

# CHAPTER 13

## MARKETS FOR LABOR

*Microeconomics in Context* (Goodwin, et al.), 1<sup>st</sup> Edition (Study Guide 2008)

### Chapter Summary

This chapter deals with supply and demand for labor. You will learn about why the supply curve for paid labor is generally depicted as sloping upward, and why the labor supply curve for an individual worker may bend backward. Also included are topics such as market power in labor markets, the notion of compensating wage differentials, and labor market discrimination. Also highlighted are the ways in which historical and social factors can influence wage patterns over long periods of time.

### Objectives

After reading and reviewing this chapter, you should be able to:

1. List and describe the factors that affect worker productivity.
2. Discuss how individuals make decisions about entering the market for paid labor.
3. Understand the ambiguity regarding the slope of the labor supply curve at the individual level.
4. Describe the interaction of supply and demand in the aggregate labor market.
5. Explain variations in wages among workers.
6. Discuss wage discrimination based on race and gender.
7. Describe the simple mechanical model of the labor market.

### Key Terms

labor force participation rate  
employer-specific human capital  
economic rents  
bilateral monopoly  
compensating wage differentials  
efficiency wage theory  
wage contours  
dual labor markets  
occupational segregation  
marginal factor cost of labor

general human capital  
signaling theory  
monopsony  
oligopsony  
monitoring costs  
employee morale  
seniority  
labor market discrimination  
marginal revenue product of labor  
backward-bending individual paid  
labor supply curve

### Active Review

*Fill in the blank*

1. The upward-sloping supply curve for labor reflects the \_\_\_\_\_ effect of a change in the wage.

2. The higher wages are, the more leisure people may want to “buy”. This phenomenon can be described as the \_\_\_\_\_ effect of rising wages.
3. If a variation in wages produces little change in the quantity of labor supplied, we can say that the market labor supply is relatively \_\_\_\_\_.
4. The \_\_\_\_\_ theory of education suggests that the value of an advanced degree lies in the information it provides about how good a worker and learner the person holding the degree is likely to be.
5. Returns earned on factors that are in fixed supply, such as extraordinary sports ability, are referred to as economic \_\_\_\_\_.
6. A situation in which there is only one buyer for a good is known as \_\_\_\_\_.
7. A situation in which there is only one buyer and one seller is known as a \_\_\_\_\_ monopoly.
8. Suppose there are many talented musicians hoping to sell their music, and just a few record label buyers of musical works. This situation, in which there are just a few buyers, is known as \_\_\_\_\_.
9. A company that spends a lot of money on the salaries of inspectors and supervisors to oversee workers and make sure they keep up a high rate of production has high \_\_\_\_\_ costs.
10. Historically determined patterns of relative wages among occupations are known as wage \_\_\_\_\_.
11. A profit maximizing firm will hire workers up to the point where the marginal revenue product of labor is equal to the \_\_\_\_\_.
12. If a firm brings labor in a perfectly competitive labor market, it will maximize profits at the point where \_\_\_\_\_ is equal to wage.

*True or False*

13. According to the theory of compensating wage differentials, non-unionized workers are more likely to take low-paying, unpleasant jobs.
14. In a dual labor market, each worker either holds two jobs or is qualified to hold two possible jobs.
15. Any given worker’s wage can be taken as an accurate representation of that worker’s contribution to well-being in the economy.

16. If a firm is a monopsonist in a labor market, it will pay wages above the marginal factor cost of labor.
17. Oligopsonistic employers will tend to hire fewer workers than firms operating in a perfectly competitive labor market.

*Short Answer*

18. If the wages of car mechanics rise, would you expect a movement along the supply curve for car mechanics, a shift in the supply curve for car mechanics, or both?

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19. Explain the concept of “efficiency wage”.

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20. What conditions are necessary in order for the theory of compensating wage differentials to operate in reality?

