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Author(s): Joshua D. Angrist

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Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records

By JOSHUA D. ANGRIST*

I. Errors in the Figures

Due to a typographer's error, the figures in my article published in *The American Economic Review* (Volume 80, No. 3, June 1990, pp. 313–36) were transposed and incorrectly labelled. The figure on page 316, labelled Figure 1, is actually Figure 3; the figure on page 324, labelled Figure 3, is actually Figure 1. The title and caption for Figure 1 appear under Figure 3, and vice versa. A corrected set of figures is reproduced in this note, and the figures are briefly described here as well as in the original paper.

Men were called for conscription in the Vietnam era draft lottery according to lottery numbers ranging from 1 to 365 which were randomly assigned to dates of birth. Men with lottery numbers below the highest number called for induction are referred to in the paper as "draft-eligible." Figure 1 shows the history of FICA (Social Security) taxable earnings for draft-lottery participants born between 1950 and 1953. For each cohort and race, two lines are drawn: one for draft-eligible men and one for men with lottery numbers that exempted them from the draft.

Figure 2 presents a magnified view of the effect of draft eligibility on earnings. This figure plots the time series of *differences* in earnings by draft-eligibility status. The figure shows no difference in earnings by draft-eligibility status before the year of conscription risk (1970–3 for men born 1950–3), while in subsequent years the earnings of draft-eligible men generally fall be-

low the earnings of men who could not be drafted.

Figure 3 graphs mean W-2 (federal income taxable) earnings in 1981–4 by cohort and lottery number (\bar{y}_{ctj}) against probabilities of veteran status by cohort and lottery number (\hat{p}_{cj}). Earnings are in 1978 dollars. Plotted in the figure are the average (over four years of earnings) residuals from a regression of earnings and probabilities on period (δ_t) and cohort (β_c) effects. Thus, the slope of the regression line drawn through the points corresponds to an estimate of α in

$$\bar{y}_{ctj} = \beta_c + \delta_t + \hat{p}_{cj}\alpha + \bar{u}_{ctj}$$

which is equation (3) in the paper. Estimates of equation (3) are equivalent to instrumental variables estimates of

$$y_{cti} = \beta_c + \delta_t + s_i\alpha + u_{it}$$

where s_i indicates veteran status and the instruments are dummy variables that indicate lottery number, cohort, and year of earnings. The parameter α represents the effect of veteran status on earnings and is estimated as –2,384 dollars with a standard error of 778 dollars.

II. Error in Footnote 7

The formula given in Footnote 7 for the sampling variance of the Wald estimates reported in Table 3 is incorrect. The correct variance formula is

$$(\hat{p}^e - \hat{p}^n)^{-2}[\Phi + \alpha^2\phi]$$

where Φ is the variance of $\bar{y}^e - \bar{y}^n$ and ϕ is the variance of $\hat{p}^e - \hat{p}^n$. The formula used

*Department of Economics, Littauer Center, Harvard University, Cambridge, MA 02138.

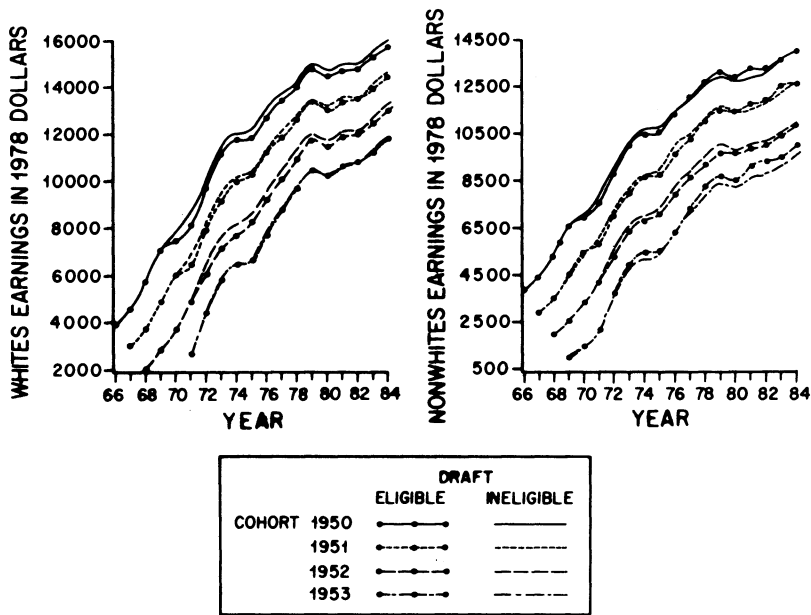


FIGURE 1. SOCIAL SECURITY EARNINGS PROFILES BY DRAFT-ELIGIBILITY STATUS

Notes: The figure plots the history of FICA taxable earnings for the four cohorts born 1950–3. For each cohort, separate lines are drawn for draft-eligible and draft-ineligible men. Plotted points show average real (1978) earnings of working men born in 1953, real earnings + \$3000 for men born in 1950, real earnings + \$2000 for men born in 1951, and real earnings + \$1000 for men born in 1952.

