Worker Mobility

Econ 3470 Lecture 8

Labor Economics

2016-2017 Term 1

Outline

- The Determinants of Worker Mobility
- Geographic Mobility
- Employee Turnover

Introduction

- Over the past two or more decades, the dramatic increase in the number of immigrants has stimulated some angry calls for stricter limits or tighter order security measures.
- Proposals to impose stricter limits on immigration, including those to expel immigrants without work visas are based on the arguments that immigrants lower wages of natives or impose other financial burden on the host country.
- For market economies, worker mobility plays a critical role in promoting voluntary exchange or free movement of workers among employers.

Introduction

- What factors influence the decision to emigrate and what are the labor market effects of immigration?
  - What are the causes and consequences of worker mobility both within and across national boundaries?
  - What are the monetary and psychic costs of mobility?

The Determinants of Worker Mobility

- The human capital model/theory views mobility as an investment with initial costs outlay with the expectations of returns in the future.
- The assumption is that if the PV of the benefits associated with mobility exceeds the monetary and psychic costs, people/workers will decide to change jobs, or move, or both.

The Determinants of Worker Mobility

The decision to move (or change jobs) depends on the PV of the net benefits, and this can be expressed algebraically as:

由于准备换工作，马上就要有cost，所以它不用被discount

$$\text{Present Value of Net Benefits} = \sum_{t=1}^{T} \frac{B_t}{(1+r)^t} - C \qquad (1)$$

认为是从明天开始工作

where

B_t = the increased utility in year t derived from changing jobs

T = the length of time (in years) one expects to work at a new job

r = the rate of discount

C = the utility lost in the move itself (direct and psychic costs)

$\sum$ = a summation - in this case, the summation of the yearly discounted net benefits over a period from year 1 to year T

The Determinants of Worker Mobility

PV of the net benefits of mobility will be larger if the:

- utility derived from the new job (if less happy at the former job) is greater, 这里B所代表的是utility而非简单的earning !
- immediate costs (C) associated with the job changes are smaller, and
- worker stays longer (the greater T is) on the new job or lives in the new area.

Geographic Mobility

Personal Characteristics of Movers

- Migration is a highly selective activity that not all people can engage in it, but it tends to be common among the young and highly educated workers.

Age

- This is one of the important factors in determining who migrates.
- For the young workers, the longer the T over which benefits from investments can be obtained, the larger the PV of these benefits.
- A large part of the costs of migration is psychic - losses associated with giving up friends, community ties, etc; and this may be minimal for younger workers who have no strong friends/community ties.

Geographic Mobility

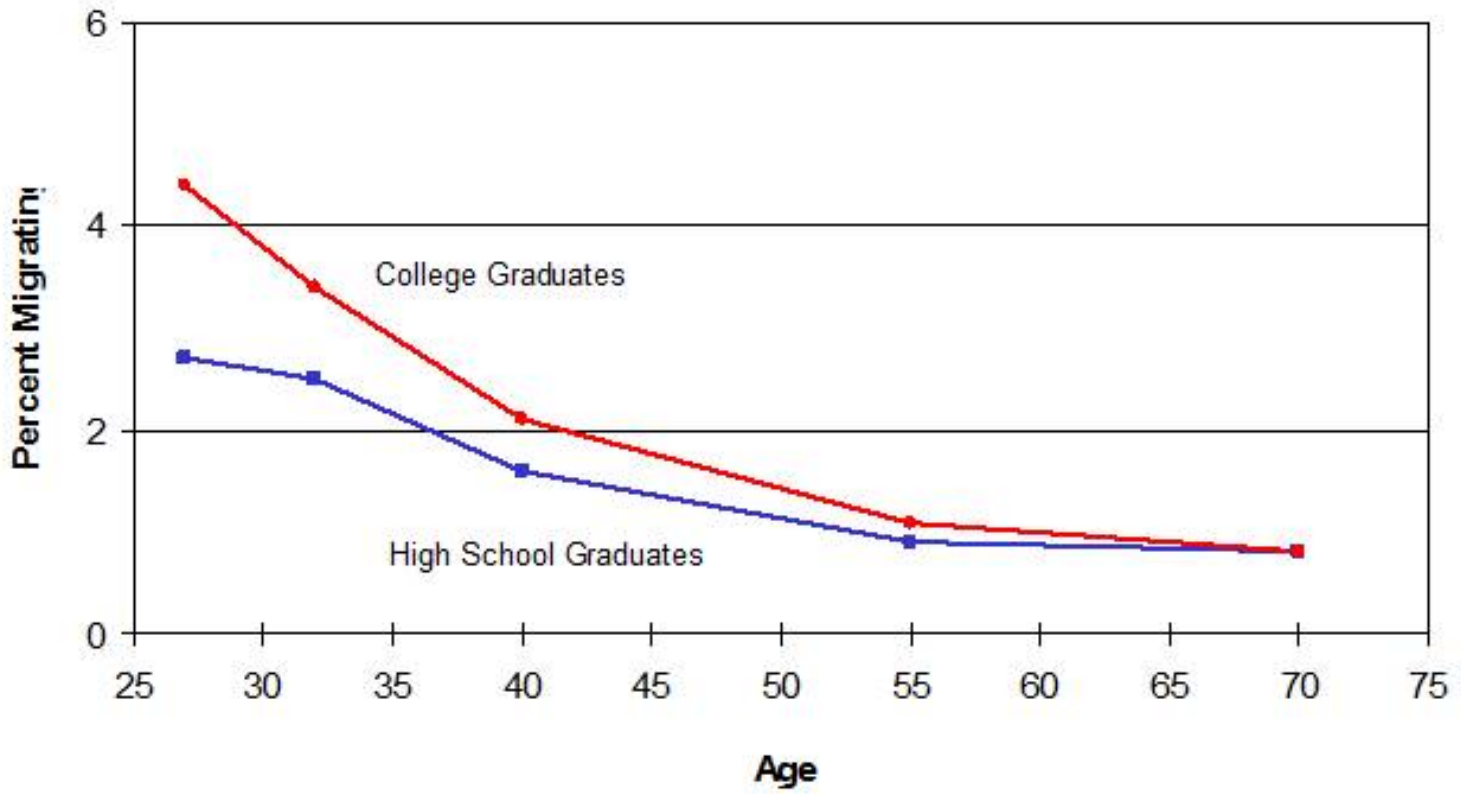
Personal Characteristics of Movers

Education

- While age is the best predictor of who will move, education is the best single indicator of who will move within an age group.
- Those with college degrees are much more likely to make an out-of-state move, more so if job is more national than localized.

Geographic Mobility

Probability of Migrating across State Lines in 2005-2006, by Age and Educational Attainment



Geographic Mobility

The Role of Distance

- Human capital theory predicts that as migration costs rise, the flow of migrants will fall.
- The costs of moving increase with distance for two reasons:
  - Cost of acquiring trustworthy information about job opportunities elsewhere
  - Time and money cost of a move and for trips back to see friends and relatives - the psychic costs of the move rise with distance.