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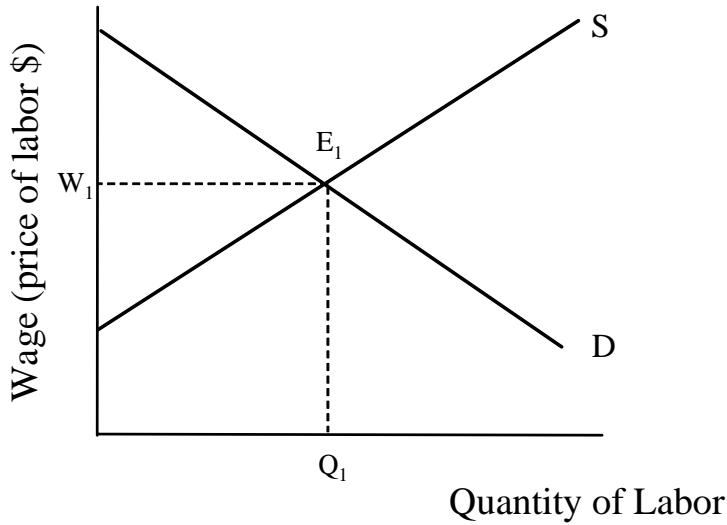
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*Problems*

1. Sketch a backward-bending individual labor supply curve, and indicate where on the curve the income effect is stronger than the substitution effect.

2. The following graph shows the labor market for pastry chefs.



Suppose a popular new diet book is published that says people should eat at least one fancy French pastry per day, for optimum health. Show the change that might result in the labor market for pastry chefs, and indicate the new quantity of labor supplied and the new equilibrium wage.

3. Suppose Amy’s Applesauce company produces jars of applesauce. The chart below shows the total number of applesauce jars produced for a given number of workers.

Number of Workers	Number of Jars	Marginal physical product of labor	Marginal revenue product of labor
1	30		
2	70		
3	120		
4	140		
5	150		

a) Fill in the marginal physical product of labor for each level of production.

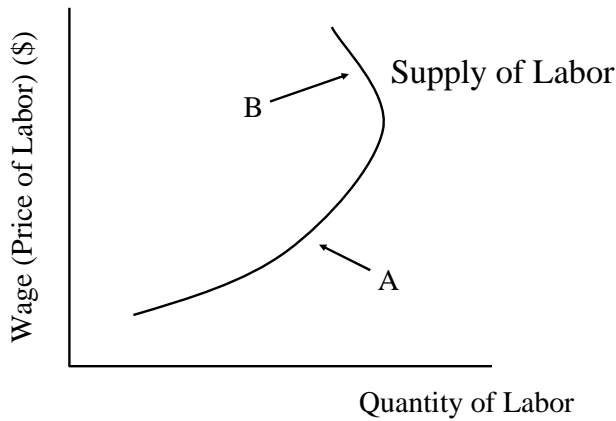
b) Now suppose each jar of applesauce sells for \$5. Fill in the marginal revenue product of labor for each level of production.

**Self Test**

1. Which of the following would *not* be considered an opportunity cost of paid employment?

- a. Caring for an elderly relative
- b. Education
- c. Self-employment
- d. Leisure
- e. Transportation costs of commuting to work

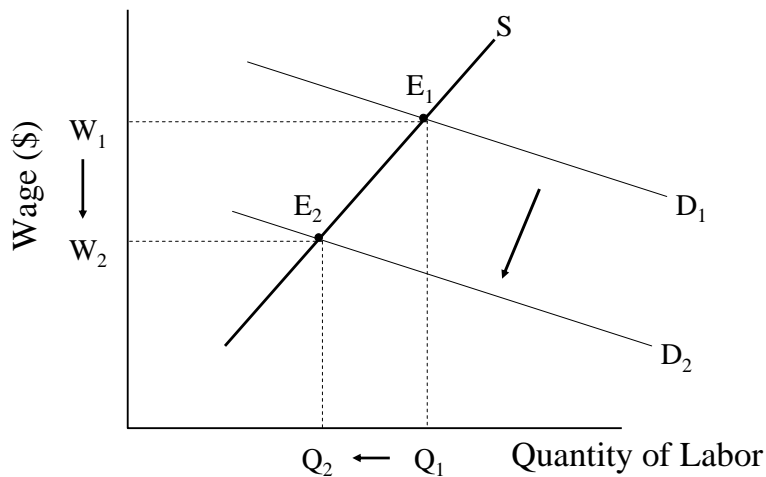
Question #2 refers to the following graph.



