Lecture 5: Labor Market Equilibrium(updated version)

Labor Economics, Fall 2025

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Introduction

Introduction to Labor Market Equilibrium

- **Labor Supply in the labor market**: under the certain wage rate, how many workers would like to work or how many hours they would like to provide.
- **Labor demand in the labor market**:
  - Under the certain wage rate, how many workers would firms want to hire
- **Labor Market equilibrium in the labor market**:
  - it coordinates the desires of firms and worker, determining the wage and employment observed in the labor market.

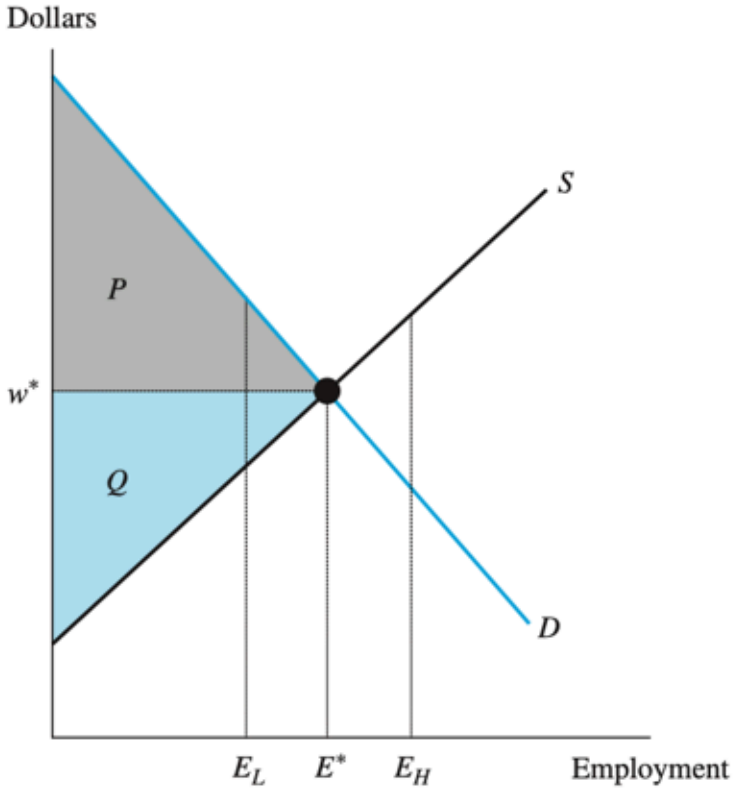
Competitive Equilibrium in Labor Market

- If markets are competitive and if firms and workers are free to enter and leave these markets, then
  - the labor supply curve is an upward-sloping curve,
  - the labor demand curve is a downward-sloping curve.
- Therefore, the equilibrium wage and employment are determined by the intersection of the labor supply and demand curves.

Competitive Equilibrium in Labor Market

FIGURE 4-1 Equilibrium in a Competitive Labor Market

The labor market is in equilibrium when supply equals demand; E^* workers are employed at a wage of w^*. In equilibrium, all persons who are looking for work at the going wage can find a job. The triangle P gives the producer surplus; the triangle Q gives the worker surplus. A competitive market maximizes the gains from trade, or the sum $P + Q$.



Factors to Labor Supply and Demand

Factors to Labor Supply

- Wage rates
- Nonwage Income
- Preference for work v.s leisure
- Technology for household works
- Nonwage aspects of the job
- Number of qualified suppliers