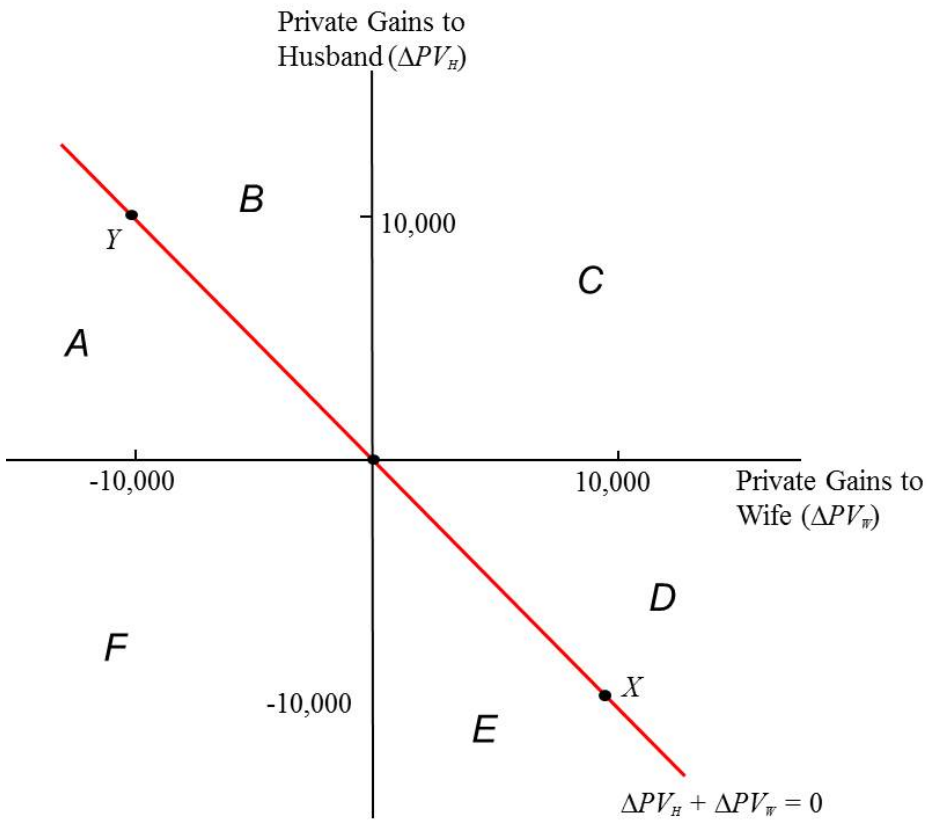
Geographic Mobility

Family Migration

- With migration, a decision to move might well be made if the family as a whole experiences a net increase in total earnings.
- The optimal choice for a member of the family may not be optimal for the family unit (and vice versa).
  - Tied stayer: someone who sacrifices better income opportunities elsewhere because the partner is better off in the current location.
  - Tied mover: someone who moves with the partner even though his or her employment outlook is better in the current location.
- The impact of migration on tied movers factors into why college-educated couples prefer to live in large urban areas where both people have access to many alternative job opportunities without moving.

Geographic Mobility

Tied Movers and Tied Stayers



- If the husband were single, he would migrate whenever $\Delta PV_H > 0$ (A, B, and C).
- If the wife were single, she would migrate whenever $\Delta PV_W > 0$ (C, D, and E).
- The family migrates when the sum of the private gains is positive (B, C, and D).
- In D, the husband would not move if he were single, but moves as part of the family, making him a tied mover.
- In E, the wife would move if she were single, but does not move as part of the family, making her a tied stayer.

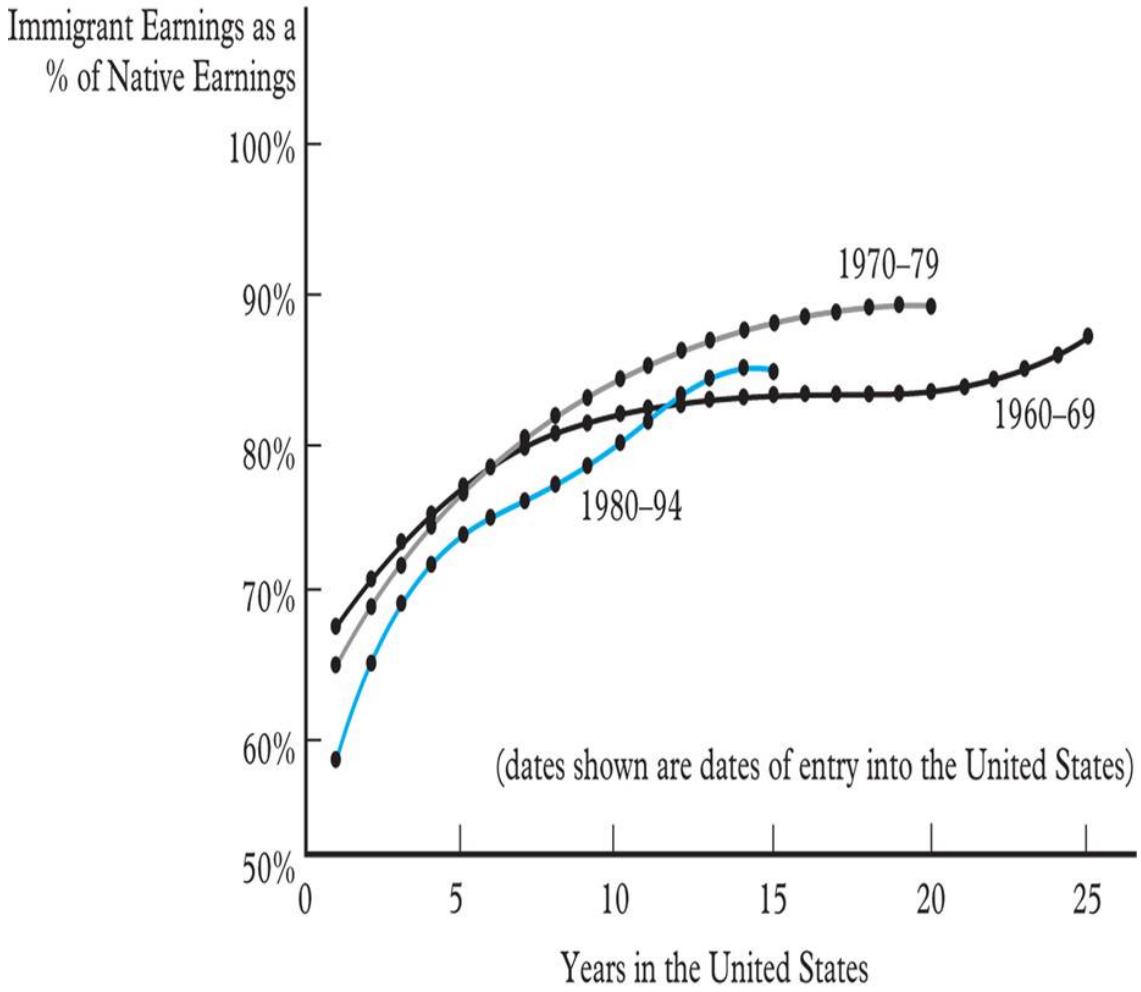
Geographic Mobility

Returns to Immigration

- It is not feasible to compare the earnings of international immigrants with what they would have earned had they not migrated because of lack of data on earnings in their home country.
- Mexican immigrants in the U.S. received between $\$9,000$ to $\$16,000$ more per year in 2000 in comparison to similar workers in Mexico.
- Men who immigrated to U.S. decades ago, have lower earnings path relative to those of native-born Americans with similar amounts of labor market experience.

Geographic Mobility

Male Immigrant Earnings Relative to Those of the Native-Born with Similar Labor-Market Experience, by Immigrant Cohort



Geographic Mobility

This graph shows three generalizations about the relative earnings of immigrants when they enter into the United States:

- First, immigrants earn substantially less than their native-born counterparts when they first arrive in the United States.
- Second, each succeeding cohort of immigrants has done less well upon entry than its predecessor.
- Third, the relative earnings of immigrants rise over time, which means that their earnings rise faster than those of natives, especially in the first 10 years after immigration.

