 17-29). Men who reached the age of 18 were required to report to their local draft board for classification. The board could issue deferments for a variety of reasons, including school attendance or the presence of dependent children, or it could classify a registrant as 'available for service' and require that he undergo pre-induction tests of physical and mental abilities. ${ }^{4}$ Those who passed the tests were liable for induction, and could be ordered to report for duty depending on the needs of the military and the allocation of national manpower requirements to the local draft boards. Men who were drafted were nearly all assigned to the Army, and served for up to 3 years. Registrants who were liable for induction could volunteer for service and thereby obtain a potential choice of which service to enter, and also qualify for a shorter period of

[^2]service. ${ }^{5}$
The process of deciding which men were actually drafted was controversial from the earliest days of the Vietnam war. Until the institution of the draft lottery, the sequence of induction from among those available for service was set by order of the President, with the highest priority for 'delinquents', second priority for volunteers, and third priority for non-volunteers between the ages of 19 and 25 , in order of their dates of birth (i.e., from oldest to youngest). ${ }^{6}$ Although other groups could be called, most draft boards were able to fill their quotas from the these three categories, even at the peak of the draft (see Semiannual Report of the Director of the Selective Service, 1969, p. 8). Technically, men who had held college or other deferments were eligible for induction until age 35 . Since few men between the ages of 26 and 35 were ever drafted, however, men who were able to maintain a college deferment until their $26^{\text {th }}$ birthday could avoid service. Those who finished a bachelors degree before reaching age 25 could apply for a graduate deferment in the early and middle years of the war (up to 1968) and could apply for occupational or dependent deferments throughout the period from 1965 to 1970.

Although contemporary observers agreed that college attendance was an effective draftavoidance technique during the early and middle years of the Vietnam war ${ }^{7}$, it is surprisingly difficult to find evidence on the relative probability of induction faced by men with different levels of education. We used data from the 1973 Occupational Change in a Generation (OCG) Survey to construct a rough

[^3]estimate of the risk of military service for men who had obtained a college degree prior to service relative to those who had not. Among men born between 1945 and 1947 ( 50 percent of whom served in the military), we estimate that men with a college degree were only one-third as likely to serve as those without a degree. ${ }^{8}$ Considering that a high fraction of men with low levels of education were found unfit for service, this ratio confirms that college attendance was a powerful, albeit imperfect, way to avoid the draft.

The draft process was substantially changed by the introduction of the draft lottery in late 1969. The first lottery, held December 1, 1969, assigned numbers by month and day of birth to men born between 1944 and 1950. Priority for induction in 1970 was based on these random sequence numbers, and was in principle independent of age. Importantly, however, educational deferments continued to be issued until September 1971, and men who were in college at that time were allowed to maintain their deferment for duration of the school year. Thus, individuals enrolled in college could delay their risk of induction through most of the years of the draft lottery. Since the rate of inductions slowed to a trickle after June 1971 (see Appendix Table 1), most individuals who obtained deferments in 1970 or 1971 permanently avoided military service.

Another key feature of the lottery was that each cohort was at risk of induction for only a single year, rather than for the entire period between the ages of 19 and 25. Individuals born between 1944 and 1950 who had not already served in the military were at risk in 1970, and thereafter each successive birth cohort was only at risk during the year of its twentieth birthday. In fact, the period of exposure was even shorter, since the Selective Service announced a ceiling (a maximum lottery number that would be called) at some point during the year. The limited period of exposure, coupled with the relatively low

[^4]rate of inductions after 1969, substantially reduced the incentives for enrolling or staying in college to avoid the draft. In contrast to the pre-lottery draft, only men with low random sequence numbers were at any risk of induction: the majority of men had no need to pursue draft avoidance strategies. Moreover, after age 20, men who had not been called had no need to prolong their stay in college. Evidence presented below suggests that draft avoidance behavior had little or no effect on the average schooling outcomes of men born after 1950. Even among men who were assigned low lottery numbers and faced the highest risk of conscription, Angrist and Krueger (1992) found no indication of elevated schooling levels relative to those who were assigned higher numbers and faced negligible risk of being drafted.

