Human Capital Investments Unemployment Inequality

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Outline

Human Capital Investments:
- The concept of human capital, human capital investment
- Types, stages, costs, benefits
- Is college education a good investment?
- The Cobweb model of labor market adjustment

Unemployment
- Sources of unemployment
- Unemployment types
- The Fanning Out of Age/Earnings Profiles
- Women and the Acquisition of Human Capital

Inequality
- Women and acquisition of human capital, women and job training, women and formal schooling
- Causes of inequality
- Measuring inequality: the Lorenz curve and the Gini coefficient

Vietnam Human Capital and Experiences from Overseas
- Thoughts and comments

9.1 Human Capital

➢ **Human capital** is the stock of knowledge, habits, social and personality attributes, including creativity, embodied in the ability to perform labor so as to produce economic value.

➢ Education, training, and heath care are the most important forms of **human capital investments**.

9.1 Human Capital Investments: Where? When?

➢ Workers undertake <u>three major kinds</u> of labor market investments:

- *Education and training*
- *Migration*
- *Search for new jobs*

➢ Investment in knowledge and skills of workers takes place in <u>three stages</u>:

- *Early childhood* human capital where such decisions are made by others – parents.
- Acquisition of knowledge and skills as *full-time student* in high school, college, or vocational training program.
- *On-the-job training* when in the labor force.

9.1 Human Capital Investment: Cost and Benefit

➢ Costs of acquiring or adding to human capital fall into three categories:

- *Out-of-pocket* or *direct* expenses – tuition costs, expenditures on books, and other supplies.
- *Forgone earnings* – salaries/income given up.
- *Psychic losses* – occur because learning is often difficult and tedious for some people.

➢ Expected *returns* to education and training investments (human capital) are in the form of:

- higher future *earnings*,
- increased *job satisfaction* over one's lifetime, and
- a greater *appreciation* of nonmarket activities and interests.

9.2 The Demand for a College Education

Weighing the Costs and Benefit of College

➢ People attend college when they believe they will be better off by so doing.

➢ College as a *consumption* good has consumption benefits that are unlikely to change much overtime.

➢ A person considering college education has two streams of earnings (streams A and B) over his/her lifetime:
  - Stream A begins after high school (*HS*) at the age of 18 but does not rise very high.
  - Stream B has a negative income for the first four years owing to college costs and rises above stream A.

Figure 9.2 Alternative Earnings Streams
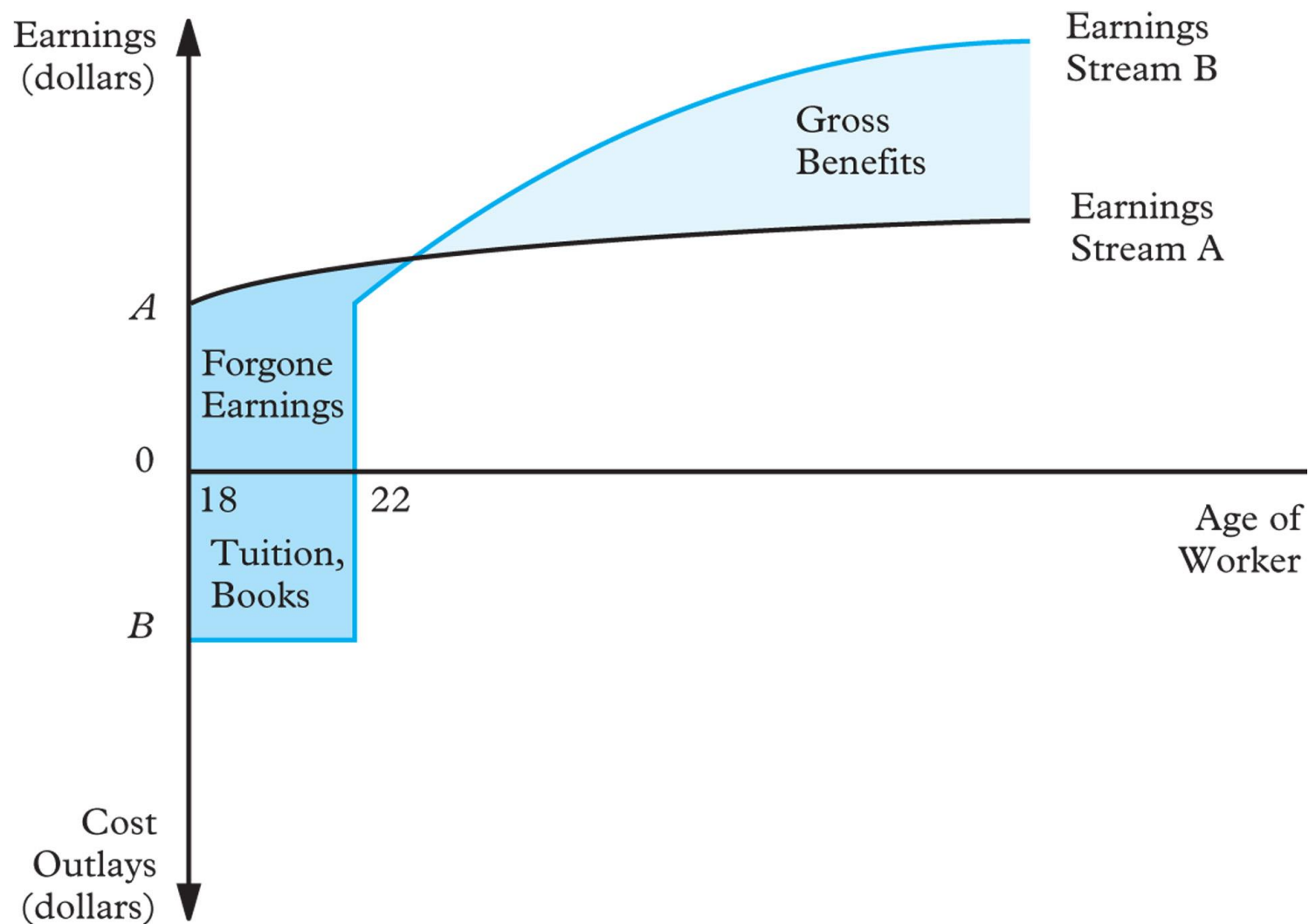
My View: Investment tip: Get yourself a college education

Posted: Tuesday, September 6, 2011 4:30 am

My View
Dr. Kenneth Ardon and Dr. Van T.H. Pham

Every year, hundreds of thousands of students finish high school and must make a decision about whether to go to college.

Unfortunately, tuitions have continued to climb, making college less affordable for many families. At the same time, college graduates in the past few years have faced the toughest job market in generations. Given the high costs and the current economic weakness, does it still make sense to go to college?

As any college-bound student knows, the cost of college has increased very rapidly. Nationally since 2000, average tuition, fees, board and book expenses at private, four-year colleges have been rising at a rate of more than 5 percent per year; while costs at public colleges, which have always offered a lower-cost option, increased approximately 8 percent per year due to declining state support.

Investment Tip: Get Yourself a College Education

Knowledge – college students have four (or more) years to study the sciences, arts, humanities and so on — courses that provide knowledge, broaden minds, open doors and bring a sense of accomplishment.

Lower Unemployment Rate – the unemployment rate for college graduates is almost always much lower than it is for high school graduates

Higher life-time earnings – college graduates' average salaries are about 70 percent higher than high-school graduates, which will add up to more than $1 million over a typical lifetime.

Other benefits - College graduates are healthier and have longer lives.
Happier with their social status and family life.
More open-minded and fewer prejudices
More open opportunities for promotions
Easier to adapt to future life or career challenges.
Children are more likely to do well in school and attend college

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9.4 Education: Social Cost and Social Benefit

The Social Cost

*   Among some of the highly industrialized countries, the United States devotes relatively more resources (*over a tenth of its gross domestic product*) to education, from elementary schools to universities.
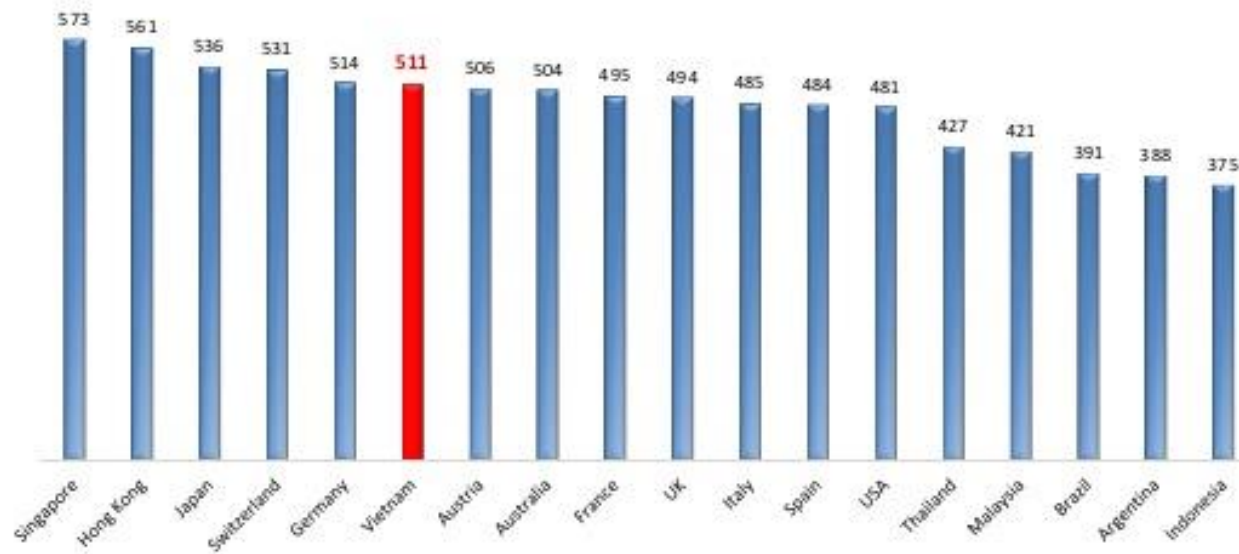*   What about Vietnam?