2. Which of the following statements is true?

- a. The income effect is stronger than the substitution effect at point A.
- b. The income effect is stronger than the substitution effect at point B.
- c. This graph represents the market supply of labor.
- d. An individual labor supply curve like that shown in the graph above could not occur in the real world.
- e. The shape of the curve is determined by the average cost of production.

Question #3 refers to the graph shown below.



3. Suppose that the graph shown above depicts a change in the labor market for graphic designers. Which of the following events could have produced the change we see in this graph?
- A new computer program allowed people to complete graphic designs automatically, without the aid of a trained designer.
  - Many new graphic designers graduated from a top training program.
  - The wage offered for specialized graphic design services rose.
  - The market for graphic designers expanded.
  - None of the above.
4. A situation in which there are many sellers of labor but only one employer (i.e. buyer of labor) can be referred to as
- Monopolistic labor
  - Monopoly
  - Monopsony
  - Competitive equilibrium
  - Labor equilibrium
5. Suppose there is only one company that hires skilled machinists, and all skilled machinists belong to one union. This situation, in which a single employer faces a single seller of labor, is known as
- Monopsony
  - Oligopsony
  - Oligopoly
  - Bilateral monopoly
  - Monopolistic competition
6. Factors that might make one job more appealing than another include
- working conditions
  - wages
  - amount of vacation offered
  - both a and c are true
  - a, b, and c are all true
7. The notion that, all else equal, workers will accept lower wages for jobs with better characteristics is known as the theory of
- social contribution
  - consumer sovereignty
  - market power
  - compensating wage differentials
  - employee morale

8. Efficiency wage theory holds that
- Workers will work harder when they know their current employer is paying them more than they could get elsewhere.
  - Workers work less when they know they are being overpaid.
  - Employee morale is not a factor influencing total productivity.
  - Raising wages is the best way to increase output per worker.
  - All of the above.
9. A situation in which some workers get high wages, job security, and other benefits while other workers, doing similar jobs, get low wages, no job security, and few other benefits, is known as
- An efficiency wage situation
  - A wage contour
  - A dual labor market
  - A price discriminating labor force
  - A high monitoring costs employment structure
10. The tendency of men and women to be employed in different occupations is referred to as
- occupational segregation.
  - gender inequality.
  - racial segregation.
  - contour segregation.
  - occupational dysphoria
11. Which of the following is *not* an assumption of the traditional model of the labor market?
- The firm is a unitary decision maker.
  - The firm is interested only in profit maximization.
  - The firm faces a convex decision problem.
  - The firm faces multiple equilibria.
  - All of the above are true
12. When a firm hires an additional worker, all else being equal, which of the following statements is false?
- Costs rise by the amount of the additional wages paid.
  - Revenue increases.
  - Revenue only increases if the firm makes a positive profit.
  - Profits may or may not increase.
  - Output increases.

13. A profit-maximizing firm should keep hiring more labor until the point where the marginal revenue product of labor is equal to
- Marginal productivity of capital.
  - Factor cost of capital.
  - Monopolistic wage.
  - Marginal factor cost of labor.
  - Marginal factor cost of fixed assets.
14. If a firm can maximize profit simply by setting  $MRP_L = \text{wage}$ , then we know that the firm must be
- A monopolist.
  - A monopsonist.
  - An oligopolist.
  - A monopolistic producer.
  - Operating in a perfectly competitive labor market.
15. Which of the following statements is true regarding monopsonistic employers?
- They hire more workers than firms that operate in perfectly competitive markets.
  - They pay workers more than their marginal revenue product of labor.
  - They pay workers less than firms that compete in labor markets.
  - They reward workers better than oligopsonistic firms.
  - Both a and c are true.
16. According to US census data for the year 2006, the median wage for women of all races was \_\_\_\_\_ of that of men.
- 20%
  - 50%
  - 77%
  - 80%
  - 93%
17. Which of the following statements is true?
- In 2006, college educated women age 55 or older earned on average only slightly more than high school educated men of the same age.
  - In 2006, college educated men aged 55 or older earned on average only slightly more than high school educated women of the same age.
  - Earning differences between gender groups tend to even out by age 50.
  - In 2000, African-American men made about 90% as much as their white male counterparts.
  - Both a and d are true.