## II. Educational Outcomes of Men and Women

The universal character of the pre-lottery draft constrains the feasible set of evaluation strategies that can be used to measure its effect on educational outcomes. Since draft avoidance was an essentially a cohort-wide phenomenon, any evaluation has to rely on differences in education outcomes for cohorts that were more or less likely to pursue draft avoidance strategies relative to some baseline specification for these outcomes in the absence of the draft. ${ }^{9}$ In this paper we make the counterfactual assumption that the relative schooling choices of men and women would follow a smooth inter-cohort trend in the absence of gender-specific factors such as the draft. We also assume that draft avoidance was proportional to the risk of induction faced by a cohort. Under these assumptions, draft avoidance effects can be measured by regressing the relative education outcomes of men and women in the same cohort on
${ }^{9}$ In reality, of course, there were substantial differences within and across states in the application of deferment policies, and in rates of disqualification for service based on mental or physical fitness (see National Advisory Commission on Selective Service, 1967, Section II) . It is an open question whether young men were aware of these differences and responded differently to the threat of induction in places with more or less lenient deferment policies.
a measure of the risk of induction faced by men in the cohort and an inter cohort trend function. ${ }^{10}$
As an illustration of the potential insights that can be gleaned from a comparison of male and female relative education outcomes across cohorts, Figure 2 plots the relative graduation rate of white men versus white women for cohorts born between 1914 and 1960, along with the fraction of men in each cohort who served in the military. ${ }^{11}$ The relative graduation rates show an interesting pattern of deviations between men and women, with 'spikes' in the relative graduation rates of men born in the early 1920s and early 1930s, and a smaller but noticeable upward deflection in the relative graduation rate of men born in the late 1940s. All three of these departures were associated with a rise in male veteran rates. The 1920-25 cohort includes men who likely to serve in World War II and were young enough to easily return to school under the GI Bill program (Bound and Turner, 1999). The 1930-35 cohort includes men who were likely to be drafted during the Korean war and were eligible for GI Bill benefits (Stanley, 1999). Finally, the 1944-50 cohort includes men who were at high risk of service in the Vietnam war, and were potentially affected by draft avoidance behavior (as well as the availability of GI Bill benefits after service). Apart from these three groups, the male-female relative college graduation rate follows a smooth (hump-shaped) inter-cohort trend. ${ }^{12}$

Further evidence of the potential value of comparing male and female schooling outcomes is

[^5]presented in Figure 3, which plots enrollment rates of 20-21 year old men and women over the period from 1960 to $1980 .{ }^{13}$ These data show that enrollment rates of college-age men and women gradually converged over the 1960-1980 period, with a deviation in the 1965-71 period coinciding with the Vietnam-era draft. The peak in the male-female enrollment gap in 1968 represents behavior by individuals born in 1947-1948 - the same group whose relative college graduation rate is noticeably above the inter-cohort trend in Figure 2.

To estimate the effect of draft avoidance behavior we have to quantify the extent of this behavior across different cohorts. In the absence of any direct measures we assume that draft avoidance activities were proportional to the risk of induction perceived by men in a cohort. Given our focus on the incentive to stay in college, we use the average number of inductions over the years each cohort was 19 to 22 years of age divided by an estimate of the size of the cohort as our measure of induction risk. ${ }^{14}$ Figure 4 plots this risk measure for cohorts born from 1935 to 1959 along with the fraction of men in the cohort who actually served in the military. The two series are very highly correlated and show a pattern of declining risk for cohorts born from 1935 to 1941, followed by a sharp rise and rapid decline associated with the beginning and end of the Vietnam war. Both the estimated induction risk measure and the rate of military service peak with the 1946 cohort. Cohorts born after 1953 faced no risk of induction and had relatively stable military service rates.

