Chapter 10
Worker Mobility: Migration, Immigration, and Turnover

This chapter employs the human capital framework to analyze the phenomena of geographic mobility and worker turnover. It demonstrates how the insights of human capital theory can explain the observed patterns of mobility and turnover, including the personal characteristics of those most likely to exhibit either kind of mobility.

The chapter also describes and analyzes immigration policy in the United States. It considers the problem of illegal immigration and uses economic theory to identify the gainers and losers from a more restrictive immigration policy. Finally, the section on immigration concludes with an analysis of the overall effects of immigration (including illegal immigration) on the "native" population.

The lengthy section on U.S. immigration policy is, of course, motivated by our human capital analysis of individual migration. However, the section does not directly employ human capital analytics. Thus, instructors who want their students exposed to human capital analysis as it applies to geographical mobility and turnover, and who are willing to forgo an analysis of the very topical issue of illegal immigration and what to do about it, could save some time in the course by eliminating the section of the chapter on immigration policy.

■ List of Major Concepts

1. Worker mobility can be viewed as a human capital investment, in which the benefit is added utility in the future and the costs are the direct and psychic costs of quitting one employer and seeking work elsewhere.

2. People will move from jobs or areas where pay is relatively low to jobs or areas where pay is relatively high unless such mobility is inhibited by a short time horizon (or high discount rate), costs of finding out about alternatives elsewhere, or high costs of the move itself.

3. There is an element of self-selection in immigration because those who are most likely to migrate are those for whom the net benefits of migration are largest (although the benefits are often initially depressed by unfamiliarity with the language or customs of the area to which they have moved).

4. Countries in which the earnings distributions are more compressed than in the United States will tend to send relatively skilled workers to the United States, while those with distributions that exhibit greater variance will tend to send less-skilled workers to the United States. U.S. immigration has tended to become less skilled in recent years.

5. Like other investments, migration investments can fail to work out as expected, resulting in "return migration."

6. A large influx of immigrants will tend to lower wages in the relevant labor markets and create more employment, but only in special circumstances would an influx of X immigrants take X jobs away from "natives."

7. The argument that immigrants fill jobs no "native" would take overlooks the fact that inducements to work in a particular occupation are not independent of the wage being offered.

8. Immigration may increase product demand and the demand for other skill grades of labor.

9. If immigrants receive wages equal to their marginal product, the native population as a whole will not experience a loss of income unless the immigrants receive government services whose value exceeds the taxes they pay.

10. "Matches" between employer and employee are improved through the process of voluntary quits and involuntary layoffs. The human capital model can be used to model quit behavior.

11. Human capital theory can shed light on the cyclical pattern of quit rates, the pattern of quit rates across age groups, and international differences in quit rates.

12. The costs of quitting and searching for a new job may produce an upward sloping supply curve to individual firms, leading to monopsonistic behavior.

■ Answers to Even-Numbered Review Questions

2. One way for the government to facilitate economic growth is for it to pay workers in depressed areas to move to regions where jobs are more plentiful. What would be the labor market effects of such a policy?

   Answer: Clearly, interregional migration would be increased as a response to this migration subsidy, and employment would grow in areas of high economic opportunity. The effects on employment in areas of reduced economic opportunity and the effects on wages in both areas depend on assumptions made about the labor market.

   If it is assumed that the labor markets in both areas are in equilibrium and that wages in the area of reduced economic opportunities are lower than they are elsewhere, then there would be incentives for workers to leave the low wage area and migrate to the higher wage area. If there are high costs of migration, some workers would not respond to a moderately large wage differential because the increase in wages would not be sufficient to cover the cost of migration. However, when the costs of migration are reduced by the subsidy, more people will respond to a given wage differential and move from the depressed area to the area of better opportunity. This move will shift the supply curve for the depressed area to the left, shift the supply curve for the area of better opportunities to the right, and thus reduce the wage differential between the two areas.

   If the problem in the sending area is one of unemployment due to wage inflexibility in that area (that is, the wage rate lies above the equilibrium wage), then an increase in out-migration will reduce unemployment in the sending area, although it may not affect the wage rate.

4. Suppose the United States increases the penalties for illegal immigration to include long jail sentences for illegal *workers.* Analyze the effects of this increased penalty on the wages and employment levels of all affected groups of workers.