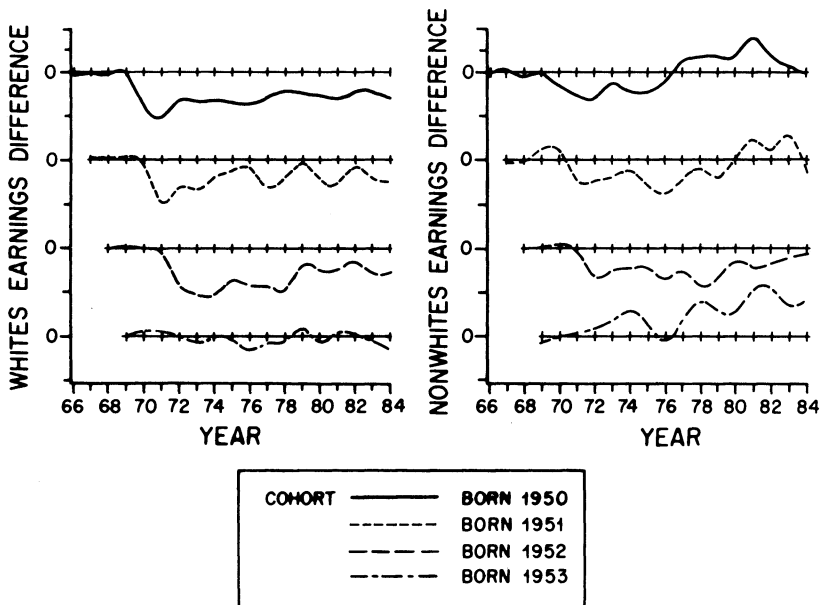


FIGURE 2. THE DIFFERENCE IN EARNINGS BY DRAFT-ELIGIBILITY STATUS

Notes: The figure plots the difference in FICA taxable earnings by draft-eligibility status for the four cohorts born 1950–3. Each tick on the vertical axis represents \$500 real (1978) dollars.

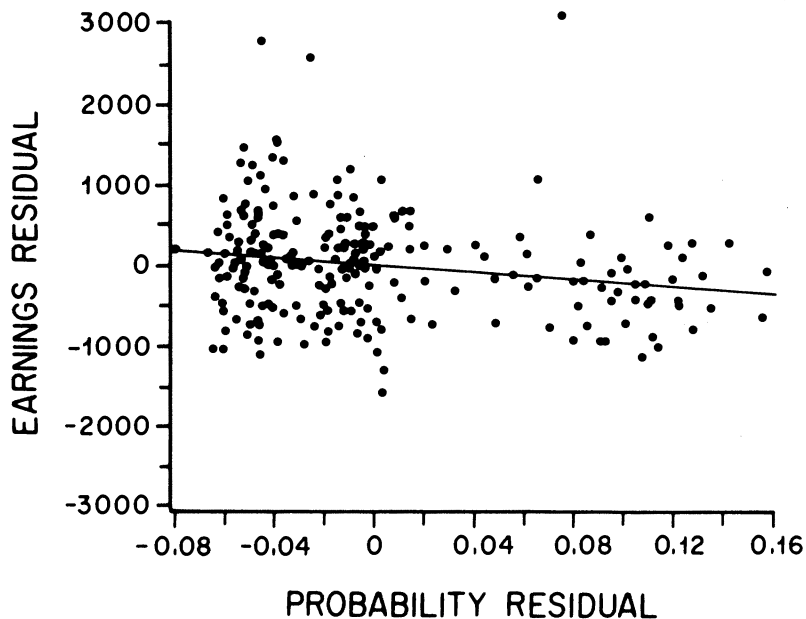


FIGURE 3. EARNINGS AND THE PROBABILITY OF VETERAN STATUS BY LOTTERY NUMBER

Notes: The figure plots mean W-2 compensation in 1981-4 against probabilities of veteran status by cohort and groups of five consecutive lottery numbers for white men born 1950-3. Plotted points consist of the average residuals (over four years of earnings) from regressions on period and cohort effects. The slope of the least-squares regression line drawn through the points is $-2,384$, with a standard error of 778 , and is an estimate of α in the equation

$$\bar{y}_{ctj} = \beta_c + \delta_t + \hat{p}_{cj}\alpha + \bar{u}_{ctj}.$$

in the paper assumes $\alpha = 0$. Replacing α with a consistent estimate in the correct formula gives the variance for the two-sample instrumental variables estimate that is

equivalent to the Wald estimate. As an empirical matter, use of the correct formula raises the standard errors in Table 3 by roughly 10 percent.