The Social Benefit

*   If an individual's productivity increases because of more schooling, then that increases *society's* stock of capital.

*   Education has positive externalities so that the social benefits are *larger* than the private benefits.
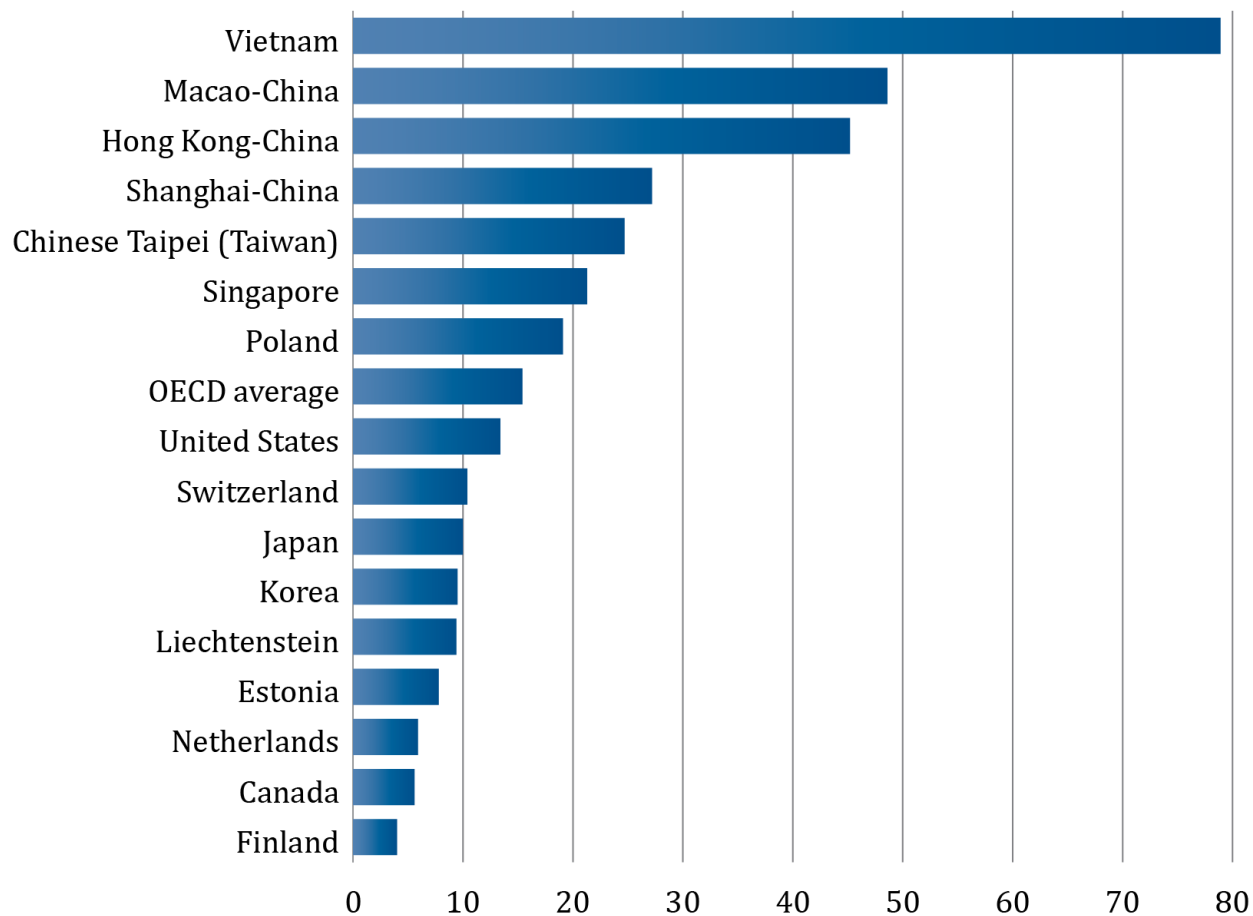
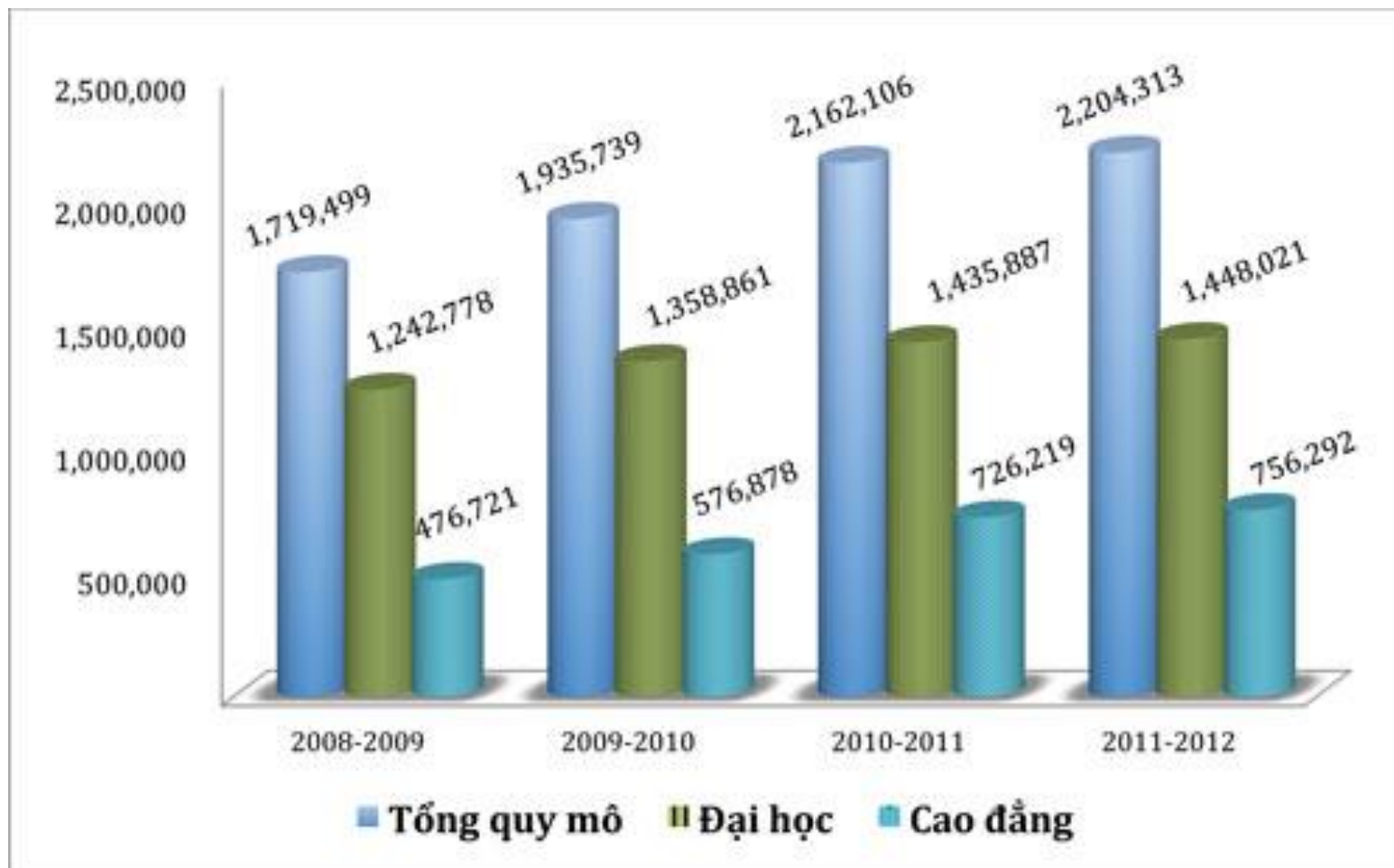# Percentage of Students from Disadvantaged Socio-economic Backgrounds