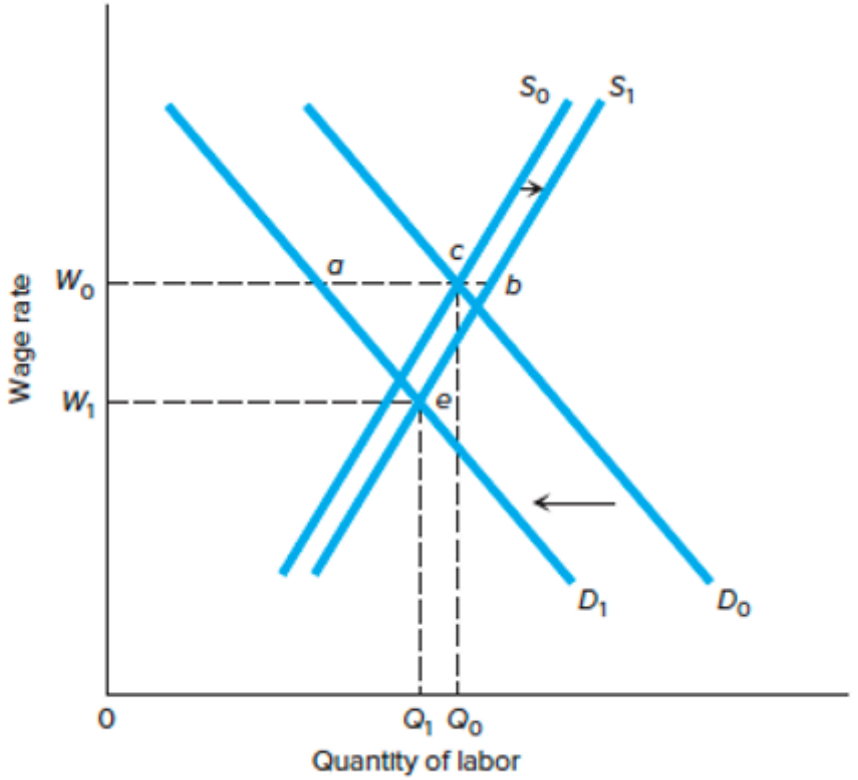
Factors to Labor Demand

- Product demand
- Productivity
- Price of other resources
- Number of employers

Changes in Labor Market Equilibrium

FIGURE 6.3 Changes in Demand, Supply, and Market Equilibrium

Changes in labor supply and demand create initial shortages or surpluses in labor markets, followed by adjustments to new equilibrium wage rates and employment. Here the decline in demand from D_0 to D_1 and increase in supply from S_0 to S_1 produce an initial excess supply of ab at wage W_0. Consequently, the wage rate falls to W_1; and because the decline in demand is large relative to the increase in supply, the equilibrium quantity falls from Q_0 to Q_1.



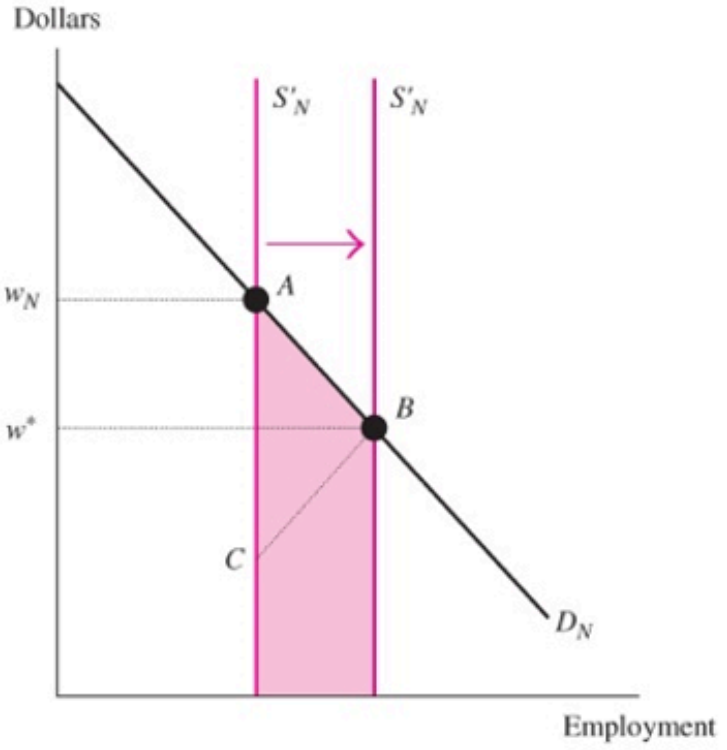
Competitive Equilibrium across Labor Market

- The economy typically consists of many labor markets, even for workers who have similar skills such as different regions/industrials/occupations/
  - e.g., Nanjing and Beijing, Software Engineer and Teacher.
- Suppose there are two regional labor markets in the economy, the south and north.
- And there are no barriers to labor mobility between the two regions.
- For simplicity, the supply curves are represented by vertical lines, implying that supply is perfectly inelastic within each region.