Geographic Mobility

Immigrants' Earnings Growth

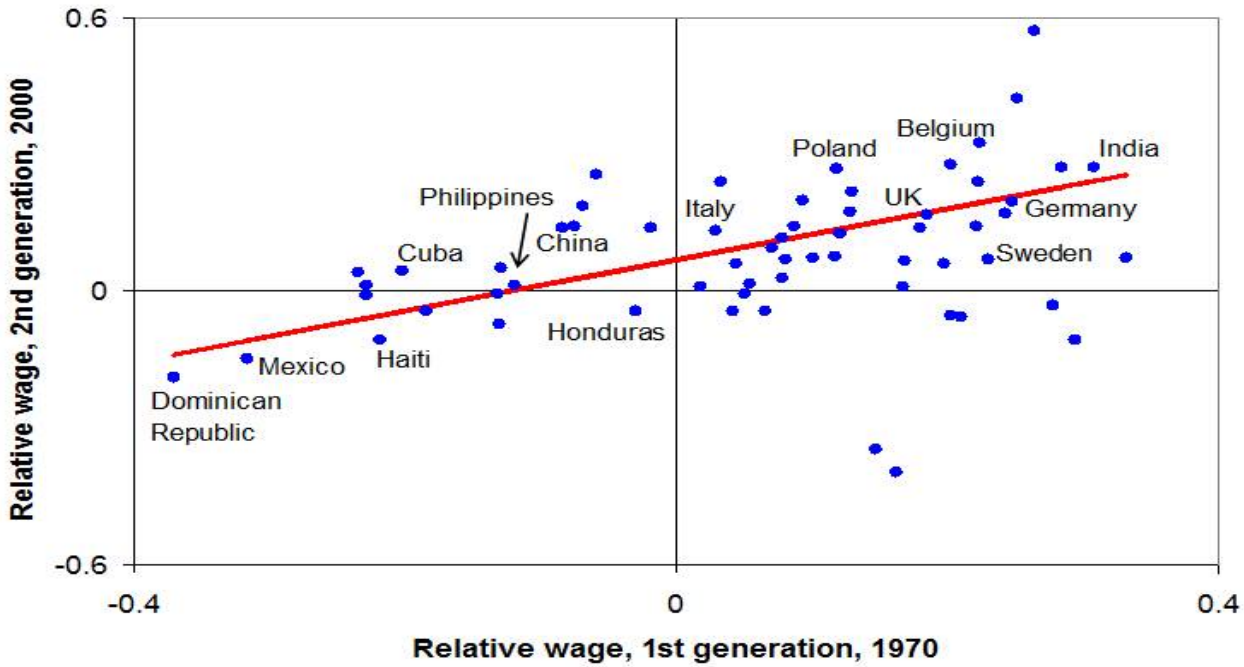
- Earnings of immigrants rise relatively quickly because of their high rates of investment in human capital, acquisition of job experience, and fluency/proficiency in English after arrival.
- Studies found that fluency/proficiency in English raised the earnings of immigrants by an average of 17% in the U.S., by 12% in Canada, and by 9% in Australia.

Return Migration

- Many of those for whom immigration does not yield expected returns/benefits decide to return to their country of origin (about 20% of all moves).
- Return migration highlights another important fact that immigration like other human capital investments, entails risk.

Geographic Mobility

Earnings Mobility between 1st and 2nd Generations of Americans, 1970-2000

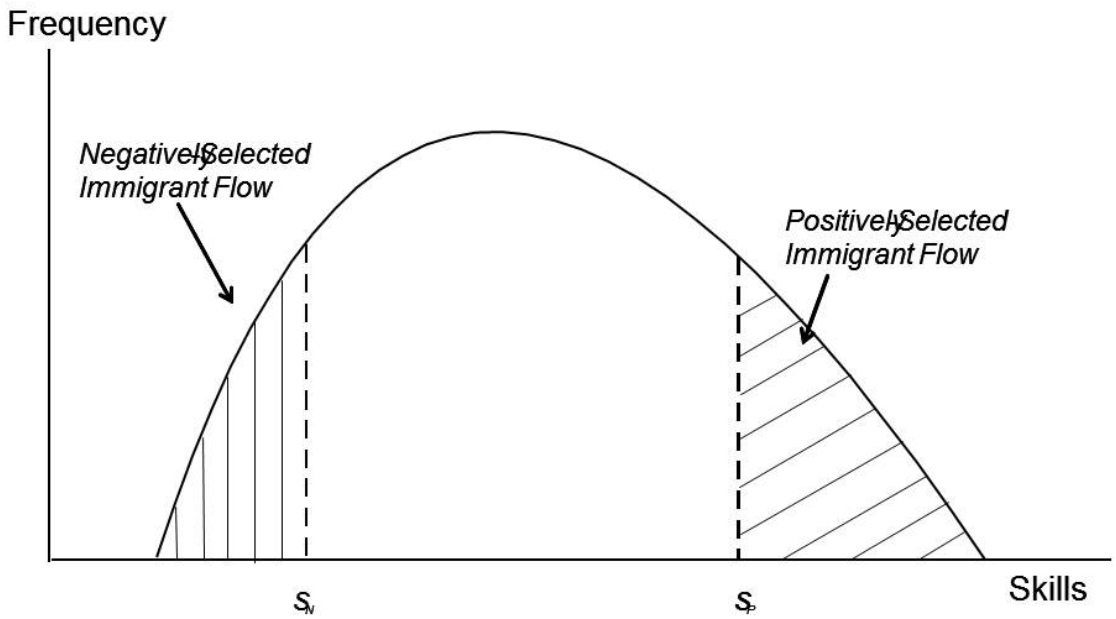


Geographic Mobility

The Roy model considers the skill composition of workers in the source country.

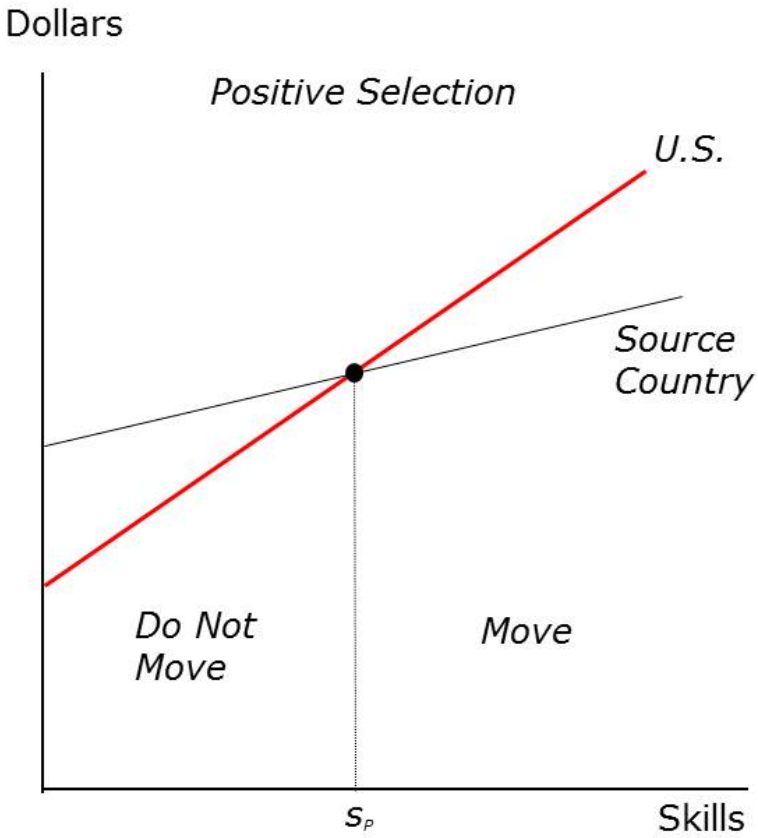
- Positive selection: immigrants who are very skilled do relatively well in the U.S.
- Negative selection: immigrants who are unskilled do relatively well in the U.S.
- The relative return to skills determines the skill composition of the immigrants from different source countries.