Source: *OECD PISA 2012*

Hình 3: Phân bổ phần trăm lao động thất nghiệp 15+ và thanh niên thất nghiệp đã qua đào tạo CMKT từ 3 tháng trở lên chia theo trình độ đào tạo, quý 1 năm 2015
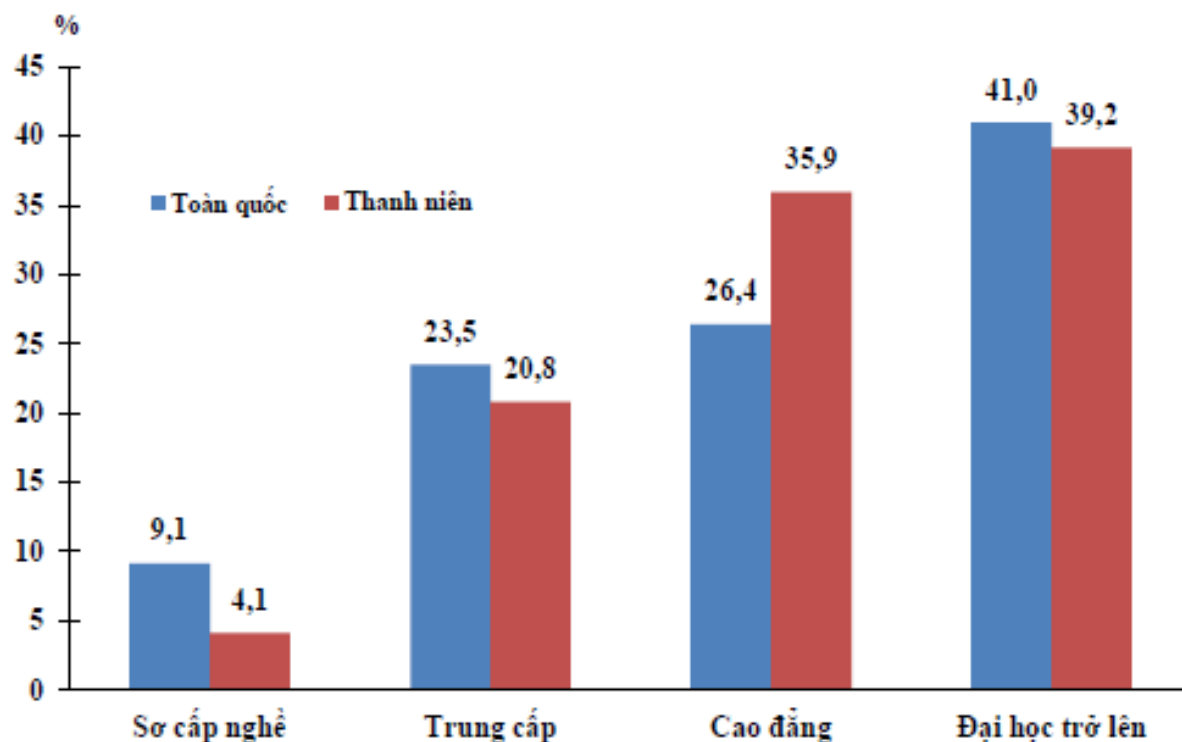
Source: Bao cao LDVL Quy I 2015
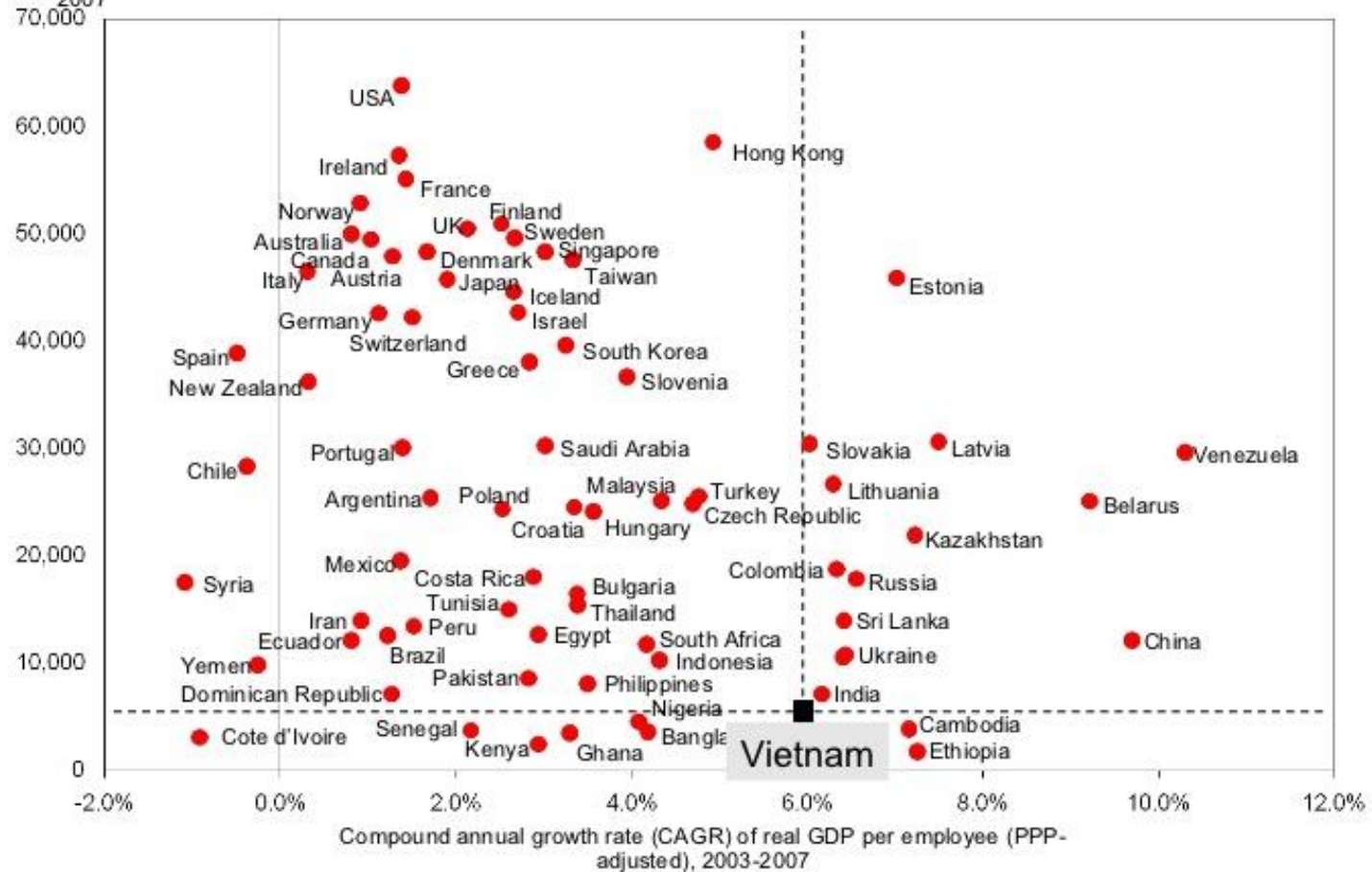
Quantity vs. Quality

Source: http://www.slideshare.net/tanhpuh/20081201-michael-e-porter

MODERN LABOR ECONOMICS
THEORY AND PUBLIC POLICY
12TH EDITION
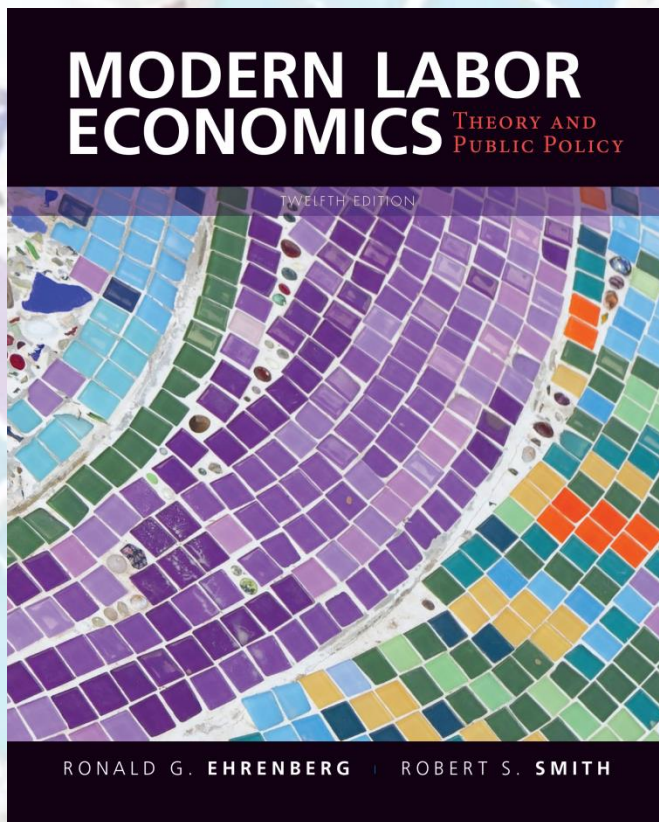
CHAPTER 9A

A "Cobweb" Model of Labor Market Adjustment

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➤ *Boom-and-bust cycles* for highly technical workers occur in the labor market due to the failure of supply to respond immediately to changes in labor market conditions.

9A.1 An Example of "Cobweb" Adjustments

➤ When the demand for certain fields/professions (e.g. *MD, CPA, CNA*) increases, the supply may be slow to adjust because it takes a long time for people/workers to be certified in those fields/professions.

➤ In the immediate market period (*at the moment*) supply will appear to be perfectly inelastic until more people decide to enter into those fields/professions and supply their services.