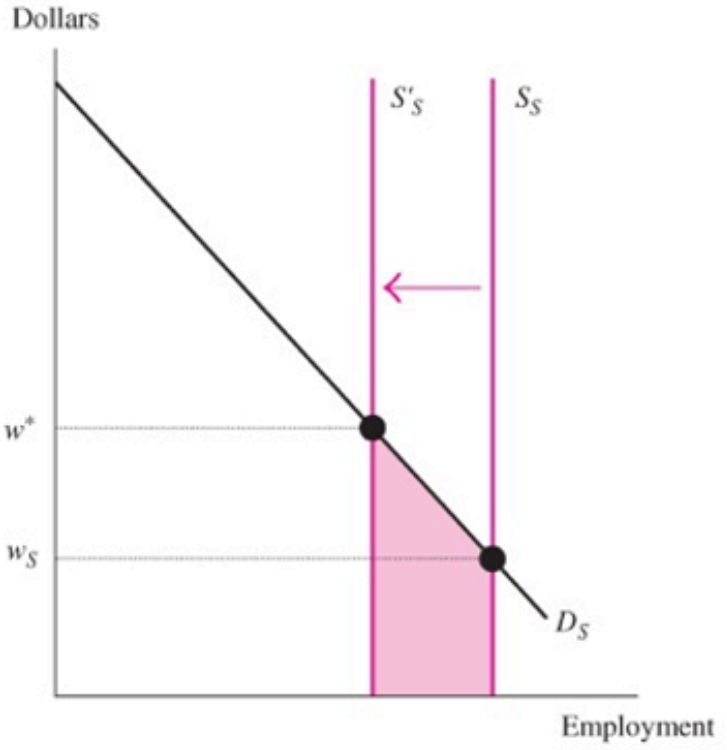
Competitive Equilibrium across Labor Market

FIGURE 4-2 Competitive Equilibrium in Two Labor Markets Linked by Migration

The wage in the northern region (w_N) exceeds the wage in the southern region (w_S). Southern workers want to move north, shifting the southern supply curve to the left and the northern supply curve to the right. In the end, wages are equated across regions (at w^*). The migration of workers reduces the gains from trade in the South by the size of the shaded trapezoid in the southern labor market, and increases the gains from trade in the North by the size of the larger shaded trapezoid in the northern labor market. Migration increases the total gains from trade in the national economy by the triangle *ABC*.