Table 2 presents a series of estimated regression models which relate the log of the ratio of male to female education outcomes for a cohort to a linear inter-cohort trend and our index of induction risk. We consider three outcomes: the enrollment rate at ages 20-21 (estimated using the Current Population enrollment rates in Figure 4; the fraction who completed a college degree (estimated from 1990 Census

[^6]microdata) and the fraction with at least some college education (also estimated from 1990 Census data).
The three dependent variables are graphed in Figure 5. All three series show steady downward trends, interrupted by a rise in male schooling for cohorts born in the 1942-50 period. Apart from this feature the trends are approximately linear: hence, the models in Table 2 include only a linear inter-cohort trend.

As a starting point for our analysis, the models in columns 1,4 and 7 of Table 2 include a linear trend and a simple dummy for cohorts born between 1942 and 50, but exclude any measure of induction risk. Consistent with the data in Figure 5 the estimated coefficients of the 1942-50 cohort dummy are positive and significant. The models in columns 2, 5 and 8 drop the 1942-50 cohort dummy and add our induction risk measure. In all three cases the estimated coefficient of the risk variable is positive and significant, confirming the high degree of correlation between the relative education outcomes of men and the relative risk of induction. The lower three rows of the table illustrate the implications of the estimated induction risk effect. The entries are estimates of the percent of men in three cohorts (1941, 1947, and 1951) who were enrolled in school or who completed some college or a college degree as a result of draft avoidance behavior. ${ }^{15}$ These estimates suggest that draft avoidance raised enrollment at ages 20-21 by about 6.5 percentage points for men in the 1947 cohort, raised the fraction with some college by about 4 percentage points, and raised the fraction with a college degree by just over 2 percentage points.

Finally, the models in columns 3,6 , and 9 of Table 2 include both the induction risk measure and the dummy for cohorts born between 1942 and 1950. In these models the coefficient of the 1942-50 cohort dummy provides a simple specification check: if the excess relative education of men in these cohorts is entirely attributable to draft avoidance, and our induction risk measure is valid, then the

[^7]coefficient should be small and statistically insignificant. This is true for the enrollment and college graduation models. However, the model for the completion of some college (column 9) yields a marginally significant coefficient, suggesting that the induction risk measure is not fully capturing all of the rise in the relative education of men. Nevertheless, the coefficient of the induction risk measure is still highly significant, and its magnitude is only 30 percent smaller than in the specification that excludes the 1942-50 cohort dummy. Overall, we conclude that the inter-cohort patterns of the relative education outcomes are well-explained by the induction risk variable, consistent with the attribution of the excess education gained by men in the 1942-50 cohorts to draft avoidance behavior.

We fit a variety of alternative specifications to probe the robustness of the estimates in Table 2. For example, the addition of a quadratic inter-cohort trend has virtually no effect. Similarly, switching the dependent variable to the male-female college ratio (rather than the log of the ratio) leads to very similar inferences about the magnitude of draft avoidance behavior. More substantively, we fit a set of models using an adjusted induction risk measure based on the assumption that draft avoidance was negligible before July 1965, when the pace of military activities in Vietnam escalated and it became clear that some draftees would be sent to a 'shooting war'. ${ }^{16}$ This adjusted risk measure is zero for cohorts born before 1942 and equals the unadjusted risk measure for cohorts born after 1946. The estimated coefficients of the adjusted risk measure are 10-20 percent smaller in magnitude than those in Table 2, but are more precisely estimated: the R-squared measures are virtually identical. The implied estimates of the percent of college enrollment and college attainment attributable to draft avoidance are 10-20 percent smaller than the estimates in Table 2 for the 1947 and 1951 cohorts, but are zero (by assumption) for the 1941 cohort. Based on these findings we believe that the main results in Table 2 are robust to changes in assumptions about the extent of draft avoidance in the pre-1965 period.