Figure 9A.1 The Labor Market for Engineers
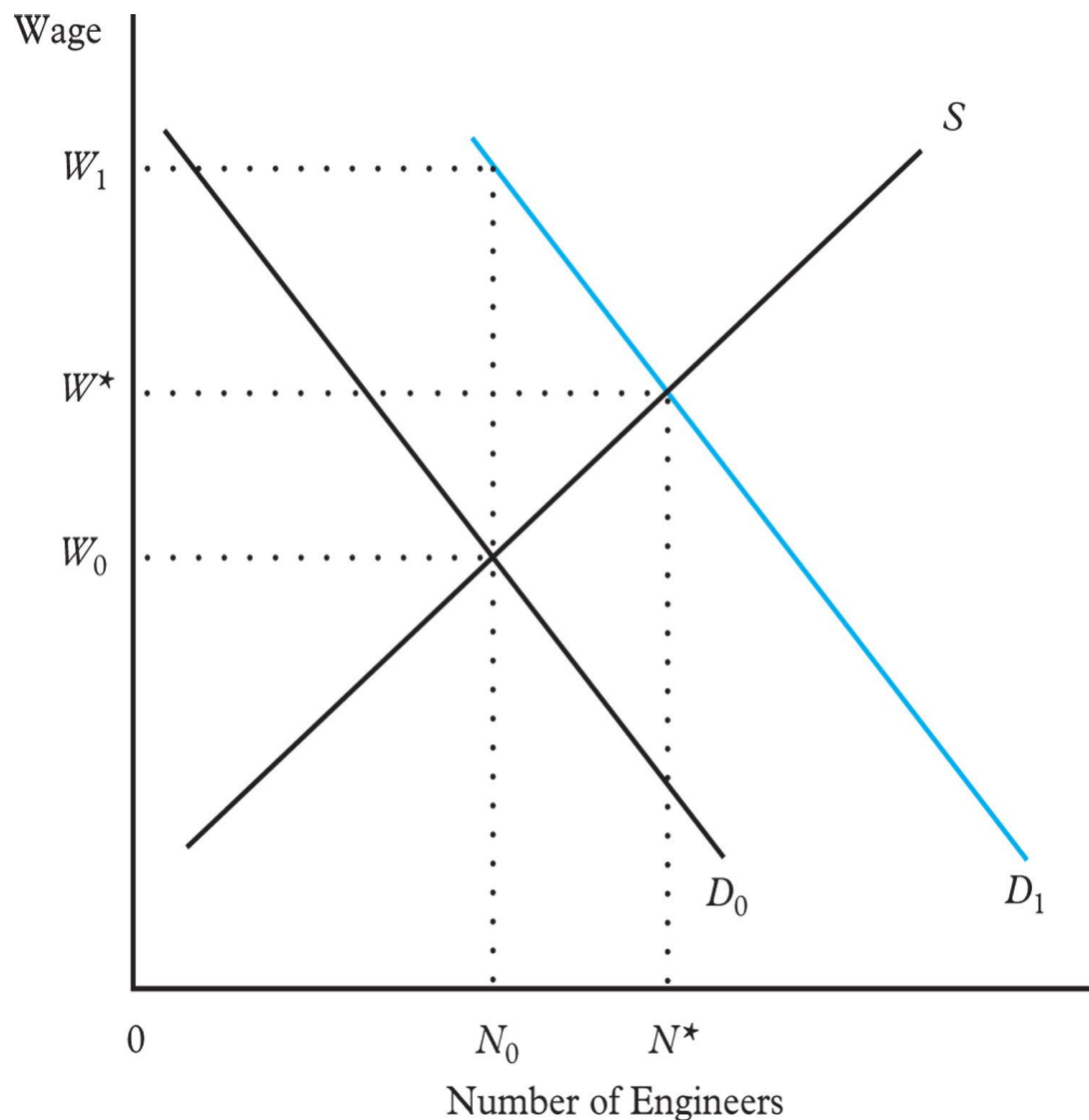
With the initial D_0 and S, equilibrium wage and employment will be W_0 and N_0.

An increase in the demand for engineers shifts D_0 to D_1, and because it takes a long time to become an engineer, the number of engineers available *at the moment* is N_0 (i.e. the elasticity of labor supply is zero in the immediate market period).

The currently available engineers N_0 can obtain a wage of W_1, which is above the new *long-run* equilibrium wage of W^*.

It will take a while before equilibrium employment is establish at N^*.

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Figure 9A.2 The Labor Market for Engineers: A Cobweb Model
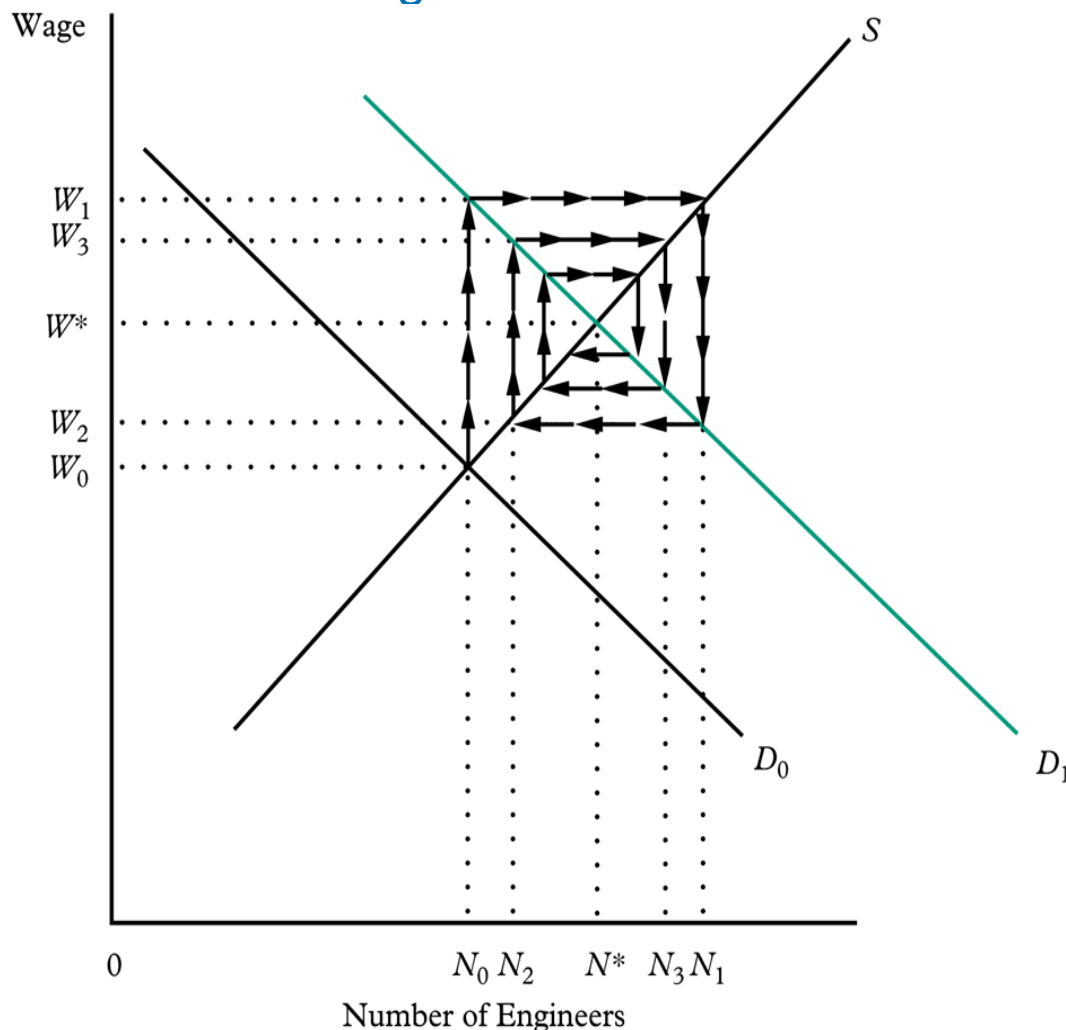
With the shift in demand from D_0 to D_1, the number of engineers currently at N_0 can obtain a wage of W_1.

If people are myopic in forming their expectations, they will assume W_1 to be the new equilibrium, therefore, N_1 people will enter the engineering field/school. When they (N_1) all graduate, there will be surplus engineers at W_1.

With supply fixed at N_1, the fall in wage to W_2 will cause students and workers to shift out of the engineering field, and N_2 will be the number of engineers after full adjustment in a few years.

With $N^D > N^S$ at W_2, wage rises to W_3, and the process as described above continues until the long-run is reached at N^* and W^*.

14.1 Unemployment

Sources of Unemployment

➤ *Downsizing* - In a typical year, half of the unemployed are job losers who are laid off temporarily or permanently discharged due to plant closure(s) or "downsizing."

➤ *New entrants* – those individuals who are entering into the labor markets for the first time

➤ *Reentrants* – those individuals with previous employment experiences who dropped out of the labor force/market for a time due to various reasons and are now back
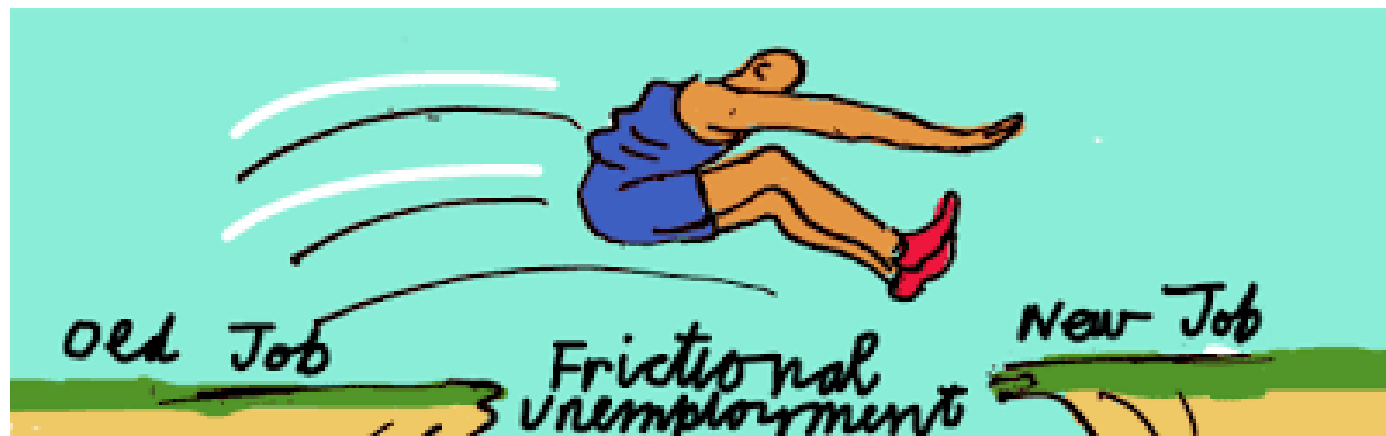
➤ *Voluntary job leavers* who quit their jobs

14.1 Types of Unemployment

- ➢ *Frictional Unemployment*

- ➢ *Structural Unemployment*

- ➢ *Cyclical Unemployment*

- ➢ *Seasonal Unemployment*

14.2 Frictional Unemployment

➢ *Frictional unemployment* - some people will move between jobs or new entrants into the job market

14.2 Frictional Unemployment

➢ Even in a market-equilibrium or full-employment situation, there will still be some *frictional unemployment*, because some people will move between jobs – some workers will quit their jobs to search for other employment opportunities.