(*a*) The Northern Labor Market

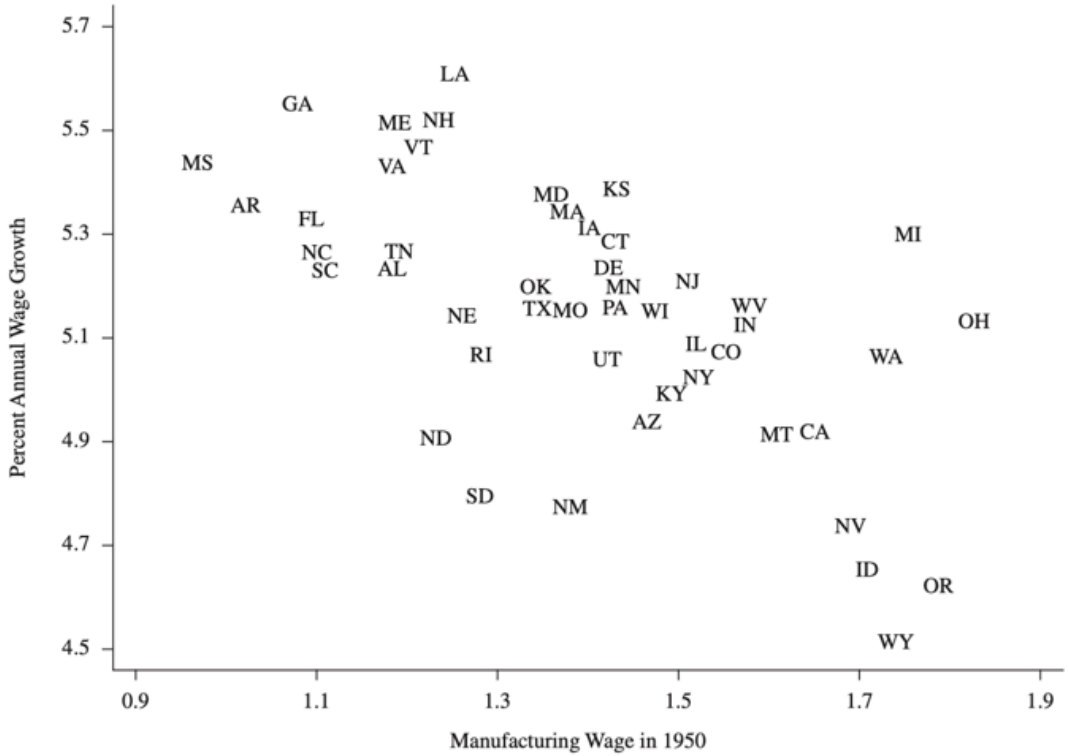


(*b*) The Southern Labor Market

Convergence across States in U.S: 1950-1990

FIGURE 4-3 **Wage Convergence across States**

Source: Olivier Jean Blanchard and Lawrence F. Katz, "Regional Evolutions," *Brookings Papers on Economic Activity* 1 (1992): 1–61.



- **Convergence**: The **negative** correlation between the initial wage level and the wage growth rate suggests that wages in more developed states tend to grow slower than wages in less developed states.

Monopoly and Monopsony

Introduction to Markets

- In an economy, there are three interconnected markets for production:

1. The Product Market
    - This is where firms sell their output—goods and services.
2. The Capital Market
    - More specifically, capital market is composed by the **financial market** and the **land market**,where firms obtain financing and investment and land.
3. The Labor Market
    - This is where workers sell their labor services to firms.

- The key insights: these markets are **interconnected**.

Introduction to Market Structure

- The benchmark market structure is the **perfectly competitive market**, both in production and labor market.
  - Firms are price takers whether they are sellers or buyers in the product market.
  - Firms are also wage takers in the labor market.
  - Workers are also price takers in the labor market.
- Neither firms nor workers have market power in these markets and they are free to enter and leave these markets.
- Both firms and workers have the full information about the market and they can make the optimal decisions.

Review: Perfect Competitive Market

- The firm's optimal production condition is

$$MC = MR$$

- In a perfect competitive market for both **products** and **labor**,
  - the firm's mariginal cost of labor is equal to the wage rate, $MC_L = w$
  - the firm's marginal revenue of labor is equal to the value of marginal product of labor, thus