Geographic Mobility

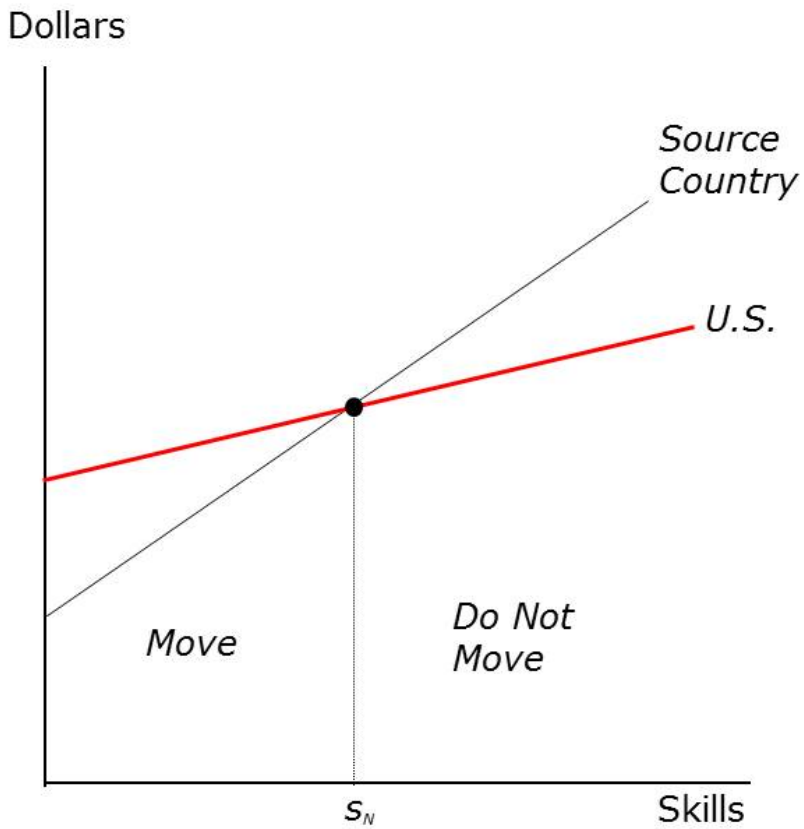


- The distribution of skills in the source country gives the frequency of workers in each skill level.
- If immigrants have above-average skills, the immigrant flow is positively selected.
- If immigrants have below-average skills, the immigrant flow is negatively selected.

Geographic Mobility

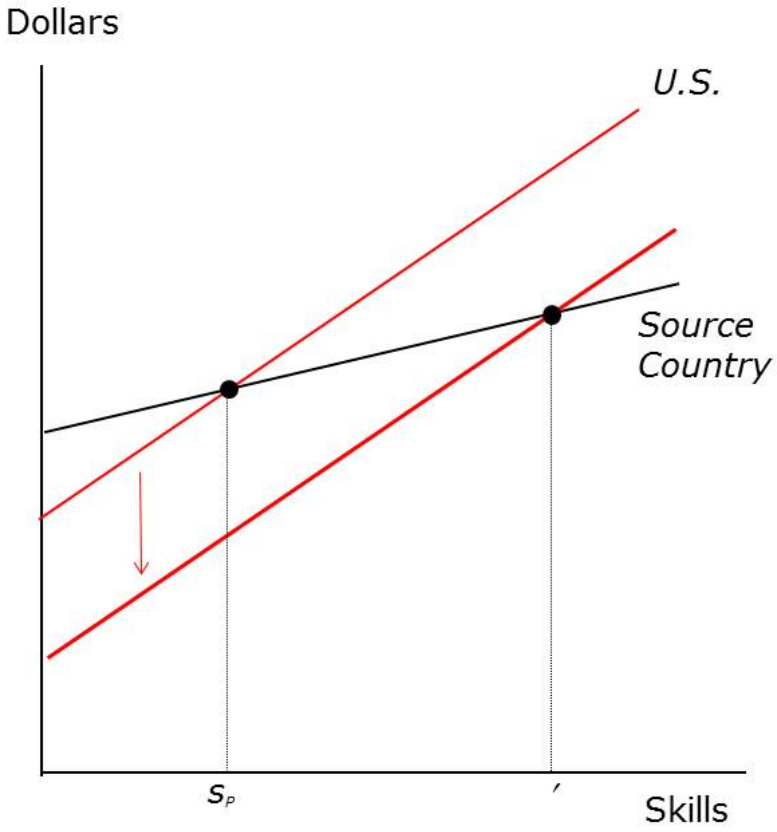


(a) Positive selection

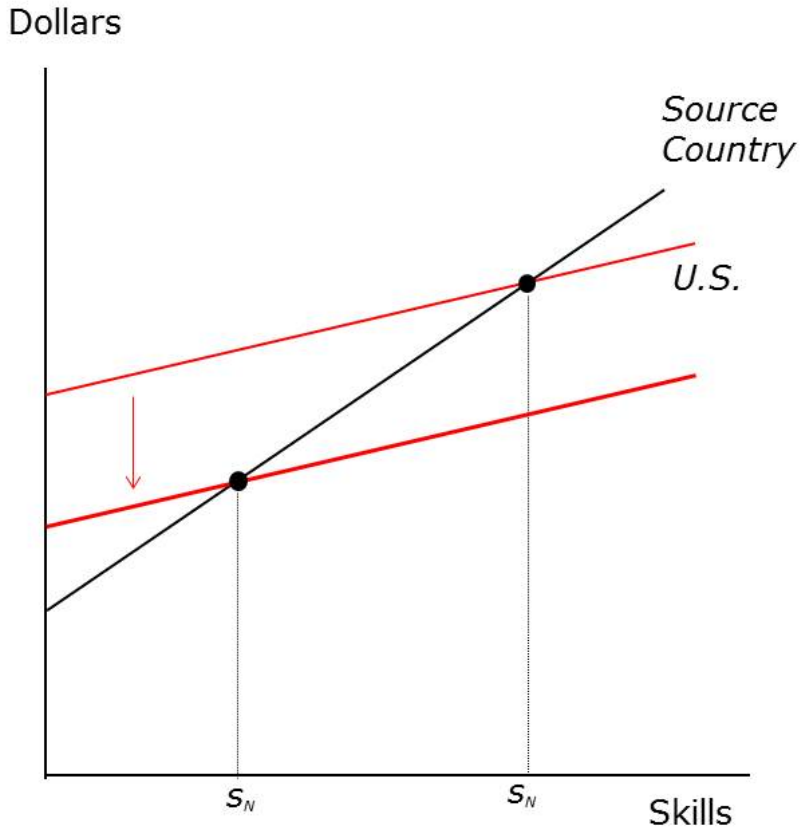


(b) Negative selection

Geographic Mobility



(a) Positive selection



(b) Negative selection

Geographic Mobility

The previous graphs shows that when U.S. incomes decrease (shift down in the returns-to-skills curve):

- Fewer workers migrate to the U.S.
- The type of selection (positive vs. negative) doesnt change.

Geographic Mobility

Policy Application: Restricting Immigration

- Immigration has both economic and cultural consequences.
- The economic effects of immigration lie at the center of the current debate about immigration in the United States, particularly, the immigration status of those workers considered to be unauthorized because they have no documentation necessary to legally reside in the country.
- On the cultural aspect of immigration, there is evidence that people's view on the desirability of immigration may be based largely on their attitudes toward cultural diversity.

U.S Immigration History

- Generally/Traditionally, the United States has also been an attractive place for immigrants from nearly all parts of the world because of its unrestricted immigration policy for the first 140 years of its history after independence.
- The flow of immigrants was especially large after 1840 when industrialization and political upheavals in Europe made immigration an attractive investment for millions of people.

