

CHAPTER THIRTEEN WAGE DETERMINATION

CHAPTER OVERVIEW

Building on the resource demand analysis of the previous chapter, this chapter provides a detailed supply and demand analysis of wage determination in a variety of possible labor market structures. Though the analysis may seem rigorous, it is little more than an application of supply and demand tools.

A discussion of the general level of real wages opens the chapter. The critical link between labor productivity and real wages merits emphasis as a theoretical and policy issue.

The section on wage determination in particular labor markets is the heart of the chapter. Competitive, monopsonistic, unionized, and bilateral monopoly market models are examined. Discussion of the effectiveness of unions in raising wages, and the complex issue of minimum wage laws follow.

Wage differentials are explained by the differences among worker characteristics, job characteristics, and lack of worker mobility. The chapter concludes with a discussion of pay schemes that link earnings to worker performance, their contributions to efficiency, and possible negative side effects.

WHAT'S NEW

The explanation of wage differentials in relation to minimum wage and unemployment has been edited to focus on unemployment that occurs when there's a difference between the equilibrium wage and minimum wage.

All of the data and tables have been updated.

INSTRUCTIONAL OBJECTIVES

After completing this chapter, students should be able to:

1. Differentiate between nominal and real wages.
2. List those factors that have led to an increasing level of real wages in the U.S. historically.
3. Determine the equilibrium wage rate and employment level when given appropriate data for a firm operating in a purely competitive product and labor market; a firm operating in a monopolistically competitive product market and a purely competitive labor market; and a firm operating in a purely competitive product market and a monopsonistic labor market.
4. Illustrate graphically how wage rates are determined in purely competitive and monopsonistic labor markets.
5. List the methods used by labor organizations to increase wages and the impact each has on employment. Give specific examples.
6. Illustrate graphically how an inclusive (industrial) union and an exclusive (craft) union would affect wages and employment in a previously competitive labor market.
7. Explain and illustrate graphically wage determination in the bilateral monopoly model.
8. Present the major points in the cases for and against the minimum wage.
9. Explain the demand factors that create wage differentials.

10. Explain the supply factors that create wage differentials.
11. Describe briefly salary systems in which pay is linked to performance rather than to time.
12. Describe the negative side effects of poorly planned incentive pay plans.
13. Define and identify terms and concepts listed at the end of the chapter.

COMMENTS AND TEACHING SUGGESTIONS

1. This chapter affords the opportunity for some community-based research.
 - a. Are local wages higher or lower than expected? Why? What factors contribute?
 - b. Is there a dominant industry in the community? Does it fit the monopsony model? Are the workers unionized?
 - c. Is the unemployment rate higher or lower than the current national average? Why?
 - d. If time permits a guest speaker such as a union leader and/or a director of human resources would be interesting.

2. Concept Illustration ... Efficiency Wages

Ford Motor Company made headlines in 1914 by offering autoworkers \$5 per day, up from \$2.50 per day. The wage payment was newsworthy because the typical market wage in manufacturing at that time was just \$2 to \$3 per day.¹

What was Ford's rationale for offering a higher-than-competitive wage? Statistics indicate that the firm was suffering from high rates of job quitting and absenteeism. It reasoned that a high wage rate would increase worker productivity by increasing morale and reducing employment turnover. Only workers who worked at Ford for at least six months were eligible for the \$5 per day wage. Nevertheless, 10,000 workers sought jobs with Ford in the immediate period following the announcement of the wage increase.

According to historians, the Ford strategy succeeded. The \$5 wage raised the value of the job to Ford workers. That created worker incentives to maintain employment at Ford and show up for work each day. It also encouraged laborers to work energetically so as not to be fired from a job that paid much more than alternative employment. The rates of job quitting and absenteeism both plummeted, and labor productivity at Ford rose by an estimated 51 percent that year.

The \$5 wage was an *efficiency wage*—one that raised the marginal revenue product of Ford workers. Ford's pay plan addressed its principal-agent problem. The \$2.50 wage hike "paid for itself" by more closely aligning the interests of Ford workers and owners.