$$MRP_L = MR_P \times MP_L = P \times MP_L = VMP_L$$

- Therefore, the optimal decision for a firm in a competitive market is

$$VMP_L = MRP_L = MC_L = w$$

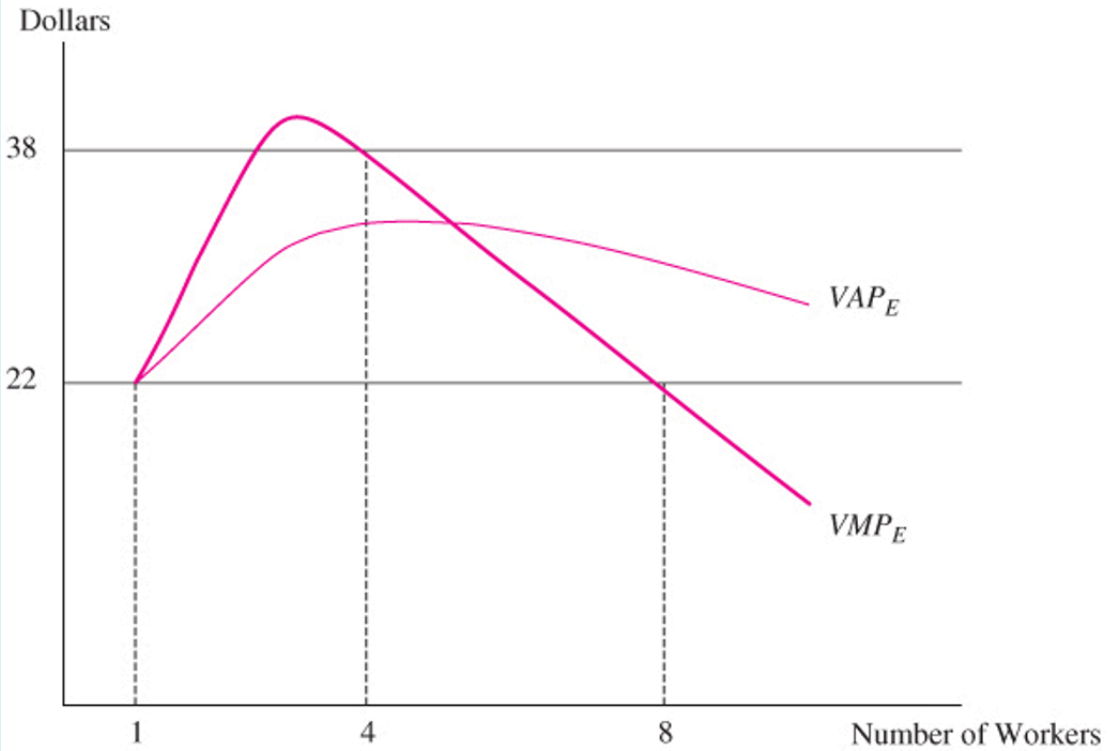
.

Review: Perfect Competitive Market

Labor Demand Curve

FIGURE 3-2 The Firm's Hiring Decision in the Short Run

A profit-maximizing firm hires workers up to the point where the wage rate equals the value of marginal product of labor. If the wage is \$22, the firm hires eight workers.