➢ Frictional unemployment occurs because the labor market is characterized by frictions:
  • information flows are imperfect – that is, information about the characteristics of those searching for work and the nature of the jobs opening are unknown
  • it takes time and effort for unemployed workers and employers with job vacancies to find each other
  • random fluctuations in demand across firms will cause some firms to close or lay off workers at the same time that other firms are opening or expanding employment

14.2 Frictional Unemployment

The Theory of Job Search

➢ The level of frictional unemployment is determined by the flows of individuals into and out of the labor market and the **speed** with which unemployed individuals find and accept jobs.

A Model of Job Search

▪ Due to imperfect information about job opportunities and workers' characteristics, it takes time and effort to match unemployed workers with potential employers.
  • The lower the probability of unemployed workers finding jobs in a period (that is, $\downarrow P_{ue}$), the higher the expected duration of unemployment and the unemployment rate.

Figure 14.3   Choice of Reservation Wage in a Model of Job Search
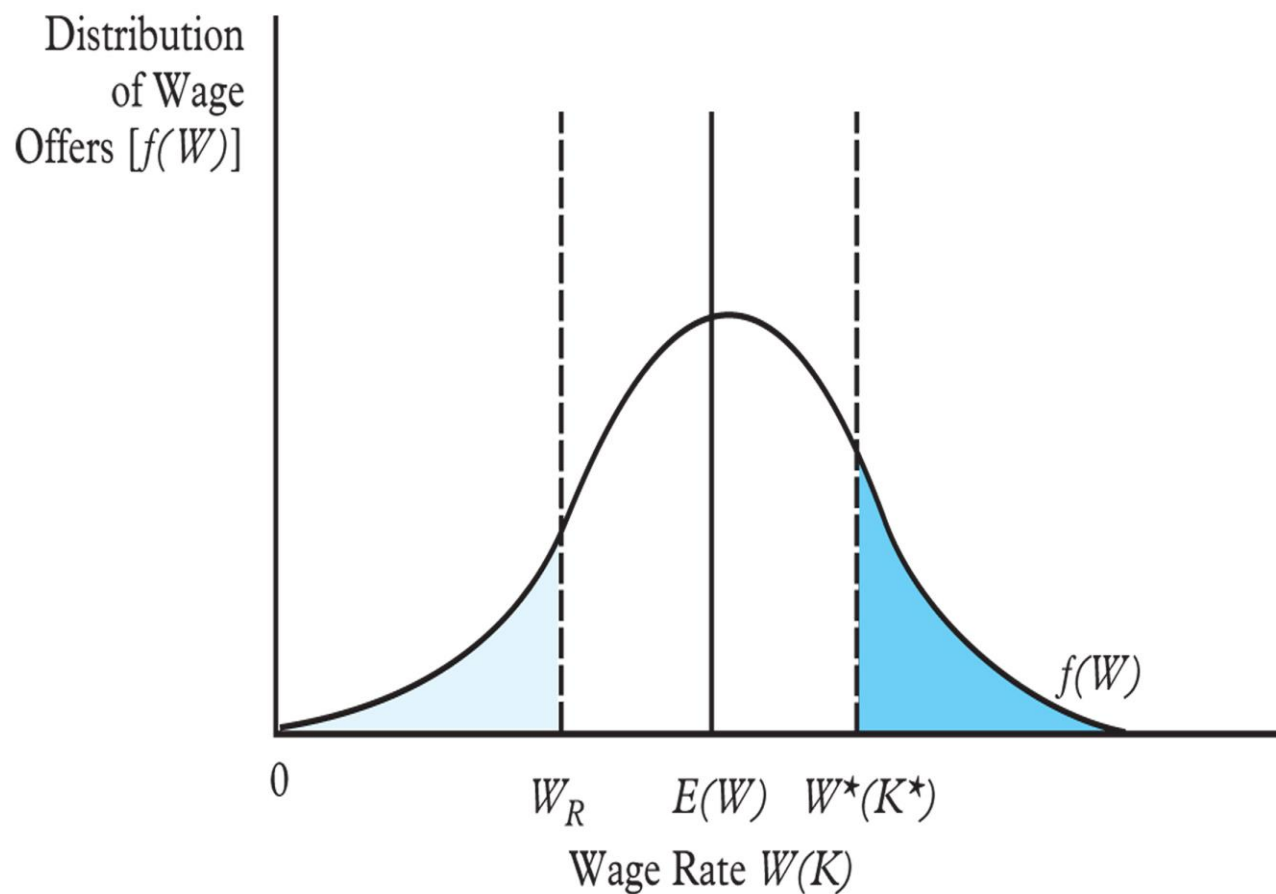
If job market information is imperfect and a firm's hiring standard exceeds K^*, a person with skill level K^* is rejected for the job.

If the hiring standard is K^* or less, the person with skill level K^* is offered the job.

Accepting a job offer depends on the number of job offers accumulated, the individual's reservation wage (W_R) as well as the match between K and W within the W_R and $W^*(K^*)$ range.

14.2 Frictional Unemployment

The Reservation Wage

- The reservation wage is the value that a worker places on an hour of lost leisure time, that is, it is the wage below which a person will not work.

- A person who has skill level K^* and whose reservation wage is W_R will accept job offers that pay between W_R and $W^*(K^*)$ – (see Figure 14.3).

- The higher the probability of finding a job in the range between W_R and (W^*K^*), the lower the expected duration of unemployment and the expected average wage, $E(W)$, is weighted average of the job offers in the W_R and $W^*(K^*)$ range.

- If the choice of W_R is higher than that indicated in Fig 14.3:
  - The worker will reject more low-wage jobs and $E(W)$ would increase
  - Rejecting more jobs offers decreases the probability of finding a job, thus increasing the expected duration of unemployment.

14.2 Frictional Unemployment

Implications of the Model

- As long as W_R is not set equal to the lowest wage in the market, the probability of finding a job will be less than 1; and hence some unemployment can be expected to result.

- Since W_R will always be chosen to be less than the wage commensurate with the individual's skill level, $W^*(K^*)$, virtually all individuals will be *underemployed* once they find a job, that is, their expected earnings, $E(W)$, will be less than W^*.

- Two unemployed individuals with the same skill level could choose the same W_R and have the same *expected* post-unemployment wage, but the wage they *actually* wind up with will depend on pure luck.

- Anything that causes an unemployed worker to intensify their job search will reduce the duration of unemployment.

- If the cost to an individual of being unemployed were to fall, and the person's W_R increases, this would increase both the expected duration of unemployment and the expected post-unemployment wage rate.

14.2 Frictional Unemployment

Do Generous Benefits Increase Unemployment?

- More generous UI benefits should cause an increase W_R of the unemployed workers, which will tend to reduce P_{ue} and P_{un}, and thus lengthens the duration of unemployment and this will increase the unemployment rate.

- Evidence from empirical studies suggests that higher UI replacement rates are indeed associated with longer durations of unemployment for recipients.

Effects of Benefits Eligibility

- Mere *eligibility* of workers for unemployment compensation benefits has been found to influence workers' job search behavior.

- In the US, there is a huge jump in the probability of a worker taking a job during the week his/her eligibility for UI benefits ends.

Do More Generous Benefits Improve Job Matches?

- Increased W_R and more-generous unemployment insurance benefits will tend to increase the duration of unemployment spell, but it should also raise the expected post-unemployment wage.

