19 EARNINGS AND DISCRIMINATION

WHAT'S NEW IN THE SIXTH EDITION:

There are no major changes to this chapter.

LEARNING OBJECTIVES:

By the end of this chapter, students should understand:

- how wages compensate for differences in job characteristics.
- the human-capital and signaling theories of education.
- why in some occupations a few superstars earn tremendous incomes in some occupations.
- why wages rise above the level that balances supply and demand.
- why it is difficult to measure the impact of discrimination on wages.
- when market forces can and cannot provide a natural remedy for discrimination.

LEARNING OBJECTIVES:

Chapter 19 is the second chapter in a three-chapter sequence that addresses the economics of labor markets. Chapter 18 developed the markets for the factors of production. Chapter 19 goes beyond the supply-and-demand models developed in Chapter 18 to help explain the wide variation in wages we find in the economy. Chapter 20 addresses the distribution of income and the role the government can play in altering the distribution of income.

The purpose of Chapter 19 is to extend the basic neoclassical theory of the labor market that was developed in Chapter 18. Neoclassical theory argues that wages depend on the supply and demand for labor and that labor demand depends on the value of the marginal productivity of labor. To address the wide variation in the wages that occurs in the real world, it is important to examine more precisely what determines the supply and demand for various types of labor.

KEY POINTS:

- Workers earn different wages for many reasons. To some extent, wage differentials compensate workers for job attributes. Other things being equal, workers in hard, unpleasant jobs get paid more than workers in easy, pleasant jobs do.

- Workers with more human capital get paid more than workers with less human capital. The return to accumulating human capital is high and has increased over the past decade.

- Although years of education, experience, and job characteristics affect earnings as theory predicts, there is much variation in earnings that cannot be explained by things that economists can measure. The unexplained variation in earnings is largely attributable to natural ability, effort, and chance.

- Some economists have suggested that more-educated workers earn higher wages not because education raises productivity but because workers with high natural ability use education as a way to signal their high ability to employers. If this signaling theory were correct, then increasing the educational attainment of all workers would not raise the overall level of wages.

- Wages are sometimes pushed above the level that brings supply and demand into balance. Three reasons for above-equilibrium wages are minimum-wage laws, unions, and efficiency wages.

- Some differences in earnings are attributable to discrimination on the basis of race, sex, or other factors. Measuring the amount of discrimination is difficult, however, because one must correct for differences in human capital and job characteristics.

- Competitive markets tend to limit the impact of discrimination on wages. If the wages of a group of workers are lower than those of another group for reasons not related to marginal productivity, then nondiscriminatory firms will be more profitable than discriminatory firms will. Profit-maximizing behavior, therefore, can act to reduce discriminatory wage differentials. Discrimination can persist in competitive markets if customers are willing to pay more to discriminatory firms or if the government passes laws requiring firms to discriminate.

CHAPTER OUTLINE:

I. Some Determinants of Equilibrium Wages

> Most people (especially college students) have little idea about the level of earnings in the labor force and about the extent of income differences. The general impression is that earnings are higher than they actually are. Thus, the actual differences in earnings among the population are a topic that most students will find interesting.

A. Compensating Differentials

1. Definition of **compensating differential: a difference in wages that arises to offset the nonmonetary characteristics of different jobs.**

2. Jobs that are easy, fun, or safe will pay lower wages than jobs that are difficult, dull, or dangerous.

An obvious example of a compensating wage differential is work that entails danger and potential personal injury. A wage premium is paid to compensate workers for exposing themselves to risk. Examples include workers in high-rise construction or electrical linemen.

***Seinfeld, "The Bris."* (Season 5, 21:30-22:13).** In the comedy clip at the end of the episode, Jerry says that the amazing thing is that "for every job, no matter how objectionable, there is someone there to do it." Properly functioning markets ensure that all jobs get filled; often to do this certain jobs require an additional premium to compensate for risk or other unpleasant dimensions of the job.

B. Human Capital

1. Definition of **human capital: the accumulation of investments in people, such as education and on-the-job training.**

2. Workers with more human capital on average earn more than those with less human capital.

3. Firms are willing to pay more for highly educated workers because highly educated workers have higher marginal products.