One potentially puzzling aspect of the estimates in Table 2 is the larger estimated effect of draft

[^8]avoidance on enrollment at ages 20 and 21 than on the likelihood of obtaining some college. We suspect that this is due to the fact that active military servicemen are excluded from the Current Population Survey (the source of the enrollment data). At the peak of the Vietnam war, a relatively high fraction of young men who were not in school were in the military, leading to an upward bias in the CPS enrollment rate. For example, if an extra 400,000 20-21 year olds were in the military in 1968 (relative to the trend from 1965 to 1975), the CPS enrollment rate would be upward biased by 11 percent. As a check on the implication of such a bias, we constructed an adjusted enrollment rate for men which assumes a peak upward bias of 11 percent in 1968, with no bias before 1965 and none after 1972. We then re-estimated the models in columns 1-3 of Table 2, and found that the coefficients on the induction risk variable were reduced in magnitude by about one-half, with the implication that the estimated draft avoidance effects were about one-half as large as those reported in the table. With this admitted crude adjustment, the estimated draft avoidance effects on enrollment of 20-21 year olds are comparable to the effects on the probability of completing some college.

## Draft Avoidance or The GI Bill?

As noted in the discussion of Figure 2, men who were at risk of service in World War II and the Korean war also had elevated relative schooling levels. The effects of these earlier conflicts are generally attributed to post-service schooling incentives provided by the GI Bill, rather than to draft avoidance. ${ }^{17}$ Veterans of the Vietnam era were also eligible for GI Bill benefits. In particular, veterans who enrolled in college or training programs could receive a monthly stipend for up to three years, depending on their length of service. The monthly stipend in the early 1970s was $\$ 220$ for a single veteran - about $\$ 1000$ per month in current dollars - with higher amounts for men with dependent families (see Bound and

[^9]Turner, 1999, Appendix Table I). Administrative data suggest that a relatively large number of Vietnam veterans received at least some benefits, raising the possibility that some of the higher relative education of men who were at high risk of service in the Vietnam war is attributable to post-service GI Bill benefits, rather than to draft avoidance.

Nevertheless, two key pieces of evidence lead us to conclude that draft avoidance is the main explanation for the patterns in Figure 5 and the results in Table 2. First, the estimates in Table 2 point to a significant effect of the risk of induction on enrollment at ages 20 and 21. Although some of the enrollment of 20-21 year olds is attributable to men who had already completed their military service, in 1968-70 less than 10 percent of this group (and only 5 percent of enrollees) were veterans. ${ }^{18}$ Thus, most of the excess enrollment of a 20-21 year old man was attributable to men who had not yet served in the military. Even after adjusting for the undercount of men in active service, the estimated draft avoidance effect on enrollment at ages 20 and 21 is about equal to the estimated effect on obtaining some college, suggesting that most of the extra education gained by men at high risk of induction during the Vietnam war was gained prior to their military service.

Second, although many Vietnam veterans attended school after their military service, this was also true of veterans who served before the Vietnam war. Tabulations from the OCG show that about 5.5 percent of veterans born between 1936 and 1938 entered the military without a college degree and obtained one after. A similar calculation for men in the peak Vietnam cohort (born 1944-47) shows only about 4 percent completed college after their service. If anything, the rate of post-service degree attainment was lower for Vietnam-era veterans than for those who served 10 years earlier. Even assuming a constant rate of post-service degree attainment among veterans, however, the rise and fall in the fraction of veterans can only explain a tiny fraction of the observed rise and fall in the fraction of men with a college degree from the late 1930s cohort to the early 1950s cohort.

