

Chapter 2

Overview of the Labor Market

■ Answers to Even-Numbered Review Questions

2. Analyze the impact of the following changes on wages and employment in a given occupation:
- A decrease in the danger of the occupation.
 - An increase in product demand.
 - Increased wages in alternative occupations.

Answer:

- A fall in the danger of the occupation, other things being equal, should increase the attractiveness of that occupation, shifting the supply curve to the right and causing employment to rise and wages to fall.
- An increase in product demand will shift the demand for labor curve to the right, causing both wages and employment to increase.
- Increased wages in other occupations will render them relatively more attractive than they were before and cause the supply curve to the occupation in question to shift to the left. This will cause employment in this market to fall and wages to rise.

4. Suppose a particular labor market were in market-clearing equilibrium. What could happen to cause the equilibrium wage to fall? If all money wages rose with inflation each year, how would real wages in this market adjust?

Answer: Starting from the position of equilibrium, a labor market could experience a fall in the equilibrium wage if either the demand curve shifts to the left or the supply curve shifts to the right. While market wages are usually stated in nominal terms, their relationship to the prices of both consumer and producer products is of ultimate importance. Therefore, both parties to the employment relationship are, in the last analysis, concerned with the real wage rate. The real wage rate can fall when the nominal wage rate is rising if prices of consumer and producer products rise even more quickly.

6. Ecuador is the world's leading exporter of bananas, which are grown and harvested by a large labor force that includes many children. Assume Ecuador now outlaws the use of child labor on banana plantations. Using economic theory in its "positive" mode, analyze what would happen to employment and wages in the banana farming industry in Ecuador. Use demand and supply curves in your analysis.

Answer: The labor supply curve to banana producers would clearly shift to the left as children were removed from the labor market. This would raise the wages paid by growers and reduce employment in the sector.

8. American students have organized opposition to the sale by their campus stores of university apparel made for American retailers by workers in foreign countries who work in sweatshop conditions (long hours at low pay in bad working conditions). Assume this movement takes the form of boycotting items made under sweatshop conditions.
- Analyze the immediate labor market outcomes for sweatshop workers in these countries using demand and supply curves to illustrate the mechanisms driving the outcomes.
 - Assuming the actions by American students are the only force driving the improvement of wages and working conditions in foreign countries, what must these actions include to ensure that the workers they are seeking to help are unambiguously better off?

Answer:

- A boycott has the effect of shifting the demand for apparel made by sweatshop labor to the left, driving down wages and employment.
- To avoid the effects in (a), students in the United States must be willing to buy the same quantity and quality of apparel at higher prices—that is, they must be willing to pay a premium for apparel made by better-paid workers.

10. Suppose we observe that employment levels in a certain region suddenly decline as a result of (i) a fall in the region's demand for labor, and (ii) wages that are fixed in the short run. If the new demand for labor curve remains unchanged for a long period and the region's labor supply curve does not shift, is it likely that employment in the region will recover? Explain.

Answer: The initial response to a leftward shift in the labor demand curve in the context of fixed wages is for there to be a relatively large decline in employment. This decline in employment is larger than the ultimate decline in employment. The initial disequilibrium between demand and supply in the labor market should force wages down in the long run, and as wages decline firms will move downward along their labor demand curves and will begin to employ more labor. However, employment in the region would recover to its prior level (assuming no subsequent shifts in demand or supply curves) only if the supply curve was vertical; if supply curves are upward-sloping, the declining wage will cause some withdrawal of labor from the market and employment will not recover to its prior level.