Geographic Mobility

Policy Application: Restricting Immigration

Officially Recorded Immigration: 1901 to 2012

Period	Number (in Thousands)	Annual Rate (per Thousand of U.S. Population)	Year	Number (in Thousands)	Annual Rate (per Thousand of U.S. Population)
1901–1910	8,795	10.4	2001	1,059	3.7
1911–1920	5,736	5.7	2002	1,059	3.7
1921–1930	4,107	3.5	2003	704	2.4
1931–1940	528	0.4	2004	958	3.3
1941–1950	1,035	0.7	2005	1,122	3.8
1951–1960	2,515	1.5	2006	1,266	4.2
1961–1970	3,322	1.7	2007	1,052	3.5
1971–1980	4,389	2.0	2008	1,107	3.6
1981–1990[a]	7,338	3.1	2009	1,131	3.7
1991–2000[a]	9,082	3.4	2010	1,043	3.4
			2011	1,062	3.4
			2012	1,031	3.3

[a]Includes illegal immigrants granted amnesty under the Immigration Reform and Control Act of 1986.

Source: U.S. Immigration and Naturalization Service, *Yearbook of Immigration Statistics: 2012*, Table 1, at http://www.dhs.gov/yearbook-immigration-statistics-2012-legal-permanent-residents.

Restrictions

- The U.S. Congress adopted the Quota Law in 1921, which sets annual quotas on immigration based on nationality.
- Other laws in 1924 and 1929 further restricted immigration from Eastern and Southeast Europe because of the adverse effect of unskilled workers from these regions on native employment.
- The passage of the Immigration and Nationality Act of 1965 abolished the quota system based on national origin that so heavily favored northern and western Europeans.

- The 1965 Act, which was also amended in 1990, formally restricted overall immigration with most spots reserved for:
  - Family-reunification purposes and they are relatively few (roughly about 20%).
  - Immigrants with special skills who are admitted for employment purposes.
  - Political refugees (who must meet certain criteria relating to persecution in their home countries) are admitted without numerical limit.
- The mix of countries of origin has changed substantially over time
  - In the 1950s, 6% of immigrants came from Asia.
  - Presently, 31% of immigrants come from Asia.

Unauthorized Immigration

- Unauthorized immigration can be divided into two categories of roughly equal size:
  - Those immigrants who enter legally but overstay or violate the provisions of their visas.
  - Those immigrants who enter the country illegally ?undocumented.
- Many (roughly 30 million people) enter the United States each year under nonimmigrant visas - e.g. students and/or visitors - and are not authorized to seek employment with such visas.
- Many immigrants from the Caribbean often enter through Puerto Rico and gain free entry to the mainland.

Unauthorized Immigration

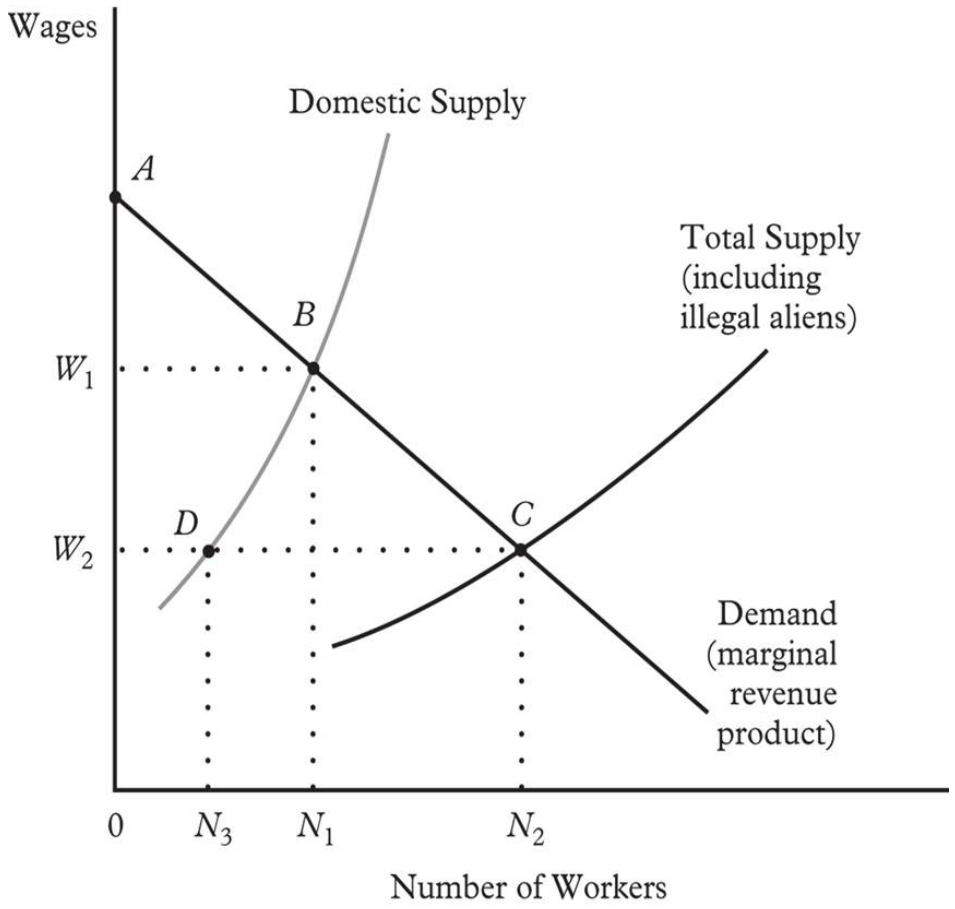
- Other immigrants:
  - Walk across the US/Mexican border
  - Are smuggled into the United States or use false documents to get through entry stations
- Between 1990 and 2007, yearly increase in the number of unauthorized immigrants was estimated to be in the range of 350,000 to 580,000 for an estimated 11.8 million in population.
- Almost three-quarters of all unauthorized immigrants are from Mexico, and about 12% from Central America.

Immigrants from Mexico

- There are two reasons for the large number of authorized and unauthorized immigrants from Mexico:
  - The huge differential in income per capita between the two countries
  - Both countries share a very long border
- The roughly 12 million Mexican immigrants who live in the United States in 2007 constituted about one-third of the entire foreign-born population.
- The typical Mexican immigrant is less educated than the average American because the educational levels are generally lower in Mexico.

