Vietnam Draft Lottery

Vietnam era service

- Defined as 1964-1975
- Estimated 8.7 million served during era
- 3.4 million were in SE Asia
- 2.6 million served in Vietnam
- 1.6 million saw combat
- 203K wounded in action, 153K hospitalized
- 58,000 deaths
- http://www.history.navy.mil/library/online/america n%20war%20casualty.htm#t7

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Vietnam Era Draft

- 1st part of war, operated liked WWII and Korean War
- At age 18 men report to local draft boards
- Could receive deferment for variety of reasons (kids, attending school)
- If available for service, pre-induction physical and tests
- · Military needs determined those drafted

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- Everyone drafted went to the Army
- Local draft boards filled army.
- Priorities

 Delinquents, volunteers, non-vol. 19-25
 - For non-vol., determined by age
- College enrollment powerful way to avoid service
 - Men w. college degree 1/3 less likely to serve

Draft Lottery

- Proposed by Nixon
- Passed in Nov 1969, 1st lottery Dec 1, 1969
- 1st lottery for men age 19-26 on 1/1/70

 Men born 1944-1950.
- Randomly assigned number 1-365, Draft Lottery number (DLN)

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- Military estimates needs, sets threshold T
- If DLN<=T, drafted

Questions?

- What are the research questions?
- What can we NOT obtain estimates from observational data?

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 If volun Thresh	teer, could get be olds for service	tter assignment	
 Draft 	Year of Birth	Threshold	
• 1970	1946-50	195	
• 1971	1951	125	
• 1972	1952	95	
 Draft su 	uspended in 1973	i	

Model

- Sample, men from 1950-1953 birth cohorts
- $Y_i = earnings$
- X_i = Vietnam military service (1=yes, 0=no)
- Z_i = draft eligible, that is DLN <=T
 - (1=yes, 0=no)

Put this all together

· Model of interest

•
$$Y_i = \beta_0 + x_i \beta_1 + \varepsilon$$

- First stage
- $x_i = \alpha_0 + z_i \alpha_1 + \mu_i$
- $\alpha_1 = (dx/dz)$

1st stage

- Because Z is dichotomous (1 and 0), this males it easy
- \overline{X}_1 = mean of X when treated (z_i =1) = $\alpha_0 + z_i \alpha_1 = \alpha_0 + \alpha_1$
- \overline{X}_0 = mean of X when not treated (z_i =0) = $\alpha_0 + z_i \alpha_1 = \alpha_0$
- X
 ₁ X
 ₀ = α₁ (change in military service from having a low DLN)

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- · Intention to treat
- $y_i = \gamma_o + z_i \gamma_1 + v_i$
- $\gamma_1 = dy/dz = (dy/dx)(dx/dz)$

Intention to treat

- $y_i = \gamma_o + z_i \gamma_1 + v_i$
- \overline{Y}_1 = mean of y when treated (z=1)
- $\gamma_{o} + z_{i} \gamma_{1} = \gamma_{o} + \gamma_{1}$
- \overline{Y}_0 = mean of y when not treated (z=0)
- γ_o + z_i γ₁ = γ_o
 Y
 ₁ Y
 ₀ = γ₁ (difference in earnings for those drafted and those not)

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q



• $\beta_1 = dy/dx$

•
$$\beta_1 = [\overline{Y}_1 - \overline{Y}_0]/[\overline{X}_1 - \overline{X}_0]$$







		$\overline{\mathbf{Y}}_1$ - $\overline{\mathbf{Y}}_0$ in numbers						
	TABLE 1	TABLE $1-D$ raft-Eligibility Treatment Effects for Earnings						
				Whites				
	FIC	A Taxabl	e Earning	s	Tot	al W-2 Co	mpensatio	on
Year	1950	1951	1952	1953	1950	1951	1052	1953
76	- 314.2	- 86.8	- 370.7	-145.5				
	(106.6)	(102.9)	(98.2)	(93.0)				
77	-262.6	-274.2	- 396.9	- 85.5				
	(117.9)	(112.2)	(111.1)	(107.1)				
78	-205.3	-203.8	-467.1	-65.3	1,059.3	233.2	175.3	-1,974.5
	(132.7)	(127.0)	(127.3)	(123.1)	(2,159.3)	(1,609.4)	(1,567.9)	(912.1
79	-263.6	- 60.5	-236.8	89.2	-1,588.7	523.6	-580.8	- 557.9
	(160.5)	(152.3)	(153.9)	(148.7)	(1,575.6)	(1,590.5)	(736.7)	(750.1
80	- 339.1	- 267.9	- 312.1	- 93.8	-1,028.1	85.6	- 581.3	- 428.7
	(183.2)	(175.3)	(178.2)	(170.7)	(756.8)	(599.8)	(309.1)	(341.5
81	- 435.8	- 358.3	- 342.8	34.3	- 589.6	- 71.6	- 440.5	- 109.5
	(210.5)	(203.6)	(206.8)	(199.0)	(299.4)	(423.4)	(265.0)	(245.2
82	- 320.2	-117.3	- 235.1	29.4	- 305.5	- 72.7	- 514.7	18.7
	(235.8)	(229.1)	(232.3)	(222.6)	(345.4)	(372.1)	(296.5)	(281.9
83	- 349.5	-314.0	-437.7	- 96.3	- 512.9	- 896.5	- 915.7	30.1
	(261.6)	(253.2)	(257.5)	(248.7)	(441.2)	(426.3)	(395.2)	(318.1
84	- 484.3	- 398.4	-436.0	-228.6	-1,143.3	-809.1	- 767.2	- 164.2
	(286.8)	(279.2)	(281.9)	(272.2)	(492.2)	(380.9)	(376.0)	(366.0

Cohort	Year	FICA Earnings (1)	Adjusted FICA Earnings (2)	Total W-2 Earnings (3)	$\hat{p}^{e} - \hat{p}^{n}$ (4)	Service Effect in 1978 \$ (5)
1950	1981	- 435.8	- 487.8	- 589.6	0.159	-2,195.8
	1982	(210.5) - 320.2 (235.8)	(237.6) - 396.1 (281.7)	(299.4) - 305.5 (345.4)	(0.040)	(1,069.5) -1,678.3 (1,193.6)
	1983	-349.5	-450.1 (302.0)	- 512.9		-1,795.6 (1.204.8)
	1984	- 484.3 (286.8)	-638.7 (336.5)	-1,143.3 (492.2)		-2,517.7 (1,326.5)
_{iv} = (₹ ₁ - *	Ÿ₀)/(X₁-	X ₀) = -487	7.8/0.159 = \$306	67.9		