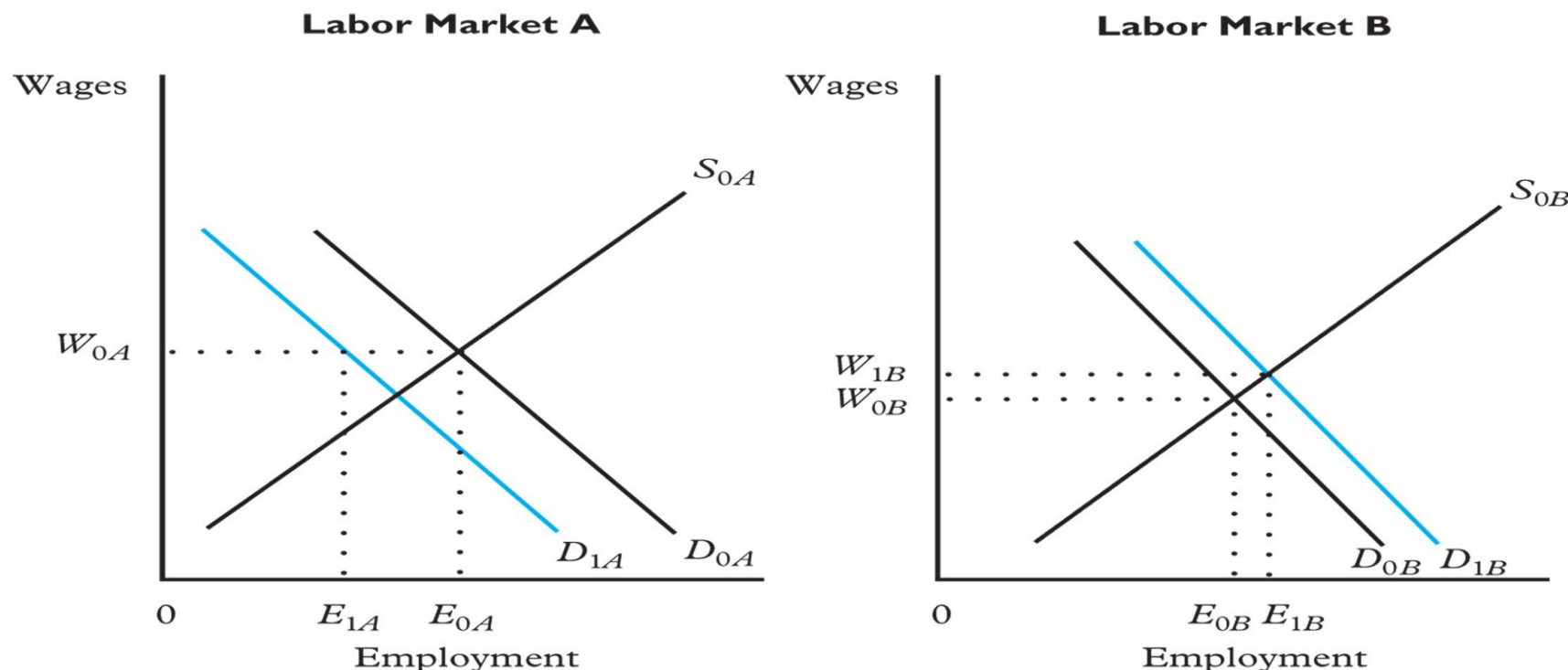# 14.3 Structural Unemployment

➢ *Structural unemployment* arises due to a mismatch between skills demanded and supplied in a given area or across areas.
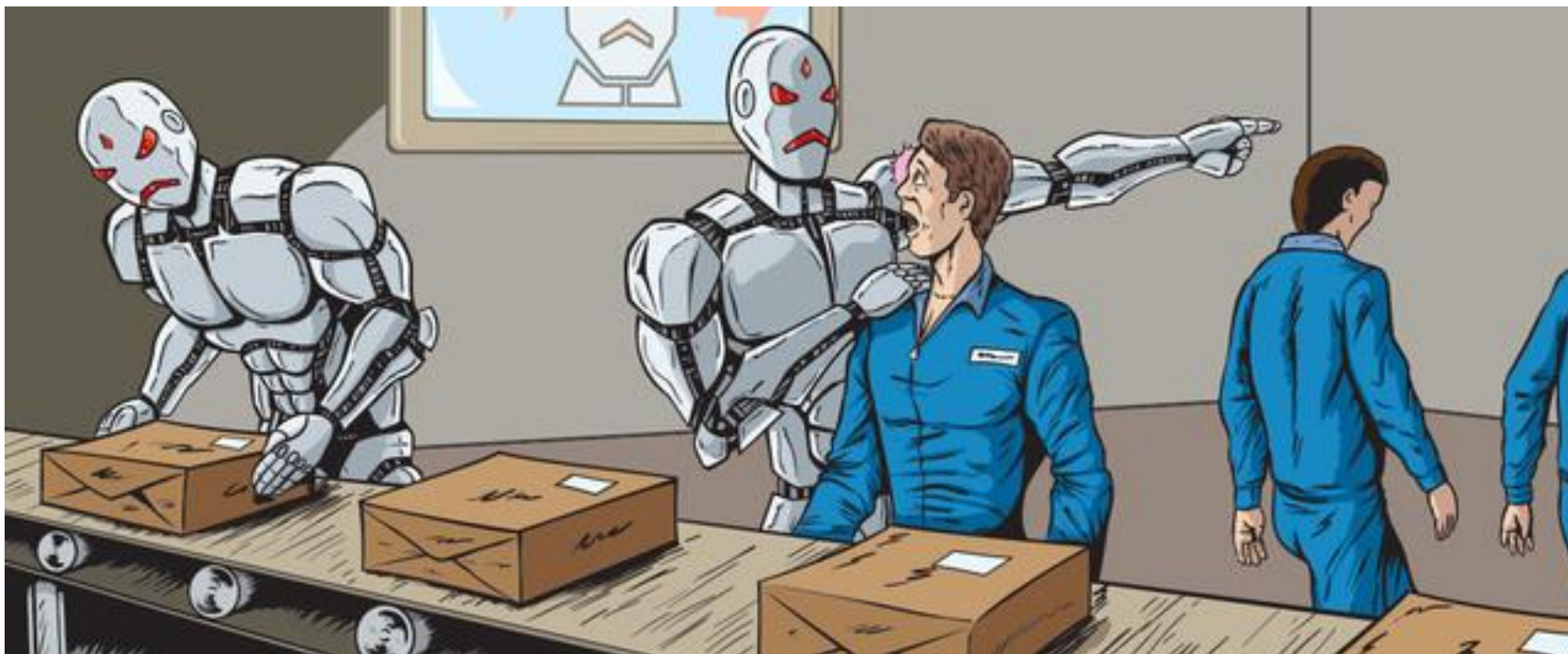
Figure 14.5 Structural Unemployment Due to Inflexible Wages and Costs of Adjustment

Labor Market A

Labor Market B

In Labor Markets A and B, (D_{0A}, S_{0A}) and (D_{0B}, S_{0B}) show the demand and supply curves, equilibrium wage and employment combinations are shown to be $(W_{0A}, E_{0A}$ and (W_{0B}, E_{0B}), respectively. The wages need not be equal in the two markets because of differences in training costs and nonpecuniary conditions of employment.

If the demand for automobile workers falls to D_{1A} due to foreign import competition, while the demand for computer specialists rises to D_{1B} because of the increased use of computers, and since real wages are inflexible downward in market A because of union contract provisions, employment falls to E_{1A}. Employment and wages of computer specialists will rise to E_{1B} and W_{1B}, respectively. Unemployment of $E_{1A} - E_{0A}$ will be created in labor market A in the short run. Can these unemployed workers move over to labor market B?

14.3 Structural Unemployment

Geographic Imbalances

- Assume that:
    - Market A is located in a Snowbelt city, and
    - Market B is located in a Sunbelt city; and that
    - Both markets employ the same type of labor

- If demand falls in the Snowbelt and unemployment increases because wages are not completely flexible, the unemployed workers will continue to wait for jobs in their home city for at least three reasons:
    - information flows are imperfect, hence workers are unaware of jobs that could be available elsewhere
    - the direct money costs of a move, including moving costs and the transaction costs involved in buying and selling a home, are high
    - the psychological costs of moving long distances are substantial because friends and neighbors and community support systems must be given up

- Structural factors can cause substantial differences in unemployment rates across states in a given year, but these differences usually do not persist indefinitely due to adjustments caused by movements of workers.

14.3 Structural Unemployment

International Differences in Long-Term Unemployment

➢ Structural unemployment exists when the unemployed workers have a small probability of finding work (that is, P_{ue} is low), and the duration of unemployment is long.

➢ The percentage of the labor force that is unemployed for more than one year is typically much higher in most of Europe than the United States because:

- The United States spends much less on government training programs than most of Europe – training and retraining programs tend to accelerate movements from U to E.
- European countries typically have job-protection policies (notification to the government, consultation with worker representatives) that are intended to reduce layoffs – these policies discourage the creation of new jobs/hires and thus increase the duration of unemployment.
- The United States requires some employers to notify their workers in advance of large-scale layoffs.

➢ A comparative study found that as the stringency of job-protection laws rose, so did the average duration of unemployment.

