

Prof. Bryan Caplan  
 bcaplan@gmu.edu  
 http://www.bcaplan.com  
 Econ 321

**HW#1** (Please type all answers)

- I. Write a table showing how many hours you would work per week at each of the following hourly wages, *assuming they are the best offers available to you*: \$.10, \$.50, \$1, \$3, \$5, \$10, \$25, \$50, \$100. Graph your table. Does your labor supply curve ever "bend back"?
- II. How high would the hourly wage in the following occupations have to be to induce you to enter them, assuming wages in all other occupations remain at their current level? (In other words, what is the *smallest wage sufficient* to draw you into these professions?)

Occupation	Lowest Wage Needed
garbage collector	
deep-sea fisher	
bank teller	
highway maintainer	
criminal lawyer	
webpage designer	
movie star	

Graph the occupations from most attractive (smallest wage required) to least attractive (highest wage required).

- III. Suppose that the MPP of an hour of labor in a shoe factory is given by the following table:

Hours	MPP/hour
0-10	100 shoes
10-20	80 shoes
20-50	70 shoes
50-100	50 shoes
100-200	20 shoes

- Carefully draw the labor demand curve for the owner of this factory, assuming the price of shoes is \$5/pair. On a separate diagram, show how the labor demand curve shifts if the price of shoes falls to \$3/pair.
- IV. Draw supply-and-demand diagrams for the market for wheat and the market for farm laborers, drawing the demand curve for wheat as highly **inelastic**. Then show what happens in both markets when the MPP of farm laborers decreases.
- V. Draw supply-and-demand diagrams for the market for DVD players and the market for DVD factory laborers, drawing the demand curve for DVD

- players as highly **elastic**. Then show what happens in both markets when the MPP of DVD factory laborers increases.
- VI. Using the concept of MVP, describe the two possible reasons why a worker would not be worth employing at any positive wage.
  - VII. Using the equation for Annual Labor Income from the NLSY, calculate your predicted wage and the predicted wage of an older family member. Roughly how accurate are the two predictions?
  - VIII. Using separate supply-and-demand curves, show what happens in a single occupation if employers provide free coffee for workers, and:
    - A. Workers like coffee, but the caffeine makes them "hyper" and less able to do their job.
    - B. Workers actively dislike coffee, but it enhances their ability to keep working late at night.
  - IX. Show what happens to *aggregate* labor demand and *aggregate* labor supply if:
    - A. A plague kills half of all workers?
    - B. The government increases subsidies to (non-productive) education.
    - C. The government repeals a law against secretly monitoring workers with video cameras.
    - D. A new vitamin raises workers' IQs.
    - E. The courts rule that unions are immune to prosecution for acts of vandalism committed during strikes.
    - F. Higher taxes on gasoline make commuting more expensive.
  - X. How would banning immigration affect the **slope** of the *aggregate* labor supply curve?
  - XI. One economist says: "More women work today than in 1900 because wages have risen so much." Another says: "No, women's labor supply curve 'bends backwards' just like men's. Women work more today because of innovations in household appliances." Use supply-and-demand curves to diagram what each of these economists is saying.
  - XII. Is it *possible* for workers in a free market labor to earn "subsistence wages"? Why or why not?
  - XIII. Your market wage is \$20/hour. Should you value your time at *more* than \$20/hour while vacationing in a foreign country?