Answer: Jail sentences for illegal immigrants would reduce the net gains from immigration, even if the probability of being apprehended is small. The reduced net benefits from migration should reduce the number of illegal immigrants coming into the country and, assuming these immigrants are unskilled workers, this reduction should raise wages in the unskilled labor market. Thus, unskilled native workers benefit by the imposition of jail sentences on illegal immigrants who are apprehended. Employment in the unskilled market goes down, although unskilled employment among natives increases.

Skilled workers may be adversely affected by this new policy because reduced immigration may mean reduced product demand (and therefore have a scale effect on the demand for their services). Moreover, if skilled and unskilled workers are gross complements, the reduction of unskilled employment and the increase in the unskilled wage may cause the demand for skilled workers to decline. If there is a leftward shift in the demand for skilled workers, there will be a reduction in wages and employment in the skilled markets. (Of course, if skilled and unskilled workers are gross substitutes, the decline in demand brought about by the reduction in product demand would be mitigated or even offset by the increased substitution of skilled workers for the now more expensive unskilled labor.)

Workers from outside the United States who would otherwise have become illegal immigrants (but who are now deterred from immigration) will be worse off. However, those who decide to immigrate and are not apprehended will be better off because they will receive higher wages in the unskilled market.

6. The last three decades in the United States have been characterized by a very wide gap between the wages of those with more education and those with less. Suppose that workers eventually adjust to this gap by investing more in education, with the result that the wages of less-skilled workers rise faster than those of the more-skilled (so that the wage gap between the two falls). How would a decline in the wage gap between the skilled and the unskilled affect immigration to the United States?

Answer: Immigrants at least implicitly compare the wages they can expect in the United States with those they can expect in their place of origin. Thus, if the American unskilled wage rises relative to the skilled wage, the United States should experience a rise in unskilled relative to skilled immigration.

Further, a declining gap between the educated and the less-educated would serve to make the American distribution of earnings more equal. Skilled workers tend to come from countries with more equal earnings distributions than found in the United States (many European countries, for example), while unskilled workers tend to come from countries (often developing countries) with less equal earnings distributions. When the American earnings distribution becomes more equal, there will be reduced incentives for skilled immigration from Europe, say, and more incentives for unskilled immigration from countries with less-equal distributions.

8. Two oil-rich middle-east countries compete with each other for the services of immigrants from India and Pakistan who perform menial jobs that local workers are unwilling to perform. Country A does not allow women to work, drive, or go out of the house without a chaperone. Country B has no such restrictions. Would you expect the wages these two countries pay for otherwise comparable *male* immigrants to be roughly equal? Why or why not? Explain.

Answer: The supply of immigrants to *A* will be restricted, partly because female immigrants who want to work will not go there and partly because married men will avoid *A* because of the restrictions on their wives. The wages in *A* will have to be higher in order to attract immigrants.

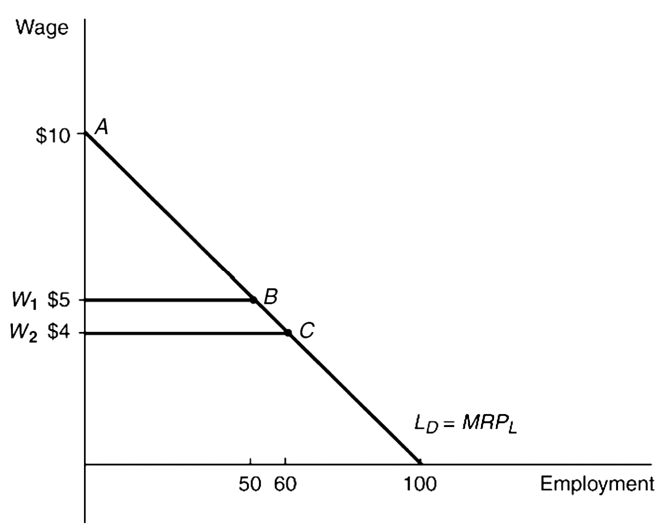
10. A recent study by a noted economist has found evidence that a 10% increase in immigration within a given skill group reduces the wages of "natives" in that skill group by 3.5%. One social commentator has said, "These findings suggest only one conclusion: immigration is bad for American workers and therefore bad for American society." Using economic theory, comment on this quote.