3. (Last Word) Have the students prepare and conduct a debate on whether CEOs (as well as superstars in the sports and entertainment industry) are overpaid.

¹ This application is from Campbell R. McConnell, Stanley L. Brue, and David A. Macpherson, *Contemporary Labor Economics*, 5th ed. (New York: McGraw-Hill, 1999), p. 233. It is based in part on Daniel M. G. Raff and Lawrence Summers, "Did Henry Ford Pay Efficiency Wages?" *Journal of Labor Economics*, pt. 2, October 1987, pp. S57-S86.

STUDENT STUMBLING BLOCK

The concept of monopsony hiring is not an easy one for students to grasp. However, the results of monopsony hiring make intuitive sense. It may be best to focus on the results first (fewer workers hired at a lower wage than would be the competitive outcome) and then address the theory. The results emphasize the importance of monopsony power in labor markets, which all students can grasp even if they have difficulty with the theory.

LECTURE NOTES

I. Introduction

A. **Learning objectives** – After reading this chapter, students should be able to:

1. Explain why labor productivity and real hourly compensation track so closely over time.
2. Show how wage rates and employment levels are determined in competitive labor markets.
3. Demonstrate how monopsony (a market with a single employer) can reduce wages below competitive levels.
4. Discuss how unions increase wage rates and how minimum wage laws affect labor markets.
5. List the major causes of wage differentials.
6. Identify the types, benefits, and costs of “pay-for-performance” plans.
7. (Appendix) Relate who belongs to U.S. unions, the basics of collective bargaining, and the economic effects of unions.

B. Wage rates may be the most important price a student will encounter in his/her life.

C. This chapter explores some of the factors behind the determination wage and wage differences. This is important since wages and salaries accounts for 70 percent of our national income when proprietors' income is included.

II. Labor, Wages, and Earnings

A. Wages refer to the price paid for the use of labor.

1. Labor may be workers in the popular sense of the terms blue-collar and white-collar workers.
2. Labor also refers to professional people and owners of small businesses, in terms of the labor services they provide in operating their businesses.

B. Wages may take the form of bonuses, royalties, commissions, and salaries, but in this text the term “wages” is used to mean wage rate or price paid per unit of labor time.

C. It is important to distinguish between nominal and real wages.

1. Nominal wages are the amount of money received per hour, per day, per week and so on.
2. Real wages are the purchasing power of the wage, i.e., the quantity of goods and services that can be obtained with the wage. One's real wages depend not only on one's nominal wage but also on the price level of the goods and services that will be purchased.

3. Example: If nominal wages rise by 5 percent and there is a 3 percent rate of inflation, then the “real” wage rose only by 2 percent.
4. In this discussion, it is assumed that the price level is constant, and so the term “wages” is used in the sense of “real wages.”

III. The general level of wages differs greatly among nations, regions, occupations, and individuals. (See Global Perspective 13.1)

- A. Productivity plays an important role in determination of wages. Historically, American wages have been high and have risen because of high productivity. There are several reasons for this high productivity.
 1. Capital equipment per worker is high—approximately \$118,200 per worker.
 2. Natural resources have been abundant relative to the labor force in the United States.
 3. Technological advances have been generally higher in the U.S. than in most other nations, and work methods are steadily improving.
 4. The quality of American labor has been high because of good education, health and work attitudes.
 5. There are other, less tangible items underlying the high productivity of American workers.
 - a. Efficient, flexible management.
 - b. Stable business, social and political environment, conducive to growth.
 - c. Vast size of the domestic market, which allows for economies of scale.
 - d. Increased specialization of global production facilitated by free-trade agreements.
- B. Real wages and productivity: real hourly compensation per worker can increase only at about the same rate as output per worker. This is illustrated historically for the U.S. in Figure 13.1.
- C. There has been a long-term, secular growth pattern in real wages in the U.S. as seen in Figure 13.2.