4. *Case Study: The Increasing Value of Skills*

   a. Table 1 compares the average earnings of college graduates with the average earnings of high school graduates with no additional education.

Table 1

   b. We can see that there has been an increase in this difference over time.

   c. One possible reason that this has occurred is that international trade has changed the relative demand for skilled and unskilled labor.

   d. Another possible reason is that changes in technology have changed the relative demand for skilled and unskilled workers.

C. Ability, Effort, and Chance

1. Because of heredity and upbringing, people differ in their physical and mental attributes. This will affect their productivity level and therefore their wage.

2. People also differ in their level of effort. Those who work hard are more productive and earn a higher wage.

3. Chance also plays a role in determining wages.

4. *Case Study: The Benefits of Beauty*

    a. Daniel Hamermesh and Jeff Biddle used data from surveys conducted in the United States and Canada to try to determine how wages are affected by physical appearance.

    b. They found that people who are considered to be more attractive than average earned 5% more than people of average looks. People of average looks earn 5% to 10% more than people considered to be less attractive than average.

    c. One possible reason for this is that good looks are important for workers who have close dealings with the public.

    d. Another possible reason is that a person who is successful in making him or herself attractive may be equally successful in other tasks.

    e. A third possible reason for this difference in the wages is discrimination.

D. An Alternative View of Education: Signaling

1. Some economists have suggested that firms may use education as a way to sort high-ability workers from low-ability workers.

2. This implies that when people earn a college degree, they do not become more productive, but instead signal their high ability to prospective employers.

3. This occurs because it is easier for high-ability people to get college degrees; therefore, more high-ability people get college degrees.

E. *In the News: The Human Capital of Terrorists*

1. Workers with more education are better at all kinds of tasks, even those aimed at destruction.

2. This is an article from the *New York Times* describing the education and training of terrorists.

F. The Superstar Phenomenon

1. Superstars arise in markets that have two characteristics.

    a. Every customer in the market wants to enjoy the good supplied by the best producer.

    b. The good is produced with a technology that makes it possible for the best producer to supply every customer at a low cost.

2. This is why we see superstars in some markets (entertainment, professional sports) and not in others (plumbing, carpentry).

G. Above-Equilibrium Wages: Minimum-Wage Laws, Unions, and Efficiency Wages

1. For some workers, wages are set above the level that brings supply and demand into balance.

2. There are three reasons why this may be the case.

a. Minimum-wage laws that generally apply to the least skilled and least experienced workers.

b. Definition of **union: a worker association that bargains with employers over wages and working conditions.**

c. Definition of **strike: the organized withdrawal of labor from a firm by a union.**

d. Definition of **efficiency wages: above-equilibrium wages paid by firms to increase worker productivity.**

e. These higher wages often reduce worker turnover, increase worker effort, and raise the quality of workers who apply for jobs at the firm.

3. Above-equilibrium wages raise the quantity of labor supplied and lower the quantity demanded, creating a surplus of labor.

II. The Economics of Discrimination

A. Definition of **discrimination: the offering of different opportunities to similar individuals who differ only by race, ethnic group, sex, age, or other personal characteristics.**

B. Measuring Labor-Market Discrimination

1. Table 2 reports median annual earnings by race and gender for 2008.

Table 2

a. The median black man was paid 21% less than the median white man.

b. The median black woman was paid 13% less than the median white woman.

c. The median white woman was paid 24% less than the median white man.

d. The median black woman was paid 15% less than the median black man.

2. However, it is difficult to determine how much of the differential in wages across different groups can be attributed to discrimination.

a. For example, the quantity of education often differs between blacks and whites.

b. It is also likely that the quality of education may differ as well.

c. Women generally have less labor market experience than men.

d. It may also be true that women take more pleasant jobs than men, leading to a compensating wage differential.

3. Because the differences in median earnings among groups in part reflect differences in human capital and job characteristics, they do not by themselves say anything about how much discrimination there is in the labor market.