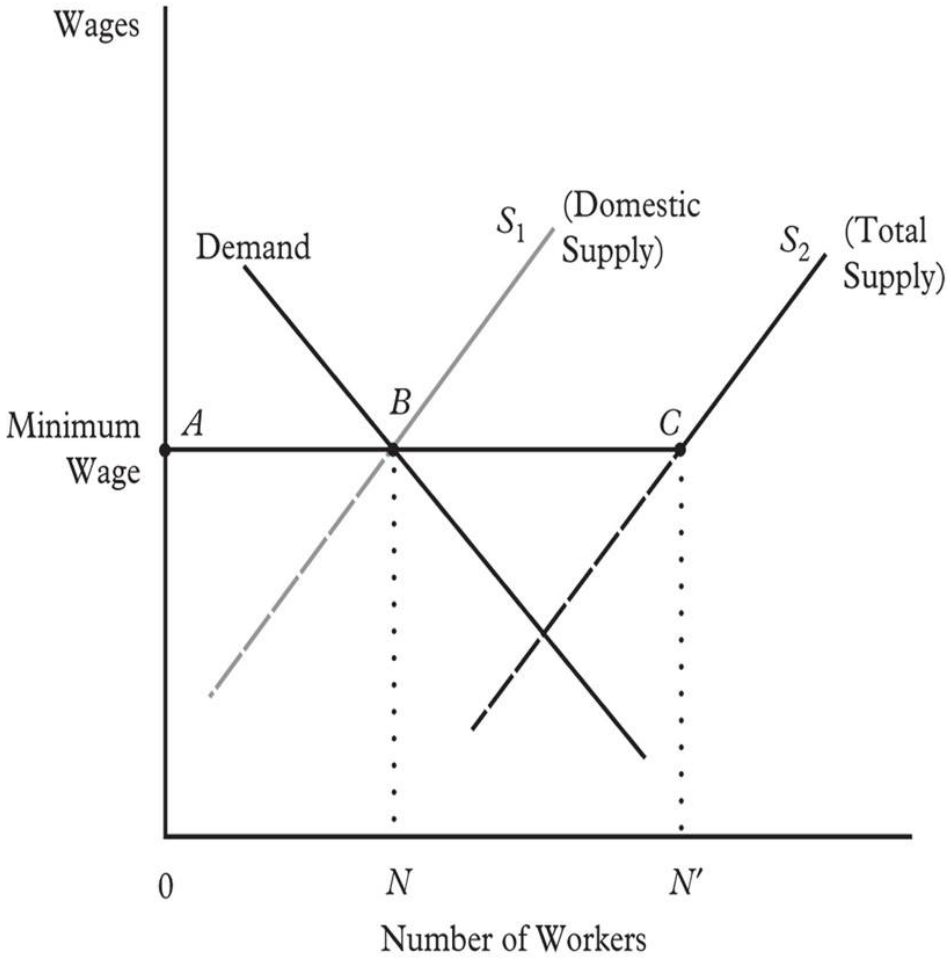
- There are two opposing views of illegal immigration that can be considered naive:
  - One view is that every employed illegal immigrant deprives a citizen or legal resident a job - substitution effect.
  - The opposing view is that illegal immigrants perform jobs no Americans citizens would do.
- Both views ignore the slopes (or elasticities) of the demand and supply curves.

Demand and Supply of Rough Laborers



- In the absence of immigration, equilibrium wage of W_1 and the employment of N_1 citizens for these rough laborer?jobs would be at point B.
- With the influx of illegal immigrants, the labor market supply shifts to the right with the new equilibrium wage of W_2 and employment of N_2 workers at point C where:
  - N_3 = Americans on this job.
  - $N_2 - N_3$ = Immigrants on the job.
- Deportation would increase the employment and wage levels of Americans in the laborers market but not on a one-for-one basis.

Demand and Supply of Rough Laborers with a Minimum Wage



- ABS_1 is the supply of laborers and the total labor supply is represented by ACS_2.
- Due to the artificially high wage, which created a surplus, only N of the total N' workers willing to work at the minimum wage can actually find employment.
- Deporting the illegal immigrants who are part of N' would create jobs for a comparable number of Americans on a one-for-one basis.
- Note that efforts to prevent low-wage immigrant labor may prompt some employers to transfer these jobs to countries with abundant supplies of low-wage labor.

An Analysis of the Gainers and Losers

- Both the wages and employment levels of Americans working as laborers are reduced when immigration increases the overall labor supply.
- It would be a mistake to conclude that it is necessarily harmful to Americans as a whole.

Consumers

- Immigration of cheap labor benefits consumers who buy output produced by these workers.
- A recent study suggests that the influx of low-skilled immigrants has made it easier for American college-educated women to pursue careers while simultaneously rearing children.

Employers

- Employers of rough labor also benefited as profit increased.
- Increase investments in new plants and equipment.

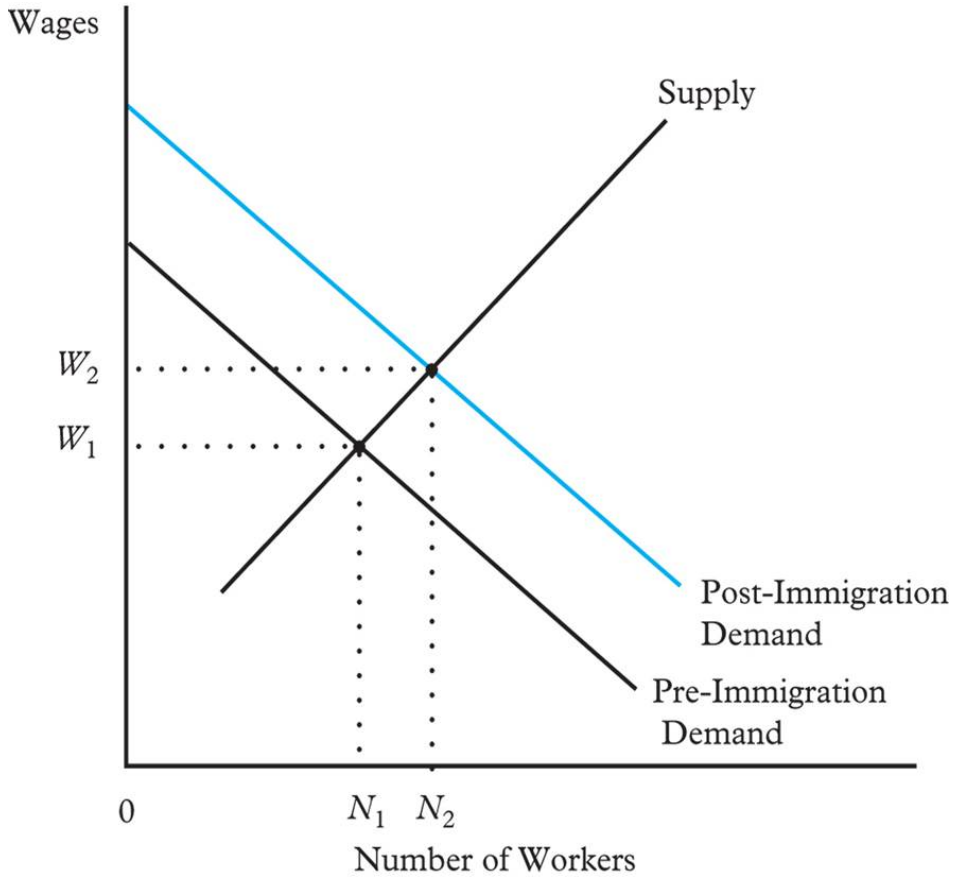
Employees in the rough Labor Market

- The population increase due to immigration may directly call for more rough laborers.

Employees in Other Labor Markets ("skilled")

- Scale and substitution effects that work in opposite directions.
  - If wages for rough laborers fall, and skilled and unskilled workers are substitutes in production, the substitution effect will tend to reduce the demand for skilled workers.
  - The falling cost of unskilled labor may also trigger a scale effect that increases the demand for skilled labor.
- Workers who are not close substitutes for unskilled immigrant labor may benefit from immigration because of the increase in consumer demand.

Market for skilled Labor



Empirical Estimates of the Effects on Natives

- Studies found the influx of low-skilled immigrants into cities to have rather small/negligible effects on wages of workers with a HS education or less.
- Some economists argued that many low-skilled natives left the cities in response to the influx of immigrants thus these studies could not actually measure the ultimate effects on their wages.
- Other studies concluded that immigration between 1980 and 2000 reduced the average wages of natives by less than half a percent both in the short-run and the long-run ?other found negative effects but small.

Employee Turnover

- Unlike geographical mobility, employee mobility or turnover (or separations of employees among employers can take place without a change of residence.
- Individuals have different personal discount rates and psychic costs that they attach to quitting one employer to find another mobility/turnover will depend on these differences, given the same set of wage offers.
- Apart from individual idiosyncrasies, there are systematic factors that influence the patterns of job mobility/turnover.

