Another type of employee mobility, turnover or separations, can take place without geographic mobility, but evidence related to voluntary turnover (quits) also supports the predictions of the human capital investment framework. The evidence clearly shows that workers in low-wage industries have higher quit rates than those in high-wage industries. This is consistent with the prediction of the human capital model since, holding all else constant, the lower the wage paid by the current employer, the greater the benefit associated with changing jobs.

Quit rates also tend to decline as firm size increases. Larger firms tend to pay higher wages and may offer more opportunities for transfers and promotions. It may also be more beneficial for large firms to attempt to reduce quit rates because they may have mechanized production processes that rely on team efforts, and thus quits may be more costly.

Other support for the human capital model comes from the observation that quit rates vary inversely over time with the unemployment rate and the layoff rate. This suggests that workers are more likely to quit when employment opportunities are better, suggesting that the decision to change jobs is directly related to the expected benefits.

Costs of job changing may also vary internationally. American workers tend to be more mobile than workers in Japan and Europe. This may be due to difference in housing policies that make costs of moving higher in those areas or to cultural differences.

Finally, is job mobility socially desirable? It may promote economic efficiency by leading to better job matches. In Chapter 8, it was shown that the possibility of job mobility was necessary to create compensating wage differentials.

### Review Questions

Choose the letter that represents the **BEST** response.

**The Determinants of Worker Mobility**

1. Voluntary mobility is predicted when
   a. the monetary benefits of mobility exceed the monetary costs.
   b. a new job is available that pays more than the old one.
   c. the present value of the benefits from mobility is at least as large as the present value of the costs.
   d. all of the above.

2. Suppose that a baseball player eligible for free agent status signs a contract with a new team that promises to pay him $100,000 more than his current team for each of the next three years. Assuming the discount rate is 6%, what is the maximum the current costs of moving could be and still have this investment be worthwhile?
   a. $251,886
   b. $267,301
   c. $283,019
   d. $283,339
Geographic Mobility

3. Holding all else constant, higher rates of geographic mobility are exhibited by
   a. older workers.
   b. married couples.
   c. highly educated workers.
   d. both a and b.

4. Age is an important factor in determining whether a person migrates because
   a. age affects the length of the benefit stream associated with migration.
   b. age affects the psychic costs of migration.
   c. age determines whether a person participates in a local or national labor market.
   d. both a and b.

5. Lack of education appears to be a bigger deterrent to long-distance migration than age. This evidence supports the hypothesis that the primary deterrent to long-distance migration is
   a. the psychic cost of moving.
   b. the lack of information about employment prospects elsewhere.
   c. the monetary cost of the move.
   d. the difficulty of return migration.

6. Immigrants from other countries are more likely to be positively selected with respect to skills if
   a. the immigrants practice chain migration, i.e., the tendency to follow previous immigrants to particular geographic locations.
   b. the earnings distribution in the sending country is more equal than in the United States.
   c. the earnings distribution in the sending country is similar to that in the United States.
   d. both a and b.

7. Evidence suggests that the earnings of immigrants start at a lower level than the earnings of native-born workers, but then grow faster over time, and eventually meet or exceed the earnings of comparable native-born workers. This evidence demonstrates that
   a. the rate of return on an immigrant’s mobility investment is likely to be high.
   b. immigrants are more productive than the average native-born worker.
   c. the present value of an immigrant’s lifetime earnings is likely to exceed that of a comparable native-born worker.
   d. many immigrants set aggressive financial goals for themselves so that they can return to their homeland when the goal is met.

8. Data showing that 20% of all geographic moves are to an area in which the household had previously lived (return migration) supports the hypothesis that
   a. individual expectations about the costs and benefits of mobility are often wrong.
   b. on average, migration does not appear to be a good investment.
   c. while individuals may gain from migration, family income (the earnings of the husband and wife) tends to fall.
   d. all of the above.
Voluntary Turnover

9. Holding all else constant, workers in industries that pay higher wages have lower quit rates. This finding is consistent with the view that
   a. quits are a form of worker-initiated mobility.
   b. workers make mobility decisions based on costs and benefits.
   c. a low quit rate is a reliable sign of an above-equilibrium wage.
   d. all of the above.