Figure 14.6 The Wage Curve
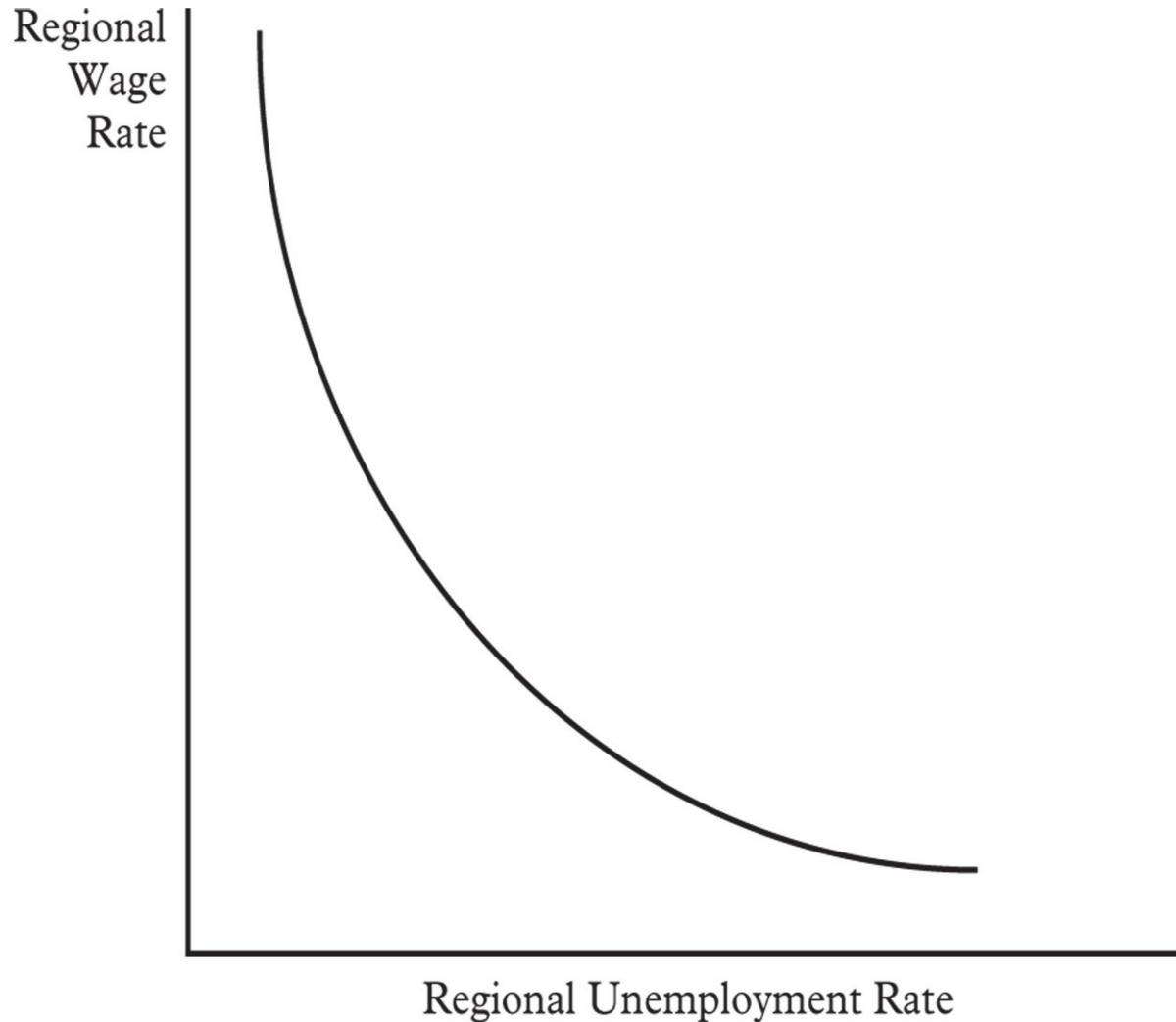
A wage curve seems to exist for every country for which enough data are available to estimate it.

The curves for each country are surprisingly similar; a 10 percent increase in a region's unemployment rate is associated with wage levels that are lower by 0.4 to 1.9 percent in 11 of the 12 countries studied.

The wage curve appears to contradict the conventional demand-and supply curve analysis, which suggests a positively sloped wage curve – a positive relationship between higher unemployment and higher wages

14.4 Cyclical Unemployment

➤ *Cyclical unemployment (demand deficient unemployment)* is associated with fluctuations in business activity ("business cycle").

The Business Cycle
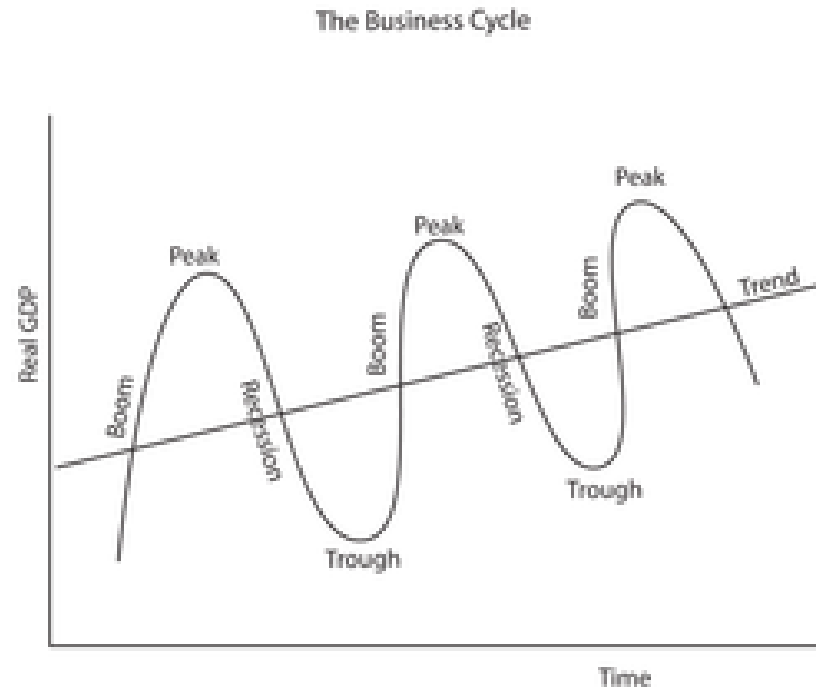
14.5 Seasonal Unemployment

➢ *Seasonal unemployment* is similar to demand-deficient unemployment because it is induced by fluctuations in the demand for labor during certain periods of the year.

- Fluctuations can be regularly anticipated and follow a systematic pattern over the course of a year.

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14.6 When Do We Have Full Employment?

➤ Governments constantly worry about:
- unusually high rate of unemployment because the unemployment rate is a handy barometer of an economy's health.

- unusually low rate of unemployment because it reflects a situation in which there is excess demand in the labor market that could lead to rising wages and thus lead to inflationary pressures.

➤ Governments will take steps to stimulate the demand for labor when they believe unemployment to be excessive.

Questions:

1. If both too much and too little unemployment are undesirable, how much is just right?

2. What unemployment rate represents full employment?

14.6 When Do We Have Full Employment?

Defining the Natural Rate of Unemployment

➢ The *full-employment* or (*natural*) rate of unemployment is difficult to define precisely:

- the natural rate of unemployment (*NRU*) is defined as the rate at which wage and price inflation are either stable or at acceptable levels.

- full employment is the rate of unemployment at which job vacancies equal the number of unemployed workers.

- *NRU* is the level of unemployment at which any increases in aggregate demand will cause no further reductions in unemployment or unemployment is voluntary.

- the *NRU* is affected by such factors as voluntary turnover rates among employed workers, movements in and out (*s*) of the labor force, and the length of time it takes for the unemployed to find (*f*) acceptable jobs

14.6 When Do We Have Full Employment?

What Is the Natural Rate?

➢ The estimates of the natural rate of unemployment (*NRU*) have varied over time; it was about:

- 5.4% in the 1960s
- 7% in the 1970s
- 6% to 6.5% in the 1980s

➢ Milton Friedman, as a leader in the development of the *NRU* concept cautioned against any attempts to forecast it.

- Some level of unemployment is unavoidably associated with the frictions in a dynamic labor market burdened with imperfect information.

- Arthur Okun pointed out that every one-percentage-point decline in the aggregate unemployment rate was associated with a three-percentage-point increase in output the United States produces.

9.3 Inequality

Women and the Acquisition of Human Capital

> The traditional/historical role of women in childrearing and household production contributed to their shorter expected work life and the skills atrophy when they drop-out of the labor force as well as their reduced labor force attachment.

> Earnings of women who work full-time year-round are lower than those of men of equivalent age and education.

> Women's earning within each group rise less steeply with age.

Women and Job Training

- Women receive less *OJT (on the job training)* than men because employers expect women workers to have shorter work lives due to drop out.

Women and Formal Schooling

- There have been dramatic changes in the level of formal education received by women in recent years, which no doubt reflect the increased returns to human capital investments and increased labor force attachment and longer expected work lives.

15.3 The Underlying Causes of Growing Inequality

➢ The widening gap between the wages of highly educated (skilled workers) and less-educated workers (unskilled workers) suggests three possible causes:

- The *supply* of less-educated workers might have risen faster than the supply of college graduates.

- The *demand* for more-educated might have increased relative to those for less-educated workers.

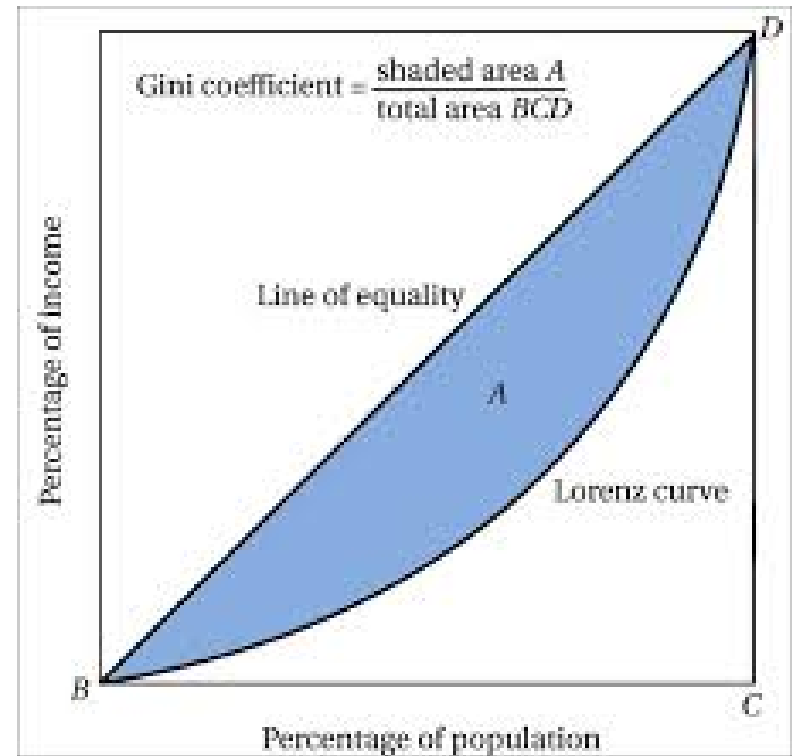- Changes in *institutional* forces such as minimum wage or the decline in unions.