[^10]
## III. Summary

Throughout most of the Vietnam war men who were in college could obtain deferments that delayed their eligibility for conscription. It was widely believed by contemporaneous observers that college deferment was an effective means of draft avoidance, and that draft avoidance led to a rise in the college enrollment rates of young men. We use data on the enrollment and completed education of men relative to women to estimate the effect of draft avoidance behavior on the education choice of men who were at high risk of being drafted during the Vietnam war. We find a strong correlation between the risk of induction faced by a cohort and the relative enrollment and completed education of men. Our estimates suggest that draft avoidance raised college attendance rates by 4-6 percentage points in the late 1960s, and raised the fraction of men born in the mid-1940s with a college degree by up to 2 percentage points. While significant, these effects are modest relative to the overall slowdown in the rate of growth of educational attainment that occurred between cohorts born in the 1940s and those born in the 1950s (see Card and Lemieux, 2000). The end of conscription is therefore only part of the explanation for the slowdown in educational trends that affected the baby boom generation. In fact, similar showdowns in college attendance and completion rates occurred in the United Kingdom and in Canada (Card and Lemieux, 2001). Other factors such as cohort size effects and changes in the perceived economic returns to education presumably played a role in depressing college enrollment rates in the late 1960s and throughout the 1970s.

## References

Angrist, Joshua D. and Alan B. Krueger. "Estimating the Payoff to Schooling Using the Vietnam-Era Draft Lottery." National Bureau of Economic Research Working Paper No. 4067. Cambridge, MA: NBER, May 1992.

Bound, John and Sarah Turner. "Going to War and Going to College: Did World War II and the G.I. Bill Increase Educational Attainment for Returning Veterans?" National Bureau of Economic Research Working Paper No. 7452. Cambridge, MA: NBER, December 1999.

Bruno, Rosalind R. and Andrea Curry. School Enrollment - Social and Economic Characteristics of Students" October 1994." U.S. Department of Commerce Bureau of the Census Current Population Reports P20-487. Washington D.C.: USGPO, September 1996.

Card, David and Thomas Lemieux. "Dropout and Enrollment Trends in the Post-war Period: What Went Wrong in the 1970s?" In Jonathan Gruber, editor, An Economic Analysis of Risky Behavior Among Youth. Chicago: University of Chicago Press, 2000.

Card, David and Thomas Lemieux. "Can Falling Supply Explain the Rising Return to College for Younger Men? A Cohort-Based Analysis." Quarterly Journal of Economics, (August 2001).

Carland, John M. Combat Operations: Stemming the Tide May 1965 to October 1966. United States Army Center of Miliary History. Washington, D.C.: USGPO, 2000.

Davis, James W. Jr. and Kenneth M. Dolbeare. Little Groups of Neighbors: The Selective Service System. Chicago: Markham Publishing, 1968.

National Advisory Commission on Selective Service. In Pursuit of Equity: Who Serves When Not All Serve? Washington D.C.: USGPO, 1967.

Stanley, Marcus. "College Education and the Mid-Century G.I. Bills: Effects on Access and Educational Attainment." Harvard university Department of Economics Unpublished Manuscript. March 1999.

United States Department of Education. Digest of Education Statistics. Washington D.C.: USGPO, 2000.

United States Selective Service. Semiannual Report of the Director of Selective Service. Washington D.C.: USGPO, various years.

Appendix Table 1: Number of Inductions by Six-Month Interval, 1960-1973

| Period | Total Inductions | Monthly Rate |
| :---: | :---: | :---: |
|  |  |  |
| $1960-1$ | 38,510 | 6,418 |
| $1960-2$ | 48,092 | 8,015 |
| $1961-1$ | 12,978 | 2,163 |
| $1961-2$ | $105,628^{\text {a }}$ | $17,605^{\text {a }}$ |
| $1962-1$ | 51,857 | 8,643 |
| $1962-2$ | 30,203 | 5,034 |
| $1963-1$ | 41,541 | 6,924 |
| $1963-2$ | 77,724 | 12,954 |
| $1964-1$ | 73,084 | 12,181 |
| $1964-2$ | 39,302 | 6,550 |
| $1965-1$ | 64,026 | 10,671 |
| $1965-2$ | 166,965 | 27,828 |
| $1966-1$ | 176,516 | 29,419 |
| $1966-2$ | 205,494 | 34,249 |
| $1967-1$ | 93,065 | 15,511 |
| $1967-2$ | 205,494 | 34,249 |
| $1968-1$ | 251,204 | 41,867 |
| $1968-2$ | 90,200 | 15,033 |
| $1969-1$ | 172,446 | 28,741 |
| $1969-2$ | 111,140 | 18,523 |
| $1970-1$ | 92,567 | 15,428 |
| $1970-2$ | 70,179 | 11,697 |
| $1971-1$ | 83,677 | 13,946 |
| $1971-2$ | 10,640 | 1,773 |
| $1972-1$ | 14,633 | 2,439 |
| $1972-2$ | 34,881 | 5,814 |
| $1973-1$ | 0 | 0 |
| $1973-2$ | 0 | 0 |