IV. Economic Models of the Labor Market

- A. The competitive labor market model.
 1. Characteristics of a competitive labor market include:
 - a. Numerous firms competing to hire a specific type of labor,
 - b. Many qualified workers with identical skills available to independently supply this type of labor service, and
 - c. “Wage taker” behavior that pertains to both employer and employee; neither can control the market wage rate.
 2. The market demand is determined by summing horizontally the labor demand curves (the MRP curves) of the individual firms, as suggested in Figure 13.3a (Key Graph).
 3. The market supply will be determined by the amount of labor offered at different wage rates; more will be supplied at higher wages because the wage must cover the opportunity costs of alternative uses of time spent either in other labor markets or in household activities or leisure.

4. The market equilibrium wage and quantity of labor employed will be where the labor demand and supply curves intersect; in Figure 13.3a this occurs at a \$10 wage and 1,000 employed.
 - a. Each individual firm will take this wage rate as given, and will hire workers up to the point at which the market wage rate is equal to the MRP of the last worker hired (according to the $MRP = MRC$ rule). Note that the demand curve in Figure 13.3 is based on figures from Table 12.1 in the last chapter.
 - b. For each firm, the MRC is constant and equal to the wage because the firm is a “wage taker” and by itself has no influence on the wage in the competitive model. (Table 13.1)
- B. In the monopsony model, the firm’s hiring decisions have an impact on the wage.
 1. Characteristics of the monopsony model:
 - a. The firm’s employment is a large portion of the total employment of a particular kind of labor.
 - b. The type of labor is relatively immobile, either geographically or in the sense that to find alternative employment workers must acquire new skills.
 - c. The firm is a “wage maker” in the sense that the wage rate the firm pays varies directly with the number of workers it employs.
 2. Complete monopsonistic power exists when there is only one major employer in a labor market; oligopsony exists when there are only a few major employers in a labor market. (Note: the root “sony” means “to purchase,” whereas the root “poly” means “to sell.”) The monopsonistic market is illustrated in Figure 13.4.
 - a. The labor supply curve will be upward sloping for the monopsonistic firm; if the firm is large relative to the market, it will have to pay a higher wage rate to attract more labor.
 - b. As a result, the marginal resource cost will exceed the wage rate in monopsony because the higher wage paid to additional workers will have to be paid to all similar workers employed. Therefore, the MRC is the wage rate of an added worker plus the increments that will have to be paid to others already employed. (See Table 13.2)
 - c. Equilibrium in the monopsonistic labor market will also occur where $MRC = MRP$, but now the MRC is above the wage, so the wage will be lower than it would be if the market were competitive. As a result, the monopsonistic firm will hire fewer workers than under competitive conditions.
 - d. Conclusion: In a monopsonistic labor market there will be fewer workers hired and at a lower wage than would be the case if that same labor market were competitive, other things being equal.
 - e. Illustrations: Nurses are paid less in towns with fewer hospitals than in towns with more hospitals. In professional athletics, players’ salaries are held down as a result of the “player drafts” that prevent teams from competing for the new players’ services for several years until they become “free agents.”