10. Quit rates tend to vary over the business cycle as general labor market conditions change. Holding all else constant, the quit rate tends to decrease when
   a. labor market conditions are considered to be tight (jobs are more plentiful relative to job seekers).
   b. the unemployment rate rises.
   c. the layoff rate decreases.
   d. both b and c.

11. Based on the human capital investment framework, quit rates should be expected to fall with age because
   a. older workers are more mature and face lower psychic costs when changing jobs.
   b. older workers have longer job tenures.
   c. older workers have a shorter time over which to recover the costs associated with quitting.
   d. all of the above.

12. Holding all else constant, voluntary turnover is lower in rural areas because
   a. the costs associated with quitting tend to be higher in rural areas.
   b. rural residents tend to be less present-oriented and so have lower discount rates.
   c. wages tend to be higher in rural areas.
   d. all of the above.

The Consequences of Immigration

In answering Questions 13–19, please refer to Figure 10-2 which depicts the demand and supply curves for a particular category of labor. $D$ refers to the market demand, $S_N$ to the supply of native-born workers, $S_I$ to the supply of immigrant workers, and $S_T$ to the total supply.

![Figure 10-2](image-url)
13. How many jobs for native-born workers are lost because of immigration?
   a. Native employment would not be reduced since Americans are unwilling to perform the kind of work that immigrants do.
   b. 4
   c. 8
   d. 12

14. How much is the total real income of native-born workers reduced because of immigration?
   a. 16
   b. 32
   c. 48
   d. 64

15. Ignoring the cost of capital, how much of an increase in total profit (in real terms) is generated because of immigration?
   a. 8
   b. 16
   c. 32
   d. 40

16. How much total output does society gain because of immigration?
   a. 8
   b. 16
   c. 24
   d. 32

17. How much would immigrants be willing to pay in real terms for the right to work in this country (i.e., how much do immigrants earn in economic rent)?
   a. 4
   b. 16
   c. 32
   d. 48

18. If immigration leads to a large enough increase in output, it is possible that native workers can be kept at least as well off as before immigration without hurting immigrants or the firms. For such an outcome to occur, it is necessary that
   a. programs exist to transfer income to native workers.
   b. immigrants not receive more in government subsidies than they pay in taxes.
   c. all illegal immigrants be denied any form of government assistance.
   d. both a and b.

19. An important consequence of immigration not shown in Figure 10-2 is
   a. the downward pressure on consumer prices that results from the lower wages associated with immigration.
   b. the employment and wage gains by those categories of labor that are gross complements with the labor in this market.
   c. the migration of natives away from areas experiencing an influx of immigrants.
   d. all of the above.
Problems

The Determinants of Worker Mobility

20. Consider a family where both the husband and wife work, and assume each spouse has three more years to work (after the current year) before retirement. Table 10-1 indicates the projected combined salary over the remaining work years if they each stay with their current employers. It also shows the combined salary they can expect if they relocate and change employers.

Table 10-1

<table>
<thead>
<tr>
<th>Year</th>
<th>Combined Salary at Current Jobs</th>
<th>Combined Salary at New Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$80,000</td>
<td>$83,000</td>
</tr>
<tr>
<td>2</td>
<td>$82,000</td>
<td>$87,000</td>
</tr>
<tr>
<td>3</td>
<td>$85,000</td>
<td>$92,000</td>
</tr>
</tbody>
</table>

Suppose the total cost of moving, including direct expenses, forgone earnings, and psychic costs total $10,000. Assume all costs are incurred during the current year (year 0).

20a. If the discount rate is equal to the market interest rate of 6%, is this investment in mobility worthwhile?

20b. What is the maximum mobility costs could be and still make this investment worthwhile?

20c. How reasonable is it to assume that the psychic costs of mobility all occur in the current year (year 0)?

20d. Is it reasonable to expect that there will also be psychic benefits associated with moving? If so, give some examples of such benefits.

*20e. When a person moves without a new job already in hand, evidence indicates that the mobility may initially lead to lower earnings than in the current job. This reduction is then more than overcome in future periods by faster earnings growth in the new location. Holding all else constant, what is the lowest the new combined salary could be in year 1 and still have this be a worthwhile investment?

20f. Is it reasonable to expect that both spouses will gain equally because of the move?

The Gain to Society from Mobility

21. Mobility investments may lead not only to individual gains, but also to gains for society as a whole. To see why this is true, consider the information in Table 10-2. It shows the relationship between employment and output in two different labor markets.