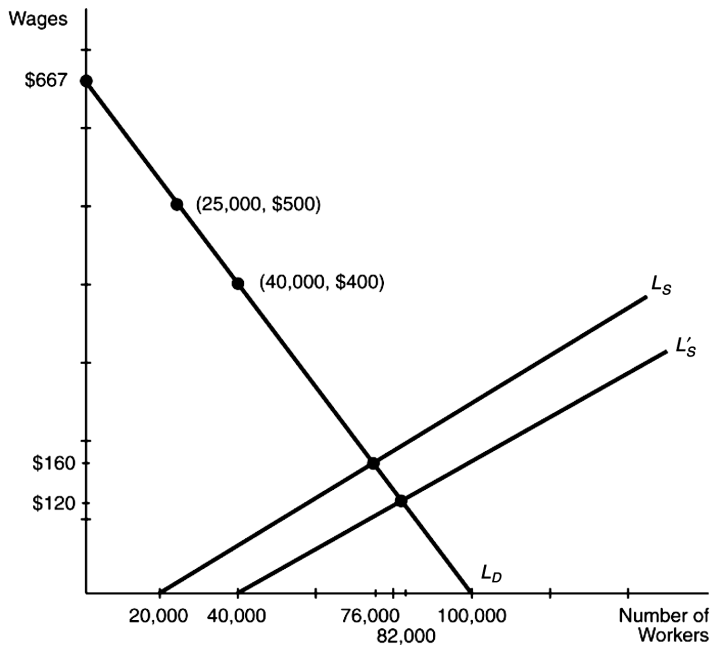
12. Assume that the war in Iraq increased the desired size of the military, and assume that potential recruits are reduced by the prospect of facing dangerous, unpleasant wartime conditions. First, analyze how the war affects the demand curve and the supply curve for military personnel. Second, use your analysis to predict how the war will affect the wages and the employment level of military personnel.

Answer: War shifts the labor demand curve to the right and shifts the labor supply curve to the left. Higher wages are clearly a result of both shifts, but the effects on the level of military employment are uncertain.

■ Answers to Even-Numbered Problems

2. Suppose that the supply curve for school teachers is $L_s = 20,000 + 350W$ and the demand curve for school teachers is $L_d = 100,000 - 150W$, where L = the number of teachers and W = the daily wage.
- Plot the demand and supply curves.
 - What are the equilibrium wage and employment level in this market?
 - Now suppose that at any given wage 20,000 more workers are willing to work as school teachers. Plot the new supply curve and find the new wage and employment level. Why doesn't employment grow by 20,000?

Answer: a. See the figure. Plot the L_d and L_s curves by solving for desired employment at given wage rates. If $W = 500$, for example, employers desire 25,000 workers ($L_d = 100,000 - 150 \times 500$); if $W = 400$, they would desire 40,000. Since the equation above is for a straight line, drawing a line using these two points gives us the demand curve. Use the same procedure for the labor supply curve.



- b. To find the equilibrium, solve for the wage at which the quantity of labor supplied equals the quantity of labor demanded: $L_s = 20,000 + 350W = 100,000 - 150W = L_d$. Solve for W by adding $150W$ to both sides and subtracting 20,000 from both sides to yield $500W = 80,000$. Dividing both sides by 500 reveals that $W = \$160$ per day. Plugging $W = \$160$ into both the labor demand and supply equations shows that $L = 76,000$ schoolteachers.
- c. The new labor supply curve is $L'_s = 40,000 + 350W$. Setting this equal to L_d and solving shows that $W = \$120$ per day; $L = 82,000$ school teachers. Employment doesn't grow by 20,000 because the shift in the supply curve causes the wage to fall, which induces some teachers to drop out of the market.

4. Suppose the adult population of a city is 9,823,000, and there are 3,340,000 persons who are not in the labor force and 6,094,000 who are employed.

- a. Calculate the number of adults who are in the labor force and the number of adults who are unemployed.
- b. Calculate the labor force participation rate and the unemployment rate.