- C. The (Three) Union models illustrate a different set of models of imperfect competition in the labor market where the workers are organized so that employers do not deal directly with the individual workers, but with their unions, who try to raise wage rates in several ways. There are three models of these methods.
1. Unions prefer to raise wages by increasing the demand for labor. (Figure 13.5)
 - a. Unions may try to increase the price of substitute resources, thus increasing the demand for union workers, e.g., higher minimum wages.
 - b. Unions can increase the demand for their labor by supporting public actions that reduce the price of a complementary resource, e.g., utility prices.
 2. Exclusive or craft unions raise wages by restricting the supply of workers, either by large membership fees, long apprenticeships, or forcing employers to hire only union workers. (Figure 13.6)
 3. Occupational licensing requirements are another way of restricting labor supply in order to keep wages high. Six hundred occupations are licensed in the U.S.
 4. Inclusive or industrial unions do not limit membership but try (usually unsuccessfully) to unionize every worker in a certain industry so that they have the power to impose a higher wage than the employers would otherwise pay (Figure 13.7.) The bargained wage becomes the MRC for the employer between point “a” and point “e”.
 5. Employers will hire fewer workers than they would if the workers were free to accept a lower wage.
 - a. Studies indicate that the size of the union advantage is 15 percent.
 - b. The size of the unemployment effect will depend on certain factors.
 1. Growth in the economy—If demand is increasing, then this shift in labor demand can offset the unemployment effect of the union wage increase.
 2. If the demand for the product and/or labor is inelastic, the wage increase will not have as much effect on employment as it would if the demand were elastic.
- D. Bilateral monopoly model occurs when a monopsonist employer faces a unionized labor force; in other words, both the employer and employees have monopoly power.
1. In such a model, the outcome of the wage is indeterminate and will depend on negotiation (see Figure 13.8) and bargaining power.
 2. A bilateral monopoly may be more desirable than one-sided market power. In other words, if a competitive market does not exist, it may be more socially desirable to have power on both sides of the labor market, so that neither side exploits the other. This can be shown by comparing $Q_u = Q_m$, and Q_c .

- V. The minimum wage controversy concerns the effectiveness of minimum wage legislation as an antipoverty device. (Figure 13.7 and Figure 13.8 can be used by substituting the minimum wage for the bargained wage.)**
- A. Facts about the minimum wage:
1. The Federal minimum wage was implemented with the Fair Labor Standards Act in 1938.
 2. The Federal minimum wage has ranged between 30 and 50 percent of the average wage paid to manufacturing workers.
 3. Many states have minimum wages exceeding the Federal minimum wage. In 2010, the state of Washington had the highest at \$8.55 an hour.
- B. The case against the minimum wage contains two major criticisms.
1. The minimum wage forces employers to pay a higher than equilibrium wage, so they will hire fewer workers as the wage pushes them higher up their MRP curve.
 2. The minimum wage is not an effective tool to fight poverty. Some minimum wage workers are teens or are from affluent families who do not need protection from poverty.
- C. The case for the minimum wage argues includes other arguments.
1. Minimum-wage laws occur in markets that are not competitive and not static. In a monopolistic market, the minimum wage increases wages with minimal effects on employment.
 2. Increasing minimum wage may increase productivity.
 - a. Managers will use workers more efficiently when they have higher wages.
 - b. The minimum wage may reduce labor turnover and thus training costs.
- D. Evidence and conclusions
1. Minimum wage only leads to unemployment in cases where the minimum wage is greater than the equilibrium wage.
 2. With a minimum wage of \$7.25 and the average wage for American workers is \$18.80, minimum wage leads to unemployment for low skilled workers with low productivity like teens, adults who didn't complete high school, and immigrants.
 3. It has been estimated that a 10% increase in minimum wage causes 1–3% unemployment for the groups above, but there's controversy about the true effects.
 4. More workers are helped by the minimum wage than are hurt.
 5. The minimum wage helps give some assurance that employers are not taking advantage of their workers.

VI. Wage Differentials

- A. Table 13.3 gives a selection of wages in different occupations to illustrate the substantial differences among them.
- B. Wage differentials can be explained by using supply and demand for various occupations.
 1. Given the same supply conditions, workers for whom there is a strong demand will receive higher wages; given the same demand conditions, workers where there is a reduced supply will receive higher wages. (Figure 13.9)
 2. The worker's contribution to the employer's total revenue (MRP) will depend upon the worker's productivity and the demand for the final product. (Figure 13.9 (a) and (b))
 3. On the supply side, workers are not homogeneous, i.e., they are in noncompeting groups. These differences that determine these noncompeting groups are:
 - a. Ability levels differ among workers.
 - b. Education and training, i.e. "investment in human capital."
 - i. Human capital is the accumulated knowledge, know-how, skills, experience, and health that enable a person to be productive and generate income.
 - ii. Figure 13.10 indicates that those with more years of schooling achieve higher incomes.
 - iii. The pay gap between college graduates and high school graduates increased substantially between 1980 and 2003.
 - iv. **CONSIDER THIS ... My Entire Life**
 4. Workers also will experience wage differentials partly due to "compensating differences" among jobs. These are the nonmonetary aspects of the job that may make some jobs preferable to others because of working conditions, location, etc. (Figure 13.9 (c) and (d))
- C. Since market imperfections exist, labor markets are not perfectly competitive.
 1. Workers may lack information about alternative job opportunities.
 2. Workers may be reluctant to move to other geographic locations.
 3. Artificial restraints on mobility may be created by unions, professional organizations, and the government.
 4. Discrimination in certain labor markets may crowd women and minorities into certain labor markets and out of others. This is referred to as *occupational segregation*.