Source: Annual Report of the Director of Selective Service, various issues.
${ }^{2}$ High rate of inductions in the second half of 1961 was a result of the Berlin Crisis.

Table 1: Chronology of Key Events in the Vietnam Draft
August 2, 1964. Gulf of Tonkin incident leads to Congressional authority for expanded military role in South Vietnam. Gradual increase in U.S. troop presence in fall 1964 and spring 1965.

August 1965. Public Law 89-152 increases penalties for non-registration and non-compliance with Draft Board orders. Executive Order 11241 eliminates deferment for married men without children.

Fall 1965. Rapid and sustained increase in inductions, from 8,700/month (average over January 1962June 1965) to $29,000 /$ month.

July 1966. National Advisory Commission on Selective Service appointed to investigate fairness of the draft. The Commission's report (released February 1967) calls for a draft lottery and the elimination of student and occupational deferments.

June 1967. Military Selective Service Act of 1967. Amendments to selective service system eliminate most deferments for post-graduate education, but retain I-S deferment for high school students and II-S deferment for undergraduate students under age 24.

Spring 1968. Rate of induction reaches peak of $42,000 /$ month, with widespread student protests of the Vietnam war and the draft.

November 1968. Richard Nixon, who had campaigned for an all-volunteer force, is elected President, and quickly appoints a commission to study the elimination of the draft.

Spring 1969. Nixon proposes the creation of a draft lottery with limited (1-year) period of vulnerability.
November 1969. HR 14001 authorizes a draft lottery, scheduled for December 1969. Executive Order 11497 establishes priority for induction, based on lottery numbers, for men age 19-26 as of January 1, 1970. Deferments for undergraduate study are retained. Rate of induction in fall 1969 is 19,000 per month.

April 1970. Executive Order 11527 eliminates all new occupational and family deferments.
July 1970. Second lottery held for men born in 1951, to be inducted in 1971.
August 1971. Third lottery held for men born in 1952, to be inducted in 1972. Rate of induction in fall 1971 is 2,000 month.

September 1971. HR 6531 ends all new undergraduate (II-S) deferments.
February 1972. Fourth lottery held for men born in 1953 to be inducted in 1973. Average rate of induction in 1972 is $4,100 /$ month.

February 1973. Draft is suspended.