> ***Anchorman: The Legend of Ron Burgundy, Chapter 5.*** Will Farrell plays Ron Burgundy, a news anchor in the 1970s. His male-dominated newsroom undergoes a change when the station hires its first female anchorperson, Veronica Corningstone.

4. *Case Study: Is Emily More Employable than Lakisha?*

    a. Economists Marianne Bertrand and Sendhil Mullainatham answered more than 1,300 help-wanted ads run in Boston and Chicago newspapers by sending in nearly 5,000 fake resumes.

    b. Half of the resumes had names that were common in the African-American community, while the other half had names that were more common among the white population. Otherwise, the resumes were similar.

    c. Job applicants with "white" names received about 50% more calls from interested employers than applicants with "African-American" names.

C. Discrimination by Employers

1. It may be incorrect to blame employers for discrimination because each firm has a profit motive.

2. Example: Two types of people, blondes and brunettes. Both groups have the same skills, experience, and work ethic. But employers prefer not to hire blondes.

    a. This implies that the demand for blondes is lower than it otherwise would be.

    b. This also means that blondes will earn a lower wage than brunettes.

3. In this economy, there is an easy way for a firm to beat out its competitors: hire all blondes.

    a. This firm would pay lower wages and therefore have lower costs.

    b. Over time, we would expect more firms to follow this example.

    c. The existing firms still hiring brunettes would be forced out of business due to their higher labor costs.

    d. The demand for blondes increases (increasing the wage that blondes earn), while the demand for brunettes falls (decreasing the wage that brunettes earn). This will continue until the wages of the two groups are equal.

4. Businesses that care about earning a profit are at an advantage when competing against those that also care about discriminating.

5. *Case Study: Segregated Streetcars and the Profit Motive*

    a. Studies of the streetcar industry suggest that streetcars were never segregated until the firms were required to do so by law.

   b. In fact, many firms that ran the streetcars protested these laws because of the increase in the firms' costs from the law (which meant lower profits).

D. Discrimination by Customers and Governments

1. Customer preferences may limit the ability of the profit motive to eliminate discriminatory wage differentials.

   a. If customers do not care whether they are being waited on by a blonde or a brunette, the profit motive will work and both groups will eventually be earning the same wage.

   b. If customers prefer brunettes, the entry of firms that hire blondes will not succeed in eliminating the wage differential between blondes and brunettes.

2. Also, if the government mandates discriminatory practices, then the wage differentials between the groups will continue to exist.

3. *Case Study: Discrimination in Sports*

   a. Studies of sports teams suggest that racial discrimination is common and that much of the blame lies with the customers.

   b. One study found that black basketball players earned 20% less than white players of comparable ability did. Attendance at basketball games was also higher for teams with a larger proportion of white players. So even if the team owners cared only about profit, the customer discrimination makes hiring black players less profitable than white players.

   c. The same situation was found in baseball in the 1960s, but more recent studies suggest that the wage differential in baseball no longer exists.

   d. Even the value of baseball cards has been affected by discrimination. A 1990 study found that the cards of black hitters sold for 10% less than the cards of comparable white hitters. The cards of black pitchers sold for 13% less than the cards of comparable white pitchers.

E. *In the News: Gender Differences*

1. Recent economic research is shedding light on why men and women often choose different career paths.

2. This is an article by economist Hal Varian describing experimental research aimed at explaining why females are less likely to choose occupations that involve high levels of competition.

Activity 1—Even Money

Type: In-class assignment
Topics: Incentives, distribution of income
Materials needed: None
Time: 20 minutes
Class limitations: Works in any size class

Purpose
This assignment explores labor market issues by looking at an artific
equality. Notions of incentives and job differences are explored. Thi
discussion, particularly if the proposal is presented as a realistic alte

Instructions
Have the class answer the following questions. Give them time to w
question, then discuss their answers before moving to the next que

4. Who would benefit from equalizing the distribution of income?
   A vast majority of households would gain (in the short run, if the system worked) because the median household income is so much lower than an equal share of GDP.

5. What jobs would be hard to fill?
   Students break into two groups on this question. Many see the undesirable jobs as menial, rote, unsafe, or unclean. Slaughterhouses, garbage disposal, and assembly-line work are frequent examples.