VII. Pay and performance are linked in many jobs, unlike the standardized wage rate per time unit.

- A. When one considers workers as the firm's agents and the firm as the principal, the principal-agent problem emerges.
 1. Both the workers and the firm want the firm to survive and be profitable.

2. If the agents do not perceive that the workers' and firm's interests are identical, there may be a problem, because workers will act to improve their own well-being, often at the expense of the firm. Some examples include loafing on the job, using company materials, and generally not working as hard as they might.
3. Some incentive methods of payment help to avoid the principal-agent problem.
 - a. With piece-rate payments, workers earn according to the quantity of output produced.
 - b. Commissions and royalties are payment schemes linked to the value of sales.
 - c. Bonuses, stock options, and profit sharing are other ways to motivate workers to have the same interests as the firm.
 - d. Efficiency wages are a way of providing incentives by paying workers above-equilibrium wages to encourage extra effort.
- B. Pay for performance can help overcome the principal-agent problem and enhance worker productivity, but such plans can have negative side effects.
 1. A rapid production pace can compromise quality and endanger workers.
 2. Commissions may cause salespeople to exaggerate claims, suppress information, and use other fraudulent sales practices.
 3. Bonuses based on personal performance may disrupt cooperation among workers.
 4. Less energetic workers can take a "free ride" in profit sharing firms.
 5. Firms paying "efficiency wages" may have fewer opportunities to hire the new workers who could energize the workplace.

VIII. LAST WORD: Are Chief Executive Officers (CEOs) Overpaid?

- A. Multimillion dollar salaries of top corporate executives are highly criticized.
- B. CEO pay in the U.S. (\$2.2 million average for firms with \$500 million in sales) in 2005 was almost twice that of France and Germany (\$1.2 million), and at least three times that of South Korea and Japan.
- C. Supporters of high CEO compensation argue that executive decisions affect the productivity of all employees in a firm. This, in turn, affects profitability for firms, and the difference between a good and a poor decision can be millions (if not billions) of dollars.
- D. Some economists argue that CEO pay is analogous to the top pay received by top performers in athletics (golf and tennis tournaments) and the entertainment industry. By having these substantial rewards for the “winners,” it promotes greater productivity both for those holding CEO positions, and for those aspiring to be CEOs.
- E. Critics contend that although CEOs deserve higher pay than ordinary workers, the gaps are excessive (they would especially balk at CEO performance bonuses at times of wage and salary freezes or cuts for ordinary workers). They also believe that the high salaries are unfair to stockholders. Boards of Directors exaggerate the importance of the CEO and thus overcompensate, reducing company profits and potential dividends for investors.