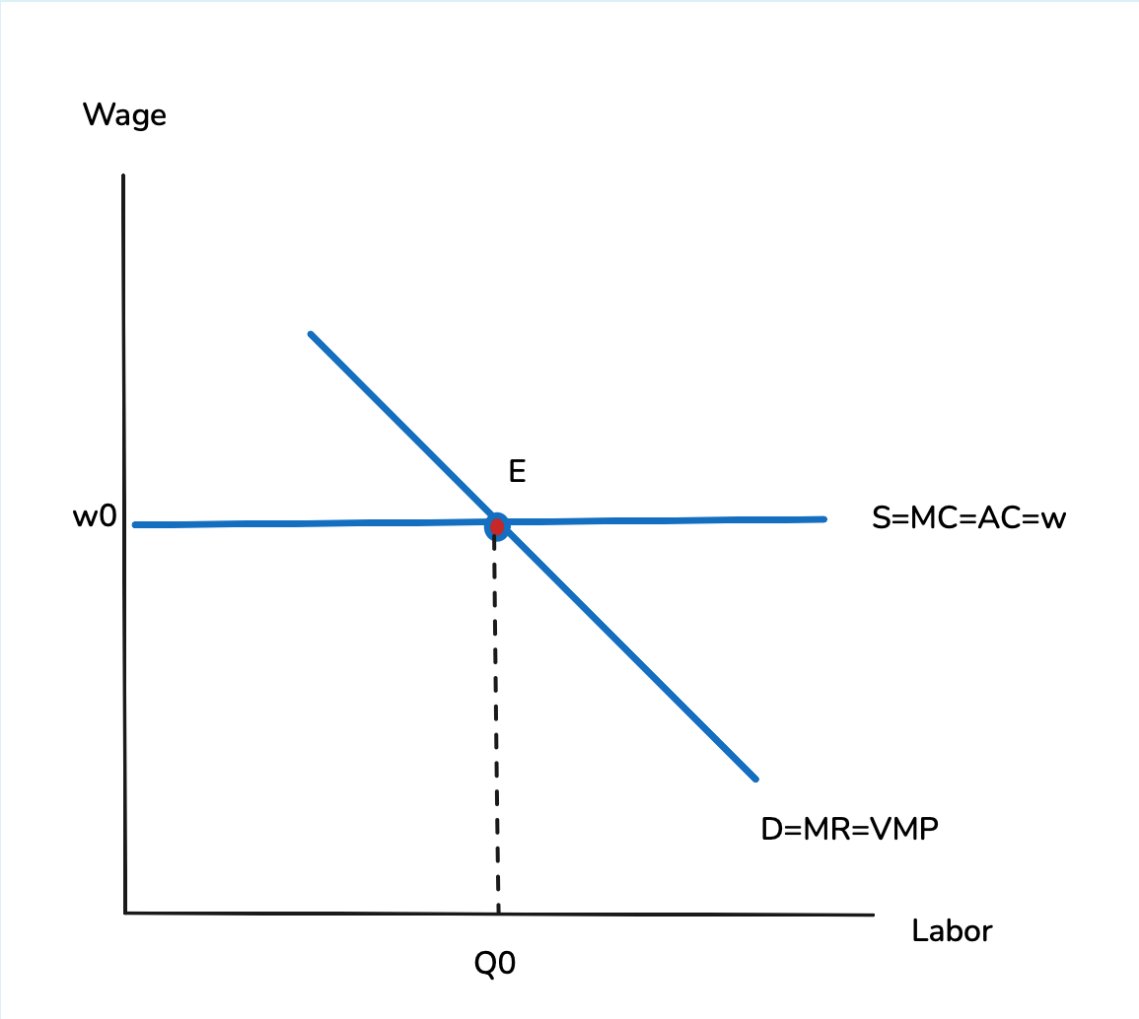


Review: Perfect Competitive Market

- **Labor Supply Curve**: In a perfectly competitive labor market, firms are **wage takers**, meaning they can only accept the wage rate set by the market.
- At the market wage rate w^*, each individual firm can hire as many workers as it wants (within reason) at that wage rate.
  - the firm's facing labor supply curve are **horizontal at the market wage rate**: $S_L = w^*$
- **Market labor supply curve**: Typically upward-sloping (aggregate behavior of all workers)
- **Firm's labor supply curve**: Horizontal line at market wage (from individual firm's perspective)

Review: Perfect Competitive Market

Labor Supply Curve



Introduction to Market Structure

- In reality, most markets are not **perfectly competitive**, but rather have some degree of monopoly or monopsony.

1. **Monopoly**: A market structure characterized by the presence of **a single seller**, who possesses significant market power and acts as a price setter for the good or service.

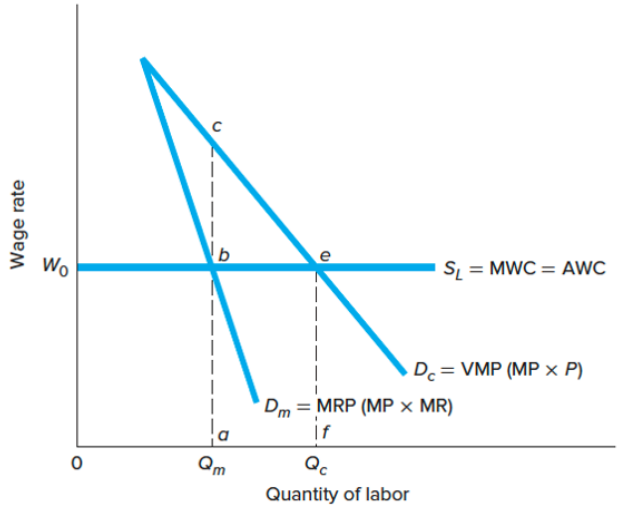
2. **Monopsony**: A market structure in which there is **only one buyer**, granting that buyer substantial market power to determine the price at which they purchase goods or services.