   A relevant follow-up question is: "Why would these jobs be hard to fill at $90,000 a year, when people currently work these jobs for much lower wages?"

   Another group of students think professional jobs would be undesirable. Doctors, lawyers, and executives are their examples.

   Ask them, "Are these jobs worse than sucking the guts out of a dead chicken? These jobs seem to have better working conditions, high levels of personal autonomy, and some interesting challenges. Are people in these jobs motivated by more than money?"

   Looking at the best jobs, many students seem to feel the ultimate "fun job" would be in professional sports. Ask them why these workers need to receive millions of dollars in compensation.

   This assignment can be used to introduce a number of topics such as market allocation of resources, distribution of income, risk premiums, compensating differentials, and returns to human capital.

SOLUTIONS TO TEXT PROBLEMS:

Quick Quizzes

1. A compensating differential is a difference in wages that arises to offset the nonmonetary characteristics of different jobs. Examples include coal miners who earn extra wages to compensate them for dangerous working conditions, workers on the night shift who get paid more than day-shift workers, and professors who are paid less than lawyers and doctors.

   More educated workers earn more than less educated workers because they are more productive, so employers are willing to pay them more, and because more education may signal greater innate ability.

2. It is hard to establish whether a group of workers is being discriminated against because there are many reasons other than discrimination for wages to differ across workers, such as differences in human capital and job characteristics.

   Profit-maximizing firms tend to eliminate discriminatory wage differentials because if some set of workers were being discriminated against, it would be in the interest of profit-maximizing firms to hire those workers with lower wages. But that, in turn, would raise the wages of those workers until the wages of all similar workers were equal.

A discriminatory wage differential might persist if customers are willing to pay to maintain the discriminatory practice or if the government mandates it.

Questions for Review

1. Coal miners are paid more than other workers with similar amounts of education because their higher wage compensates them for the dirty and dangerous nature of coal mining, as well as their long-term health problems. As a result, they earn a sizable compensating differential.

2. Education is a type of capital because it represents an expenditure of resources at one point in time to raise productivity in the future.

3. Education might raise a worker's wage without raising the worker's productivity if education works as a signal that the worker has high ability.

4. The conditions that lead to economic superstars are: (1) every customer wants to enjoy the good supplied by the best producer; and (2) the good is produced with a technology that makes it possible for the best producer to supply every customer at a low cost. Because one dentist could not supply every customer, you would not expect to see superstars in dentistry. But because copies of music can be made at low cost, you would expect to see superstars in music.

5. A worker's wage might be above the level that balances supply and demand because: (1) minimum-wage laws raise wages above the levels that some workers would earn in an unregulated labor market; (2) unions may have market power to raise wages above their equilibrium levels; and (3) a firm may find it profitable to pay an efficiency wage, which exceeds the equilibrium wage, because doing so raises productivity.

6. Deciding whether a group of workers has a lower wage because of discrimination is difficult because people differ in other attributes, such as the amount of education they have, the amount of experience they have, and the possibility of compensating differentials.

7. The forces of economic competition tend to ameliorate discrimination on the basis of race, because business owners who care only about making profit are at an advantage when competing against those who also care about discriminating.

8. Discrimination can persist in a competitive market if customers have a preference for discrimination. For example, if customers prefer blonde waiters to brunettes, restaurants will prefer to hire blonde waiters and they will discriminate against brunettes.

Problems and Applications

1. a. The opportunity cost of taking a job as a summer intern that pays little or nothing is the wage that the student could earn at an alternative job.

   b. Despite the low wages, students are willing to take internships because an internship might help them land a permanent job with the firm or the government later. Also, the internship enhances the student's resume. Finally, the student may gain valuable on-the-job training.

c. You would expect that students who were interns earn higher incomes later in life.

2. The single minimum wage might distort the labor market for teenage workers more than for adult workers because: (1) teenagers have a lower value of marginal product, so it is more likely that the minimum wage will be above their value of marginal product; and (2) the demand for teenage labor is more elastic than for adult labor, so the minimum-wage law distorts the market more. The minimum wage affects those individuals who are least skilled and least experienced and these characteristics generally apply to teenagers.