APPENDIX TO CHAPTER 13: Labor Unions and Their Impacts

I. Unionism in America

- A. About 12.3 percent (15.3 million) U.S. workers belonged to unions in 2009.
 - 1. Many unions (representing 8 million workers) are voluntarily affiliated with the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO).
 - 2. There are a number of independent unions, representing 6 million workers, including organizations such as the Teamsters, Service Employees Union, and Nurses Union.
- B. In the United States, unions have generally adhered to a philosophy of business unionism.
 - 1. Concerned with the practical short-run economic objectives of higher pay, shorter hours, and improved working conditions.
 - 2. Union members have not organized into a distinct political party.
- C. The likelihood of union membership depends mainly on the industry: Membership is high in government, transportation, construction, manufacturing and mining; low in agriculture, finance, and retail trade. (See Figures 1a and b)
- D. The decline of unionism.
 - 1. Since the mid-1950s union membership has not kept pace with the growth of the labor force. Union membership has declined both absolutely and relatively.
 - 2. The structural-change hypothesis says that changes unfavorable to union membership have occurred in both the economy and the labor force.
 - a. Employment patterns have shifted away from unionized industries. Consumer demand has shifted from unionized U.S. producers of manufactured goods to foreign producers. Also demand has shifted from highly organized “old-economy” unionized firms to “high-tech” industries.

- b. A higher proportion of the increase in employment recently has been concentrated among women, youths and part time workers; groups that harder to organize.
- c. A geographic shift of industrial location away from the northeast and Midwest (traditional union country) to the south and southwest.
- d. Union success in gaining higher wages for their workers may have given employers an incentive to substitute away from the expensive union labor in a number of ways.
 - i. Substituting machinery for workers,
 - ii. Subcontracting more work to nonunion suppliers,
 - iii. Opening nonunion plants in less industrialized areas, and
 - iv. Shifting production of components to low-wage nations.
- E. Relatively high-priced union produced goods would encourage consumers to seek lower-cost goods produced by non-union workers.

II. Collective Bargaining

- A. The goal of collective bargaining is to establish a “work agreement” between the firm and the union.
- B. Union status and managerial prerogatives.
 - 1. In a closed shop, a worker must be (or become) a member of the union before being hired. This is illegal except in transportation and construction.
 - 2. In a union shop, an employer may hire nonunion workers, but they must join in a specified period of time.
 - 3. An agency shop requires nonunion workers to pay dues or donate a similar amount to charity.
 - 4. In an open shop, the employer may hire union or nonunion workers. Workers are not required to join the union or contribute; but the “work agreement” applies to all workers – union and nonunion.
 - 5. Most work agreements contain clauses outlining the decisions reserved solely for management; these are called managerial prerogatives.
- C. The focal point of any bargaining agreement is wages and hours.
 - 1. The arguments most frequently used include for wage increases are:
 - a. “What others are getting”;
 - b. Employer’s ability to pay based on profitability;
 - c. Increases in the cost of living; and
 - d. Increases in labor productivity.
 - 2. In some cases, unions win automatic cost-of-living adjustments (COLAs).
 - 3. Hours of work, voluntary and mandatory overtime, holiday and vacation provisions, profit sharing, health plans, and pension benefits are other contract issues.

- D. Unions stress seniority as the basis for worker promotion and for layoff and recall and sometimes seek means to limit a firm's ability to subcontract work or to relocate production facilities overseas.
- E. Union contracts contain grievance procedures to resolve disputes.
- F. The bargaining process.
 - 1. Collective bargaining on a new contract usually begins about 60 days before the existing contract expires.
 - 2. Hanging over negotiations is the "deadline" which occurs at the expiration of the old contract, at which time a strike (union work stoppage) or a lockout (management forbids workers to return) can occur.
 - 3. Bargaining, strikes and lockouts occur within a framework of Federal labor law, specifically the National Labor Relations Act (NLRA).