Table 2: Estimated Models For Male-Female Relative Schooling

|  | Fraction Enrolled at Ages 20-21 |  |  | Fraction Completed College Degree |  |  | Fraction Completed Some College |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Linear Trend $(\times 100)$ | $\begin{aligned} & -3.25 \\ & (0.24) \end{aligned}$ | $\begin{aligned} & -2.73 \\ & (0.23) \end{aligned}$ | $\begin{aligned} & -2.73 \\ & (0.25) \end{aligned}$ | $\begin{gathered} -1.96 \\ (0.05) \end{gathered}$ | $\begin{gathered} -1.70 \\ (0.08) \end{gathered}$ | $\begin{gathered} -1.76 \\ (0.10) \end{gathered}$ | $\begin{gathered} -1.13 \\ (0.04) \end{gathered}$ | $\begin{gathered} -0.89 \\ (0.05) \end{gathered}$ | $\begin{gathered} -0.96 \\ (0.06) \end{gathered}$ |
| Induction Risk | -- | $\begin{gathered} 1.16 \\ (0.20) \end{gathered}$ | $\begin{gathered} 1.14 \\ (0.34) \end{gathered}$ | -- | $\begin{gathered} 0.46 \\ (0.09) \end{gathered}$ | $\begin{gathered} 0.34 \\ (0.14) \end{gathered}$ | -- | $\begin{gathered} 0.43 \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.30 \\ (0.08) \end{gathered}$ |
| $\begin{gathered} \text { Dummy for } \\ 1942-50 \\ (\times 100) \end{gathered}$ | $\begin{aligned} & 10.57 \\ & (0.30) \end{aligned}$ | -- | $\begin{gathered} 0.39 \\ (3.84) \end{gathered}$ | $\begin{gathered} 4.22 \\ (1.00) \end{gathered}$ | -- | $\begin{gathered} 1.51 \\ (1.42) \end{gathered}$ | $\begin{gathered} 4.05 \\ (0.65) \end{gathered}$ | -- | $\begin{gathered} 1.66 \\ (0.81) \end{gathered}$ |
| R -squared | 0.94 | 0.96 | 0.96 | 0.98 | 0.98 | 0.98 | 0.97 | 0.98 | 0.98 |


| Excess Male Enrollment | Rate/Graduation | Rate Due to Draft Avoidance | (Percent) |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1941 Cohort | -- | 2.91 | 2.77 | -- | 1.00 | 0.75 | -- | 1.80 | 1.28 |
| 1947 Cohort | -- | 6.47 | 6.17 | -- | 2.22 | 1.66 | -- | 4.01 | 2.84 |
| 1951 Cohort | -- | 1.45 | 1.39 | -- | 0.50 | 0.37 | -- | 0.90 | 0.64 |

Notes: Standard errors in parentheses. Models in columns 1-3 are fit to data for cohorts born 1939-1959; other models are fit to data for cohorts born 1935-1959. Dependent variable in columns 1-3 is the log of the relative enrollment rate of men and women at ages 20-21 (estimated from October CPS data for 1960-1980). Dependent variable in columns $4-6$ is log of the relative fraction of men with a college degree (estimated from 1990 Census data). Dependent variable in columns 7-9 is log of the relative fraction of men with at least some college (estimated from 1990 Census data). Induction risk is number of inductions during ages 19-22, divided by number of men in cohort. Risk is 0.082 for 1951 cohort, 0.178 for 1947 cohort, and 0.041 for 1951 cohort.

Figure 1: College Enrollment of Male High School Graduates and Number of Inductions


Figure 2: College Graduation Rates of Men and Women By Birth Year


Figure 3: Male-Female College Ratio Versus Male Veteran Rate


Figure 4: Enrollment Rates of 20-21 Year Old Men and Women, 1960-1980


Figure 5: Risk of Induction and Veteran Rate


Figure 6: Male-Female Relative Schooling Outcomes, by Cohort



[^0]:    *We are grateful to Olivier Deschenes and Ethan Lewis for assistance in this project. This research was supported by grants from the National Science Foundation and the National Institute of Child Health and Development.

[^1]:    ${ }^{1}$ Men who were issued college deferments remained at risk of induction after the completion of their studies (technically, until the age of 35). As we argue below, however, men who had finished college were relatively unlikely to be drafted.
    ${ }^{2}$ The enrollment series in Figure 1 represents the number of men age $16-24$ who completed high school in the previous spring and were enrolled in college in October. The number of inductions represents the total number of men drafted during the fiscal year ending in July.

[^2]:    ${ }^{3}$ For reference, Appendix Table 1 reports the number of men inducted into the military in semiannual periods from 1960 to 1973.
    ${ }^{4}$ A relatively high fraction of potential inductees failed the tests. In fiscal year 1965 (just prior to the ramp-up of inductions associated with the war), 44 percent of examinees were found unfit for service: about one-half of these failed the medical standards and one-half failed the mental standards (National Advisory Commission on Selective Service, 1967, Table 9.3). In the first half of 1970 the overall failure rate was very similar (Semiannual Report of the Director of the Selective Service, 1970).

