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 Econ 321

HW#4 (Please type all answers)

- I. Using S&D diagrams, show what would happen to the labor market in the state of Virginia if each of the following happened. In 1-2 sentences, explain your answer. (Hint: There is a very high level of mobility between states!)
 - A. The federal income tax rises.
 - B. The Virginia state income tax rises.
 - C. Virginia reduces welfare payments.
 - D. Virginia imposes a "head tax" of \$1000/person.
- II. What would happen if the state of Virginia made the state income tax more progressive? What if it made the state income tax *regressive* (tax rate falls as income rises)? (3-4 sentences)
- III. The federal marginal tax rate in the 1970's rose to about 70%. How would you expect this to affect occupational choice and the proportions of wage and non-wage compensation? Why? (3-4 sentences)
- IV. Pick one real government redistributive program. Which rationale would proponents most likely use to justify it - return on investment, insurance, or egalitarian? How well does this rationale actually fit the facts about the program? (3-4 sentences)
- V. Propose a change in immigration policy that would admit more immigrants without - on net - hurting *any* Americans. (Make a case that might persuade an "intelligent tribalist.") Your policies may involve redistribution to anyone you like as long as you specify tax changes to pay for it. (1 paragraph)
- VI. Suppose you are a partner at a law firm, and are deciding whether to continue interviewing job candidates. You value your time at \$300/hour, and it takes an hour to interview a candidate. If you find someone who is "good enough for the job" it is worth \$3000. Your searching abilities are as follows:

Total Time Spent (hours)	Chance of Finding Someone Good Enough	Expected Marginal Benefit of Search
1	25%	.25*\$3000=\$750
2	45%	(.45-.25)*\$3000=\$600
3	60%	
4	70%	
5	75%	

- A. Fill in the 3rd column of the table. The "expected marginal benefit of search" is just the value of finding a "good enough" worker times the marginal increase in the probability of finding him.

- B. Search theory says you will set the marginal cost of search equal to the expected marginal benefit of search. If this is true, how long will you search for?
- C. Suppose you search until the marginal cost of search equals the expected marginal benefit, but you still haven't found a worker. Should you search some more, or give up? Why?
- VII. Use S&D diagrams to analyze the effects of abolishing tenure for university professors. What happens to wages of "tenure-worthy" professors? What effect does this ban have on total surplus in the labor market? (3-4 sentences)
- VIII. (Answer each of the following in 1-2 sentences)
- A. Which class in college has given you the *most* job-related skills?
- B. Which class in college has given you the *least* job-related skills?
- C. What percent of the first class was "signaling" (as opposed to job-related training)? What percent of the second class was "signaling"?
- IX. Carefully explain why Caplan thinks education is a better signal of conscientiousness than intelligence. (4-5 sentences)
- X. Suppose there are seven workers. The PDV of their lifetime labor is as follows:

Worker #	1	2	3	4	5	6	7
\$ PDV	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,500,000

Employers cannot tell how productive a worker is, but they CAN tell whether a worker has a college degree, and they know the **AVERAGE** value of workers with and without college degrees. Competition forces them make worker pay equal their average PDV.

- A. What will the PDV of lifetime earnings be for workers with and without college educations be if...? Fill in the following table.

Worker #'s w/ College Degrees	Without College PDV	With College PDV	College Premium
1-7	--	\$1,642,857	--
2-7	\$1,000,000	\$1,750,000	\$750,000
3-7			
4-7			
5-7			
6-7			
7	\$1,500,000	\$2,500,000	\$1,000,000

- B. Suppose you are worker #4. Workers #1-3 don't have college degrees; workers #5-7 do. What is your PDV of earnings without a college degree? With a college degree?
- C. What are the **total** earnings of the *other* workers if you (still worker #4) get a college degree? If you don't?
- D. Suppose worker #4's college costs \$500,000 total. What is the net gain of college to worker #4? The net gain to all seven workers?