III. Economic Effects of Unions

- A. The union wage advantage is verified by studies that suggest that unions do raise the wages of their members relative to comparable nonunion workers; on average, this pay differential over the years is estimated to have been about 15 percent.
 - 1. The overall average level of wages of all workers has probably not been affected by unions (Figure 2).
 - 2. Union workers seem to gain at the expense of nonunion workers.
 - 3. Real wages overall still depend on productivity.
- B. Efficiency and productivity are affected both positively and negatively by unions.
 - 1. The negative view has three major points.
 - a. Featherbedding and work rules make it difficult for management to be flexible and to use their workers in the most efficient ways.
 - b. Strikes, while rare, do constitute a loss of production time and affect certain industries more than others.
 - c. Labor misallocation might occur as a result of the union wage advantage, but studies suggest that the efficiency loss is minimal—perhaps only a fraction of one percent of U.S. GDP.
 - 2. The positive view has three major points as well.
 - a. Managerial performance may be improved when wages are high because managers are forced to use their workers in more efficient ways. This is called the shock effect.
 - b. Worker turnover may be reduced where workers feel they can voice dissatisfaction and have some bargaining power. (Using the "voice mechanism" rather than the "exit mechanism")
 - c. Seniority promotes productivity because workers do not fear loss of jobs, and informal training may occur on the job because workers do not compete with one another in a seniority-based system.

3. Research findings have been mixed. Some have found a positive effect of unions on productivity, while an almost equal number have found a negative effect of unions on productivity.

QUIZ

1. If the nominal wages of carpenters rose by 5 percent in 2008 and the price level increased by 3 percent, then the real wages of carpenters:
 - A. decreased by 2 percent.
 - B. increased by 2 percent.
 - C. increased by 3 percent.
 - D. increased by 8 percent.

Answer: B

2. If a firm is hiring a certain type of labor under purely competitive conditions:
 - A. its labor demand curve will be perfectly elastic at the market-determined wage rate.
 - B. the labor supply curve will lie above the marginal labor cost curve.
 - C. the labor supply and marginal labor (resource) cost curves will coincide and be upsloping.
 - D. the labor supply and marginal labor (resource) cost curves will coincide and be perfectly elastic.

Answer: D

3. Real wages would rise if the:
 - A. Prices of goods and services rose more rapidly than nominal-wage rates
 - B. Prices of goods and services rose less rapidly than nominal-wage rates
 - C. Prices of goods and services and wage rates both rose
 - D. Prices of goods and services and wage rates both fell

Answer: B

4. A single buyer is called a(n):

- A. Monopolist
- B. Monopsonist
- C. Oligopolist
- D. Labor union

Answer: B

5. An industrial union:

- A. Is most concerned with decreasing the supply of workers in an industry
- B. Organizes workers with similar skills or jobs in an industry
- C. Organizes skilled and unskilled workers in an industry
- D. Is most effective in a purely competitive industry

Answer: C

6. Craft unions have typically been most effective in raising wage rates by:

- A. Increasing the supply of labor
- B. Increasing the demand for labor
- C. Decreasing the supply of labor
- D. Decreasing the demand for labor

Answer: C

7. Critics of the minimum wage argue that an increase in the minimum wage rate above the equilibrium rate of a purely competitive labor market would:

- A. Increase unemployment in the labor market
- B. Increase firms' demand for labor
- C. Decrease the supply of labor
- D. Cause firms to substitute labor for capital

Answer: A

8. Shirking can be considered to be a principal-agent problem because:
- A. Firms often operate in a monopsonistic labor market
 - B. Firms pay seniority wages to workers in a labor market
 - C. The work objectives of the agents diverge from the profit objectives of the principal
 - D. The principal firm in an industry does most of the major collective bargaining for other agents in the industry

Answer: C

9. A firm pays an equilibrium wage of \$15.00 an hour and the workers produce 25 units of output an hour. If the firm adopts an efficiency wage, then the wage rate for these workers would be expected to:
- A. Increase and productivity to decrease
 - B. Decrease and productivity to increase
 - C. Increase and productivity to increase
 - D. Decrease and productivity to decrease

Answer: C

10. Suppose all workers are identical, but working for Ajax is more pleasant than working for Acme. In all other nonwage aspects the two firms offer the same job characteristics. We would expect:
- A. wage rates at Ajax to be higher than at Acme.
 - B. wage rates at Ajax to be lower than at Acme.
 - C. wage rates at Ajax and Acme to be the same.
 - D. workers at Ajax would have to be monitored more closely than at Acme.

Answer: B