Table 10-2

<table>
<thead>
<tr>
<th>Labor Market A</th>
<th>Labor Market B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>Output</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
</tr>
</tbody>
</table>
21a. Compute the marginal product of labor for each unit of labor in market A.

21b. Graph the marginal product of labor schedule for market A.

21c. For an employment level of 5, show that the area under the marginal product schedule equals the total output associated with that output level.

21d. Compute the marginal product of labor for each unit of labor in market B.

21e. Suppose that there are 6 workers in this economy and that currently 3 work in market A and 3 work in market B. If each worker is paid in real terms the marginal product associated with the last worker hired, what will the wage rates be in each market? How much combined total output will be produced by the two markets?

21f. Assuming all other job characteristics are the same in both markets, where will workers tend to migrate? What happens to total output if one worker migrates from market A to market B? What would happen to total output if more than one worker migrated from A to B? Would there be an incentive for more than one worker to migrate?

**The Consequences of Immigration**

22. Consider a labor market where the demand for a particular category of labor is given by the equation

\[ L_D = 20 - 2W. \]

Suppose that the supply curve of workers in this market who are also native-born citizens is given by

\[ L_N = 2W, \]

while the supply curve of immigrants in this market is given by

\[ L_I = W, \]

where \( L \) represents the number of workers, \( W \) is the wage expressed in real terms, and the subscripts \( D, N, \) and \( I \) are used to distinguish between the quantity of labor demanded and the quantity of labor supplied by native-born and immigrant workers.

22a. Find the market-clearing wage and employment level assuming immigration is not allowed. Then find the market-clearing wage and employment level after allowing for immigration. How many native jobs are lost to immigrants?

22b. Compute the real income of native-born workers in this market before and after immigration. How much is the income flow reduced?

22c. Ignoring the cost of capital, compute the total profits of the firms before and after immigration. What is the change in total profits?

22d. Compute the total output of this market before and after immigration. How much total output does society gain because of immigration?

*22e. Taken as a whole, how much would immigrants be willing to pay in real terms for the right to work in this country (i.e., how much do immigrants earn in economic rent)?
*22f. If immigration leads to a large enough increase in output, it is possible that native workers can be kept at least as well off as before immigration without hurting immigrants or the firms. Give an example of a transfer payment scheme that would accomplish this.

22g. What other effects do immigrants have on labor markets that are not captured in this model?

Applications

Migration After a Job Loss

23. Consider a worker currently making $60,000 in a defense industry plant in the New England area. Suppose the plant is closed because of government spending cutbacks and the worker loses his job. After a prolonged search, the worker decides to change occupations and move to North Carolina. His new job only pays $50,000. Has not migration made this worker worse off? Do such examples contradict the prediction of the human capital investment model that says people invest in mobility only when the present value of the benefits is at least as large as the present value of the costs?

The Causes of Higher Quit Rates for Women

*24. According to the text “It is well established that female workers have had higher propensities toward quitting than male workers.” Empirical evidence also exists which shows that the job tenure of women tends to be significantly lower than that of men, a finding consistent with the view that women have had higher quit rates. The higher quit rates and shorter tenure, in turn, are attributed to the lower levels of firm-specific training obtained by women, a subject discussed in Chapter 5.

*24a. Using the lessons of Chapter 5, review why women are less likely to be offered firm-specific training.

*24b. Review why higher quit rates are expected when a worker does not receive firm-specific training. Would eliminating general training also lead to higher quit rates?

The Effects of Reducing Immigration When a Minimum Wage Applies

25. Consider a labor market where the demand for a particular category of labor is given by the equation

\[ L_D = 20 - 2W. \]

Suppose that the supply curve of workers in this market who are also native-born citizens is given by

\[ L_N = 2W, \]

while the supply curve of immigrants (including illegal immigrants) in this market is given by

\[ L_I = W. \]

(This is the same information given in Problem 22 earlier in the chapter.) Suppose the government imposes a minimum wage (in real terms) of $6 that applies to all workers.

25a. Is the minimum wage binding? What would the market-clearing wage be in the absence of the minimum wage (assuming there are no restrictions on immigration)?

25b. What is the quantity of workers demanded at the minimum wage?