3. People with more experience usually have had more on-the-job training than others with the same formal education but less experience. Such training increases the value of the marginal product of their labor. Job tenure is also valuable, because people gain job-specific knowledge or a specialization in knowledge that is useful to the firm.

4. a. Economics professors may receive higher salaries than professors in some other fields because they have better opportunities outside academia. For example, they could find jobs in the private sector or the government.

   b. Differences in teaching loads can make up for lower pay. If professors in all fields are paid the same, the pay level is probably below what economics professors could earn elsewhere. To attract economics professors, the university would have to offer them some other compensation, such as a lower teaching load.

5. Under the signaling theory, you would rather have the degree and not attend the university. But under the human-capital theory, you would rather attend, even though doing so would be a secret.

6. The development of recording devices led to a superstar phenomenon in which the best musicians were paid significantly more than average musicians were paid. So the incomes of the best musicians rose and the income of the average musician fell.

7. a. People respond to incentives. Merit pay provides an incentive for teachers to work harder.

   b. Teachers whose classes do not perform well may be opposed to a system of merit pay. Also, some teachers may not want to work harder to receive higher pay.

   c. A large challenge would be to accurately measure the teachers' performance.

   d. Because incentives matter, it should be able to secure better teachers by offering higher wages.

8. Yes, his behavior is profit maximizing. He is hiring labor at a lower cost. You might claim that Alan is despicable because he is discriminating against men. Some might claim that Alan was admirable, though, because he is maximizing profit and giving women a better opportunity to find a job. If more employers were like Alan, the wage differential between men and women would shrink, as employers would be competing for female workers, so women would have as many job options as men. Ultimately, the wage differential could disappear. Other firms at the time may not have followed his strategy because their customers may have preferred male consultants.

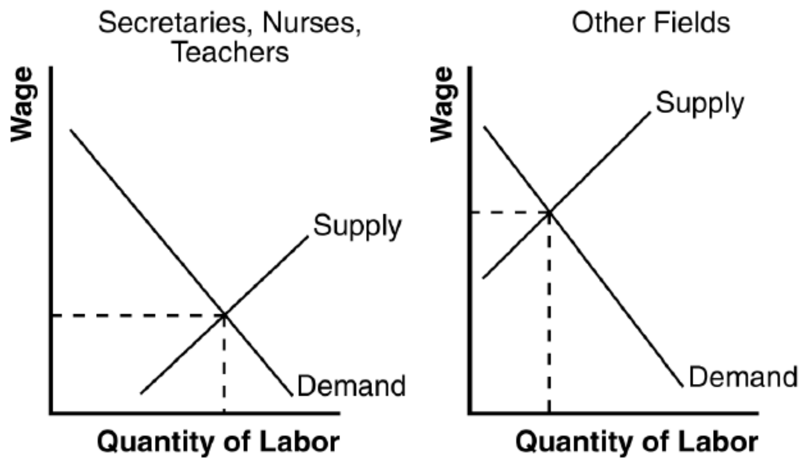

Figure 1

9. a. Figure 1 shows a situation in which young women are channeled into careers as secretaries, nurses, and teachers. The left panel shows the labor market for secretaries, nurses, and teachers, and the right panel shows the labor market for other fields. The large supply of people in the secretarial, nursing, and teaching fields depresses the wage in those fields. On the other hand, the smaller supply of labor in other fields raises the relative wage.

   b. Over time, if both men and women pursue more varied fields of work, the wages across fields should equalize. The supply of labor in the market for secretaries, nurses, and teachers will fall and the supply of labor in other fields will rise. Thus, the average wages of men should decline relative to the average wages of women.

10. If brunette workers do not like working with blonde workers, a blonde worker's marginal product of labor is likely to be lower, because the firm's output will not be as high compared to the case if the firm had a brunette worker instead. Thus, firms might find that blonde workers are not worth as much and may reduce their wages relative to brunette workers. A profit-maximizing entrepreneur could create a firm using all blonde workers, so there would be no frictions between brunette and blonde workers. If there were many such entrepreneurs, the wage differential between brunette and blonde workers would disappear over time.