Inequality and Measurements

Lorenz Curve

is a graphical representation of the cumulative distribution function of the empirical probability distribution of wealth or income
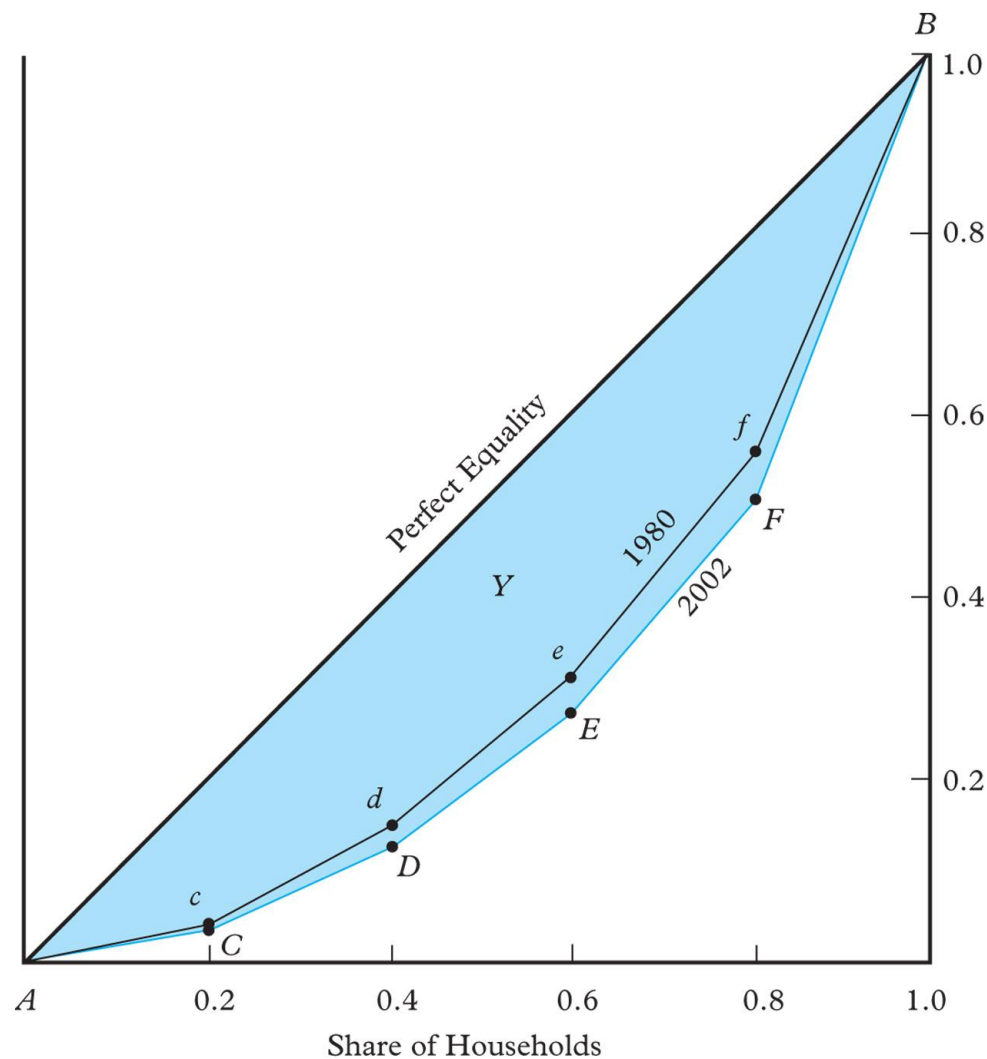
Gini Coefficient

is a measure of statistical dispersion intended to represent the income distribution of a nation's residents, and is the most commonly used measure of inequality.


Gini coefficient = $\dfrac{\text{shaded area } A}{\text{total area } BCD}$

Line of equality

A

Lorenz curve

Percentage of income

Percentage of population

➤ As indicated in the table below, the distribution of income is not perfectly equal.

Quintiles	Actual Share of Income	Cumulative Share of Households	Cumulative Share of Income
First Fifth	3.5 %	20 % or 0.2	3.5 % or 0.035
Second Fifth	8.8 %	40 % or 0.4	12.3 % or 0.123
Third Fifth	14.8 %	60 % or 0.6	27.1 % or 0.271
Fourth Fifth	23.3 %	80 % or 0.8	50.4 % or 0.504
Highest Fifth	49.6 %	100 % or 1.0	100 % or 1.0

Figure 15A.1 Lorenz Curves for 1980 and 2002 Distributions of Income in the United States

Figure 15A.3 Calculating the Gini Coefficient for the 2002 Distribution of Household Income
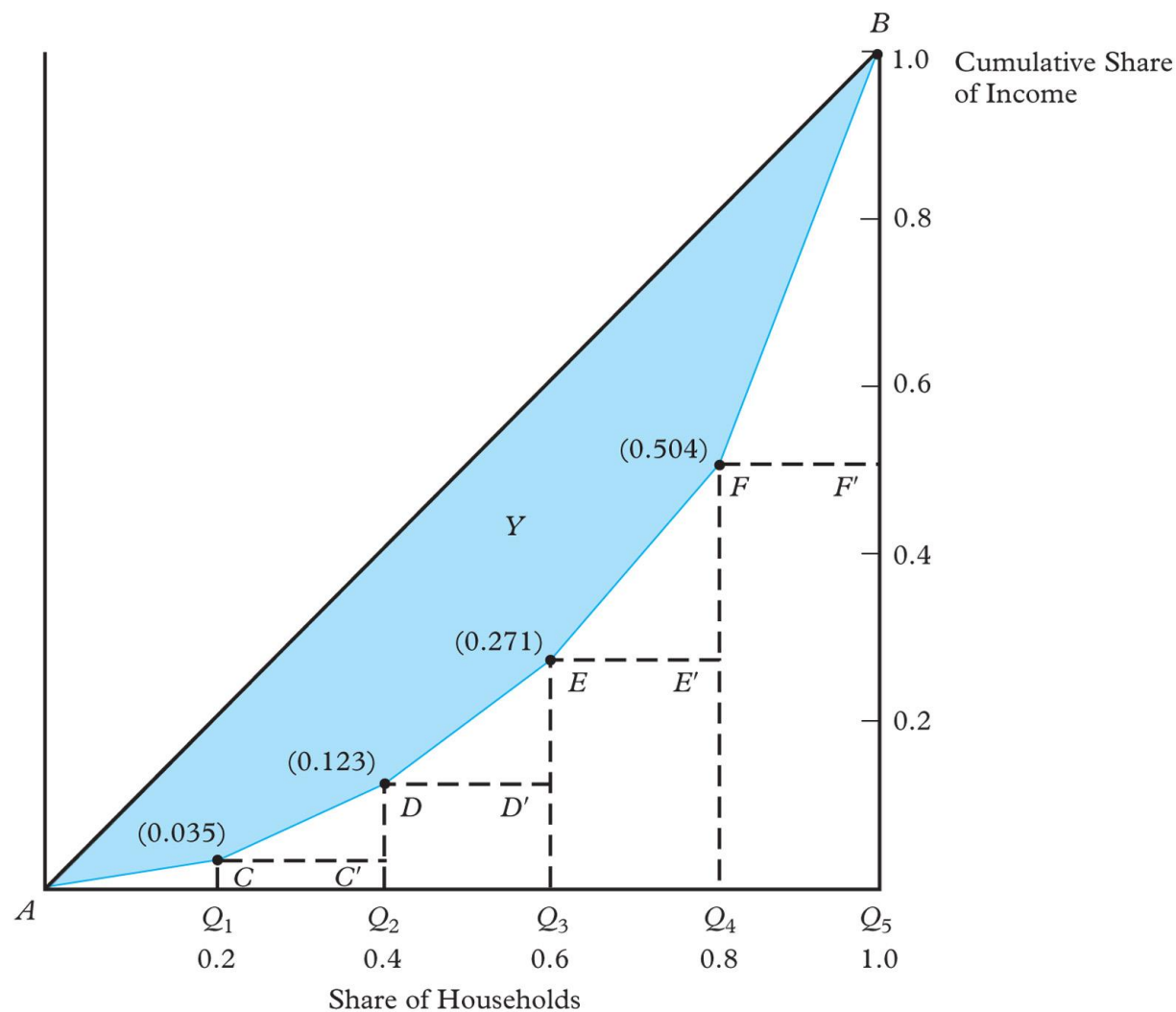
$$\text{Gini Coefficient} = \frac{0.5 - 0.2866}{0.5} = 0.4268 \qquad (15A.1)$$

➢ Gini coefficient (*GC*) is generally between 0 and 1

  • *GC* = 0   →   perfect equality

  • *GC* = 1   →   perfect inequality

➢ Gini Coefficient will become smaller when the rich give up some of their income to the middle class as well as when they give up income in favor of the poor.

Agribank ưu tiên 'người nhà' khi tuyển dụng

Con đẻ, dâu, rể hoặc con nuôi của cán bộ Agribank sẽ được ưu tiên cộng 30% thang điểm trong đợt tuyển dụng sắp tới theo thông báo chính thức trên website.

Bạn có ý kiến gì về việc tuyển dụng lao động và sử dụng nhân lực theo cách này?

Human Resource Investment Experiences from Other Countries