[^3]:    ${ }^{5}$ Until January 1966 men who were ordered for induction could voluntarily enlist for service in the Reserves or National Guard. After 1966 these highly sought positions were only available to those who volunteered prior to receiving orders to report for induction. (Annual Report of the Director of the Selective Service, 1966, p. 26).
    ${ }^{6}$ See Annual Report of the Director of the Selective Service (1966, p. 19; 1969, p. 16). Delinquents were men who failed to register or failed to report for pre-induction testing or otherwise violated Selective Service laws.
    ${ }^{7}$ For example, the National Advisory Commission on Selective Service (1967, p. 41) noted that "...what starts out as a temporary deferment for college enrollment is easily extended into a de facto exemption - by graduate school, by occupation, by fatherhood, and ultimately by the passage of time and advance of age."

[^4]:    ${ }^{8}$ We estimate the risk of service for those with a degree as the ratio of the number of men who entered the military after completing 16 or more years of school, divided by the sum of this total plus the number of men with a college degree who never served. For men born in 1945-47, this risk was 19 percent.

[^5]:    ${ }^{10}$ Formally, let $\mathrm{E}(\mathrm{m}, \mathrm{c})$ represent an education outcome measure for men in cohort c , let $\mathrm{E}(\mathrm{f}, \mathrm{c})$ represent an education outcome measure for women in the same cohort, and let R (c) represent some measure of the risk of induction faced by men in cohort c . We assume that
    $\log \{\mathrm{E}(\mathrm{m}, \mathrm{c}) / \mathrm{E}(\mathrm{f}, \mathrm{c})\}=\mathrm{g}(\mathrm{c})+\beta \mathrm{R}(\mathrm{c})+\epsilon(\mathrm{c})$,
    where $\mathrm{g}(\mathrm{c})$ is a smooth trend function of year of birth and $\epsilon(\mathrm{c})$ is a residual.
    ${ }^{11}$ The data are drawn from the 5 percent public use samples of the 1980 and 1990 Censuses. We use 1980 Census data for people born up to 1939, and 1990 Census data for later cohorts. Cohort averages of college graduation rates for men over age 40 are quite similar in the consecutive Censuses, as are veteran service rates by cohort. College graduation rates for women are about 11 percent higher in the 1990 Census, even for cohorts over age 40 in 1980. We therefore adjusted the college graduation rates obtained from the 1980 Census for pre-1939 cohorts upward by 11 percent.
    ${ }^{12}$ Excluding the three 'war cohorts' a third-order polynomial in year of birth explains 99 percent of the inter-cohort variation in male-female relative college rates for cohorts born from 1914 to 1960.

[^6]:    ${ }^{13}$ The data are from published tabulations of the October Current Population Survey in Bruno and Curry (1996).
    ${ }^{14}$ We estimate cohort size using data on the number of 17 year olds in each year from the Digest of Education Statistics (2000, Table 104).

[^7]:    ${ }^{15}$ These entries are estimated by multiplying the induction risk coefficient by the estimated risk for the cohort (reported in the footnote of the table), and then multiplying this result by the average enrollment rate or fraction completed college or with some college for the 1941 cohort to translate the effect on the $\log$ of the outcome into an effect on levels.

[^8]:    ${ }^{16}$ The first Army troops were sent to Vietnam in May 1965: see Carland (2000, chapter 2).

[^9]:    ${ }^{17}$ The World War II draft had no college deferments: thus going to college to avoid the draft was not an issue. College deferments were available during most of the Korean war, and may have led to some draft avoidance behavior.

[^10]:    ${ }^{18}$ We used the October 1968-70 CPS files to derive this estimate.