18. From the perspective of an individual, the upward-sloping labor supply curve reflects the \_\_\_\_\_ effect of changes in wages.

- a. income
- b. substitution
- c. downward
- d. backward-bending
- e. upward

19. Which of the following jobs is most likely to have a relatively inelastic labor supply curve?

- a. cashier
- b. garbage collector
- c. janitor
- d. nuclear physicist
- e. none of the above

Question #20 refers to material presented in the Appendix.

20. Suppose a firm manufactures bags of peanuts. A single worker can produce 20 bags of peanuts, but adding a second worker makes it possible to produce 45 bags of peanuts. The marginal physical product of the second worker is

- a. Equal to \$20.
- b. Equal to \$25.
- c. 20 bags of peanuts.
- d. 25 bags of peanuts.
- e. Measured in dollars but unknown from the information given in this problem.

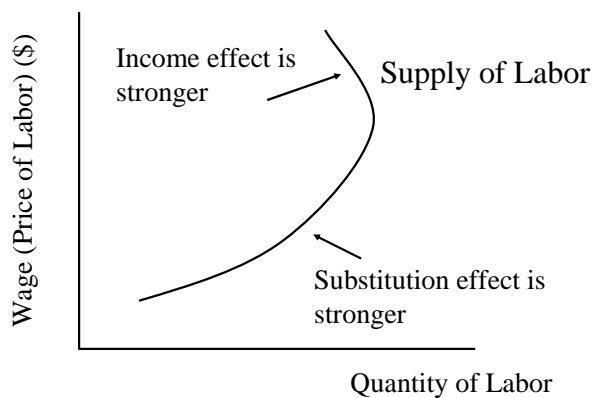
### **Answers to Active Review Questions**

- 1. substitution
- 2. income
- 3. wage inelastic
- 4. signaling
- 5. rents
- 6. monopsony
- 7. bilateral
- 8. oligopsony
- 9. monitoring
- 10. contours
- 11. Marginal factor cost of labor
- 12. Marginal revenue product of labor

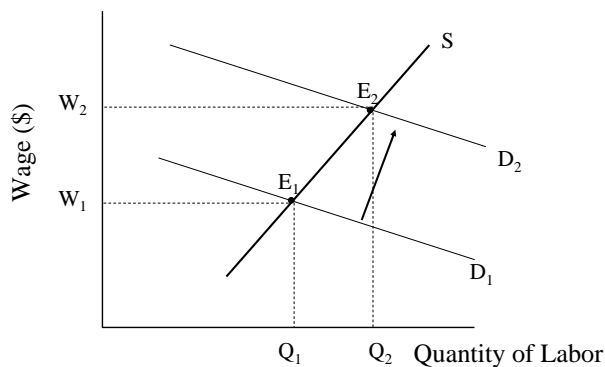
13. False. It is true that non-unionized workers are more likely to be found in low-paying, unpleasant jobs, but this is not the focus of the theory of compensating wage differentials. The theory of compensating wage differentials holds that workers will be willing to accept lower wages for jobs with better characteristics and will demand higher wages for jobs with unappealing characteristics, all else being equal.
14. False.
15. False.
16. False.
17. True.
18. Rising wages for car mechanics will produce movement along the supply curve only.
19. Efficiency wage theory suggests that workers perform better when they know their current employer is paying them more than they would receive elsewhere. Efficiency wages may be profit maximizing since the cost to the firm may be counterbalanced by superior work effort and loyalty on the part of the employees.
20. Workers must have very good information about job conditions and risks, and must be able to move freely to alternative jobs.

### Answers to Problems

1.



2.



3.

<b>Number of Workers</b>	<b>Number of Jars</b>	<b>Marginal physical product of labor</b>	<b>Marginal revenue product of labor</b>
1	30	30	\$150
2	70	40	\$200
3	120	50	\$250
4	140	20	\$100
5	150	10	\$50

### **Answers to Self Test Questions**

1. e
2. b
3. a
4. c
5. d
6. e
7. d
8. a
9. c
10. a
11. d
12. c
13. d
14. e
15. c
16. c
17. a
18. b
19. d
20. d