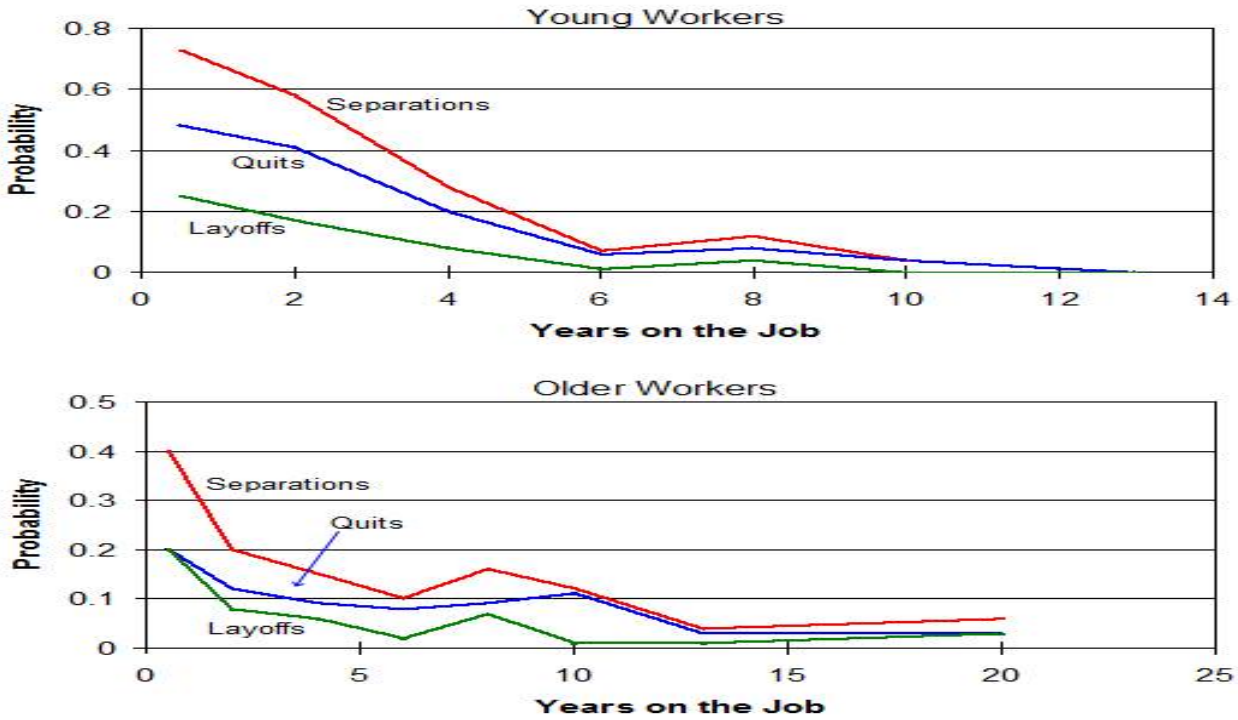
Employee Turnover

Stylized facts

- Newly hired workers tend to leave their jobs within 24 months of being hired, while workers with more seniority rarely leave their jobs.
- The rate of job loss is highest among the least educated workers.
- There is a strong negative correlation between a workers age and the probability of job separation.
  - This fits with the hypothesis that labor turnover can be an investment in human capital.
  - Young workers are testing the waters?
  - Older workers have a smaller payoff period to recoup the costs associated with job search. Thus, they are less likely to search (or move).