Answer: Even if immigration imposes costs on one group in society, we cannot conclude that it is bad for society as a whole. Lower wages for one group of workers (the closest substitutes with immigrants) could still be accompanied by higher wages (due to a scale effect) for other workers. Further, consumers gain from immigration. The real societal question is whether the gainers can compensate the losers and still have net gains

■ Answers to Even-Numbered Problems

2. Suppose that the demand for rough laborers is $L_d = 100 - 10W$, where W = wage in dollars per hour and L = number of workers. If immigration increases the number of rough laborers hired from 50 to 60, by how much will the short-run profits of employers in this market change?

Answer: The short-run profits of the employer equal the area below the MPR_L curve and above the wage rate. See the figure. This will increase from area W_1AB in the figure to area W_2AC. Find the wage rates by plugging the employment levels into the L_d equation. $50 = 100 - 10W$ initially, so $W = \$5$ per hour. $60 = 100 - 10W$ after the immigration, so $W = \$4$ per hour. The area of the triangle is 0.5(base × height), with the base being employment and the height being $\$10 - W$. Thus, the area of W_1AB is $50 \times \$5 \times 0.5 = \$125$ per hour, and the area of W_2AC is $60 \times \$6 \times 0.5 = \$180$ per hour. Thus, profits have risen by \$55 per hour.



4. The following table summarizes the market for labor in an occupation. "Demand" is the number (in thousands) of employees firms would be interested in hiring at particular wages. "Domestic supply" is the number (in thousands) of native workers who are interested in working in the occupation at particular wages, and "immigrant supply" is the number (in thousands) of immigrants who are interested in working at particular wages.

Wage	Demand	Domestic Supply	Immigrant Supply
\$3	30	22	4
\$4	29	23	4
\$5	28	24	4
\$6	27	25	4
\$7	26	26	4
\$8	25	27	4
\$9	24	28	4
\$10	23	29	4

a. Graph the following curves for this labor market: demand for labor, domestic supply, supply of immigrant workers, and total supply of workers.
b. What is the equilibrium wage rate before immigration? How many workers would be hired?
c. What is the equilibrium wage rate after immigration? How many workers would be hired? How many domestic workers would be hired? How many immigrant workers would be hired?
d. Comparing your answers in Parts b and c, has immigration caused a change in the number of domestic workers hired? What was the change, if any? Why did the change, if any, occur?

Answer: a. The demand curve is a simple plot of the first and second columns above, and the domestic supply curve is a plot of columns one and three above. The total supply curve adds 4 to each level of domestic supply, and thus is parallel to the domestic supply curve and lies 4 units to its right.

b. Before immigration, the equilibrium wage is \$7.00 per hour and 26 thousand (domestic) workers will be hired.

c. After immigration, the equilibrium wage is \$5 per hour. 28 thousand workers will be hired, of which 24 thousand are domestic workers and 4 thousand are immigrant workers.

d. After immigration, there is a decrease in the number of domestic workers employed, from 26 thousand to 24 thousand. When immigrants arrived labor supply increased, without an associated increase in labor demand, which led to a decrease in the market wage rate. At the lower wage rate, fewer domestic workers were willing to work.

■ Suggested Essay Questions

1. Great Britain has seen a huge influx in immigration (especially from Poland) over the past few years. One report stated that immigrants have added several billion dollars to the British gross domestic product, and that it has also reduced the prices of British consumer goods and services. Use economic theory to analyze the conditions that would have to hold for both statements to be true.

Answer: Immigrants can add to a nation's gross domestic product if (a) they come to work (not simply receive transfer payments), and (b) if their presence adds to total employment (that is, each additional employed immigrant does not just reduce "native" employment by one). Total employment in the country can be increased by immigration if the presence of immigrants either shifts the demand curve for labor to the right or if the increased supply of workers reduces the average wage employers must pay. For both statements to be true, it must be that immigration to Britain increased overall employment and reduced employer wage costs.

2. In late 2007, Oklahoma passed a law that increased the penalties on employers who hire illegal immigrants (making such hiring a felony offense). As a result, huge numbers of Mexican immigrants have left the state. Use economic theory to analyze whether the citizens of Oklahoma were made better off as a result of this law.

   Answer: If the immigrants who left were employed, theory implies that they were receiving a wage no greater than their marginal revenue product, with any infra-marginal gains going to employers (who are assumed to be natives). When the immigrants leave, total output in the state will fall, and the infra-marginal gains associated with this loss of employment will also fall. Only if the illegal immigrants were receiving net transfer benefits (benefits minus taxes they paid) in excess of the infra-marginal gains they generated would Oklahomans gain from their leaving.