Answer: a. Number in labor force = number in population less those not in the labor force
 $= 9,823,000 - 3,340,000 = 6,483,000$

Number unemployed = number in labor force minus number employed
 $= 6,483,000 - 6,094,000 = 389,000$

b. Labor force participation rate = (labor force/population) \times 100
 $= (6,483,000/9,823,000) \times 100$
 $= 66.0\%$

Unemployment rate = (unemployed/labor force) \times 100
 $= (389,000/6,483,000) \times 100$
 $= 6.0\%$

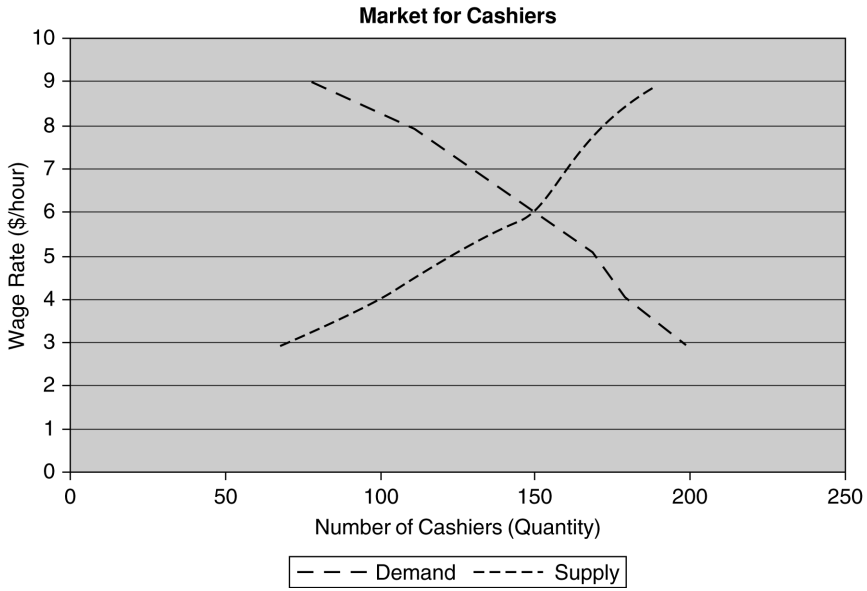
6. The following table gives the demand and supply for cashiers in retail stores.

Wage Rate	Number of Cashiers Demanded	Number of Cashiers Supplied
\$3.00	200	70
4.00	180	100
5.00	170	120
6.00	150	150
7.00	130	160
8.00	110	175
9.00	80	190

- a. Plot the demand and supply curves.
- b. What are the equilibrium wage and employment level in this market?

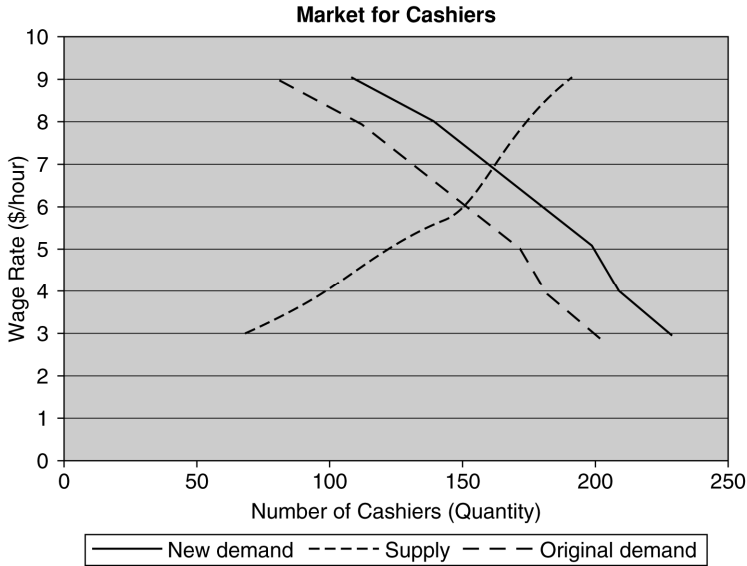
- c. Suppose the number of cashiers demanded increases by 30 at every wage rate. Plot the new demand curve. What are the equilibrium wage and employment level now?

Answer: a.



- b. From either the table or the graph, the equilibrium wage is \$6.00 per hour and the equilibrium quantity is 150 cashiers.

c.



From either the table or the graph, the new equilibrium wage is \$7.00 per hour and the equilibrium quantity is 160 cashiers.