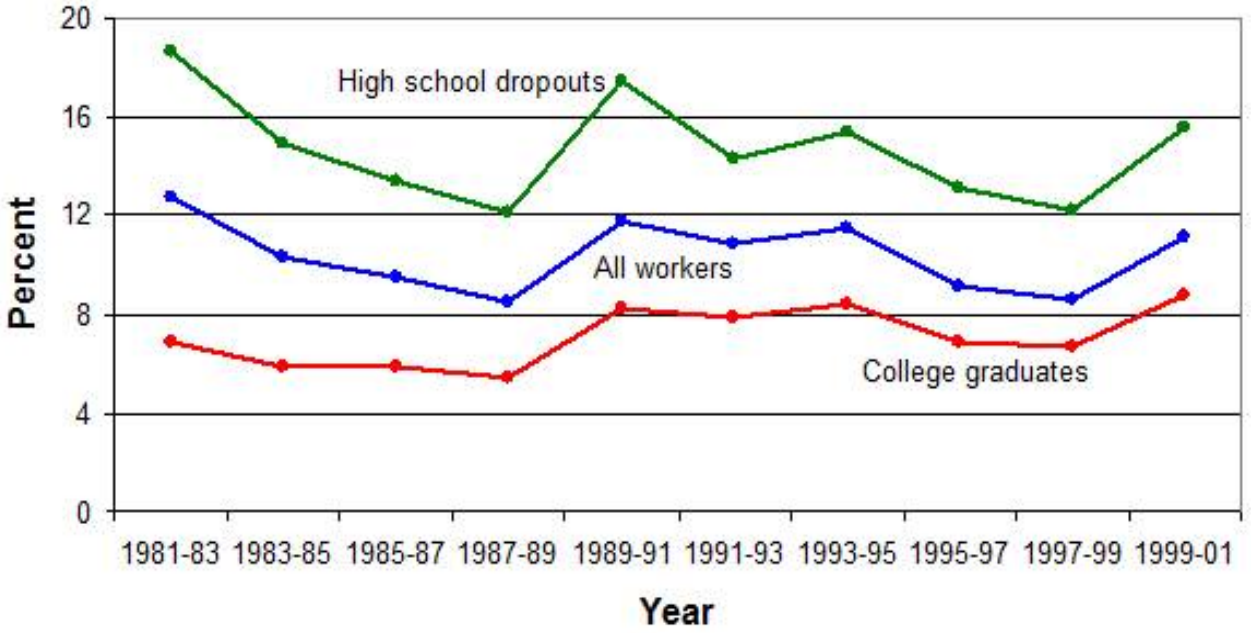
Employee Turnover

Probability of Job Turnover over a 2-Year Period



Employee Turnover

The Rate of Job Loss in the United States, 1981-2001



Employee Turnover

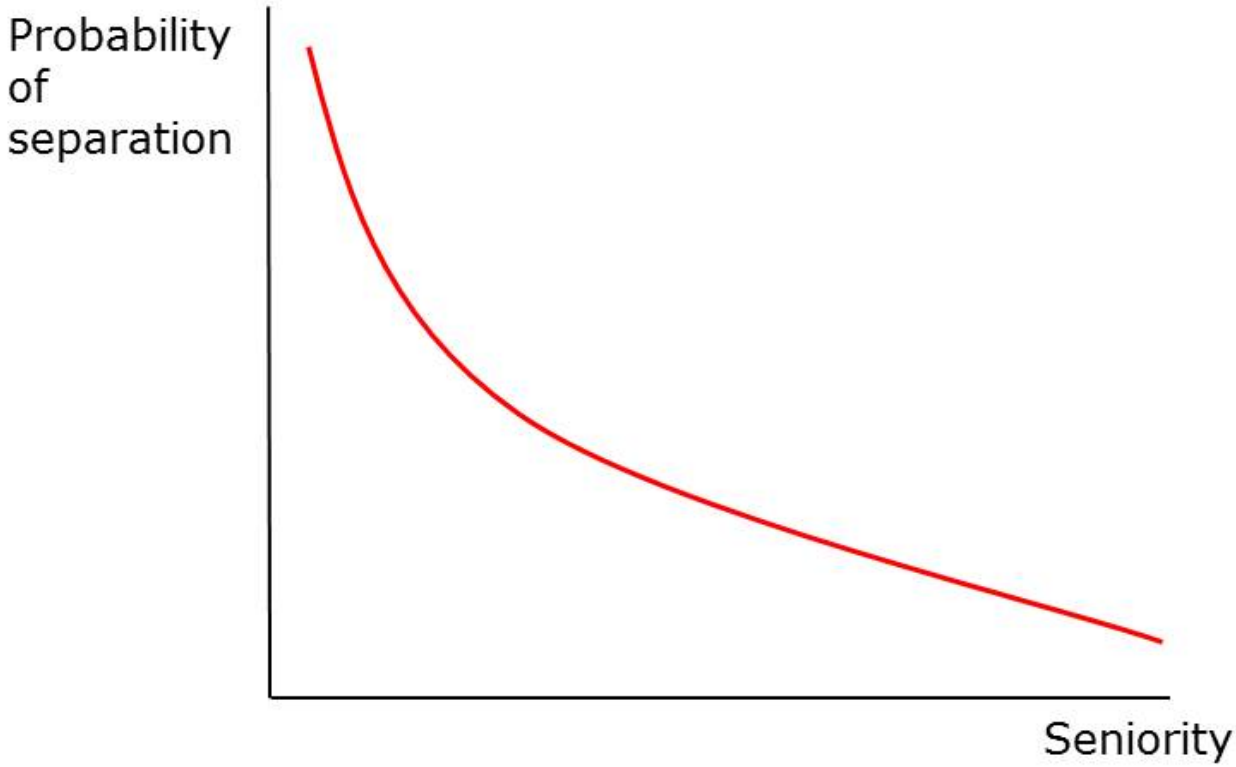
Job match

- Each particular pairing of a worker and employer has its own unique value.
- Workers and firms might improve their situation by shopping for a better job match.
- Efficient turnover is the mechanism by which workers and firms correct matching errors and obtain a better and more efficient allocation of resources.

Employee Turnover

Specific training and turnover

- When a worker receives specific training, his productivity improves only at the current firm.
- This implies there should be a negative correlation between the probability of job separation and job seniority.



Employee Turnover

Age earning profile

- Young people who quit often experience substantial increases in their wages.
- Workers who are laid off often experience wage cuts.
- A workers earnings depend on total labor market experience and seniority on the current job.

Employee Turnover

Effects of Employer Size

- Quit rates tend to decline as firm size increases because they offer more opportunities for transfers and promotions.
- Large firms have highly mechanized production processes, and they pay higher wages to reduce the turnover/quit rates.
- Large firms have greater needs for dependable and steady workers because employee shirking could impose great costs ?hence they establish internal labor market.

Employee Turnover

Monthly Quit Rates per 100 Workers by Firm Size, Selected Industries (1977–1981Averages)

	Number of Employees			
Industry	<250	250–499	500–999	1,000 and Over
All manufacturing	3.28	3.12	2.40	1.50
Food and kindred products	3.46	4.11	3.95	2.28
Fabricated metal products	3.33	2.64	2.12	1.20
Electrical machinery	3.81	3.12	2.47	1.60
Transportation equipment	3.90	2.78	2.21	1.41

Employee Turnover

Gender Differences

- Women workers have higher quit rates, and shorter job tenures than men.
- Higher quit rates in women may reflect lower levels of firm-specific human capital investments.
- If we control for lower wages and shorter careers of women, there appears to be no difference between the sexes in the propensity to quit a job.

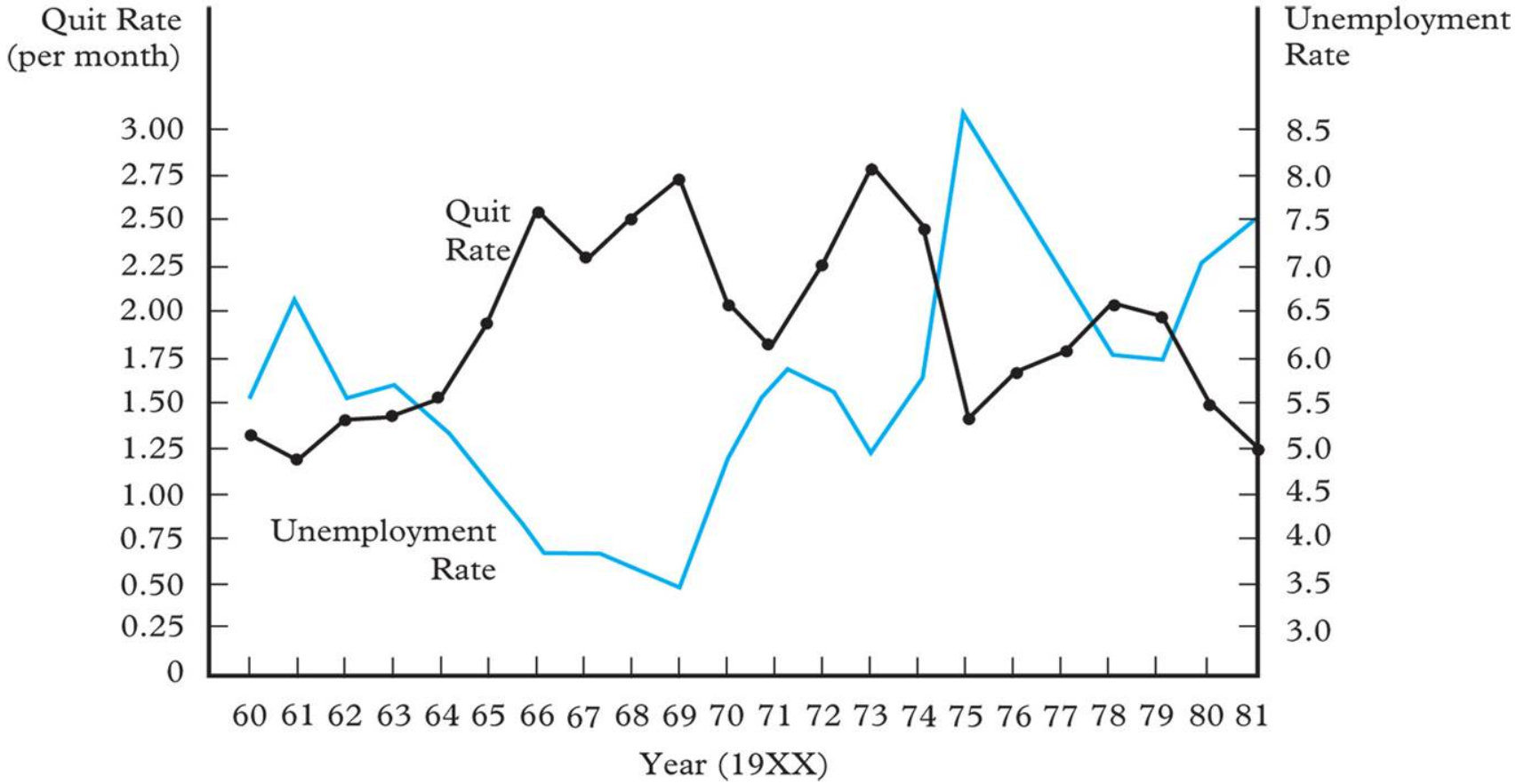
Employee Turnover

Cyclical Effects

- Human capital theory predicts that workers will have a higher probability of quitting a job for another during economic booms.
- Quit rates tend to fall when labor markets are loose and rise when labor markets are tight.
- The unemployment rate is a good measure of labor market conditions - unemployment rate is inversely related to quit rate.

Employee Turnover

The Quit Rate and Labor Market Tightness



The unemployment rate as a good measure of labor market conditions - tightness or looseness - shows the inverse relationship with the quit rate.

Employee Turnover

Is More Mobility Better?

- Mobility is socially useful because it promotes both individual well-being and the quality job matches.
- More workers and more employers in the market provide the economy with more flexibility in making job matches that best adapt to a changing environment.
- Lower mobility costs (and greater mobility) among workers also weaken the incentives of both employers and employees to invest in specific training or information peculiar to a job match.
- On a cautionary note, there is the concern that employers may have created job lock by providing pension plans and health care policies that are not portable if the worker leaves the firm.