3. **Bilateral Monopoly**: A market structure in which there is **only one seller and one buyer**, granting that seller and buyer substantial market power to determine the price at which they purchase goods or services.

Monopoly in Product Market

FIGURE 6.6 Wage Rate and Employment Determination: Monopoly in the Product Market

Because a product market monopolist faces a downward-sloping demand curve, increased hiring of labor and the resulting larger output force the firm to lower its price. And because it must lower its price on all units, its marginal revenue (MR) is less than the price. Thus, the firm's MRP curve (MP × MR) lies below the VMP curve (MP × P), and this employer hires Q_m rather than Q_c units of labor. An efficiency loss to society of bce results.

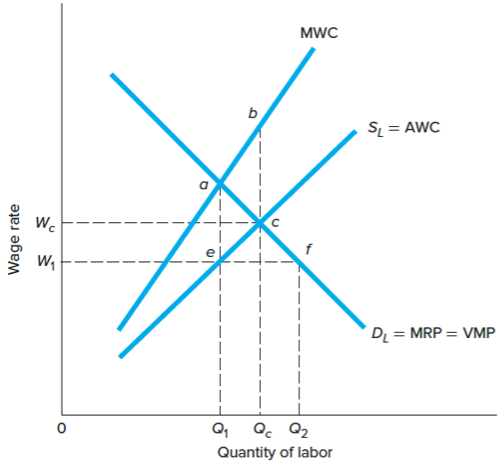


- The optimal production condition is $MRP_L = MR_P \times MP_L = w$.

- Because $MR_P \leq P$, then $MRP_L \leq VMP_L$
- The labor demand is steeper or less elastic than that of perfect competitive market.
- The wage paid by the monopolist is the same as that paid by a competitive firm.
- However, there is a lower level of employment, and labor resources are misallocated.

Monopsony in Labor Market

FIGURE 6.7 Wage Rate and Employment Determination Monopsony
The firm's MWC lies above the S_L = AWC curve in a monopsonistic labor market. The monopsonist equates MRP with its MWC at point *a* and chooses to hire Q_1 units of labor. To attract these workers, it need only pay W_1 an hour, as shown by point *e*. The firm thus pays a lower wage rate (W_1 rather than W_c) and hires fewer units of labor (Q_1 as compared to Q_c) than firms in a competitive labor market. Society loses area *eac* because of allocative inefficiency.



- If the firm want to attract more workers toward this market, then it must increase the wage rate.

$$MC_L \neq AC_L \neq w$$

- The labor supply curve is not horizontal line but upward-sloping. Because if the firm want to attract more workers, it must raise the wage rate to every worker instead of only the additional worker(impossibility of full discrimination).
- Follow the profit maximization, the firm still hires Q_1 workers based on

$$MC_L = MRP_L$$

- But based on the labor supply curve(S_L), the firm attract these worksers only need to pay the wage rate w_1.
- Therefore, the monopsonist firm hire less workers(Q_1) and pay them at lower wage rate(w_1) than firms in competitive market(Q_c and w_c).

Market Structure: Labor and Product

TABLE 6.3
Wage Outcomes of Labor Markets without Unions

		Product Market Structure (Firm)	
		Perfect competitor in sale of product (MR = *P*)	Monopolist in sale of product (MR < *P*)
Labor Market Structure (Firm)	Perfect competitor in hire of labor (MWC = *W*)	*W* = MRP = VMP (Figure 6.4)	*W* = MRP *W* < VMP (Figure 6.6)
	Monopsonist in hire of labor (MWC > *W*)	*W* < MRP (= VMP) (Figure 6.7)	*W* < MRP (< VMP)

[6] For a survey of theoretical and empirical studies of monopsony, see William M. Boal and Michael R. Ransom, "Monopsony in the Labor Market," *Journal of Economic Literature,* March 1997, pp. 86–112. See also Alan Manning, *Monopsony in Motion: Imperfect Competition in Labor Markets* (Princeton, NJ: Princeton University Press, 2003).

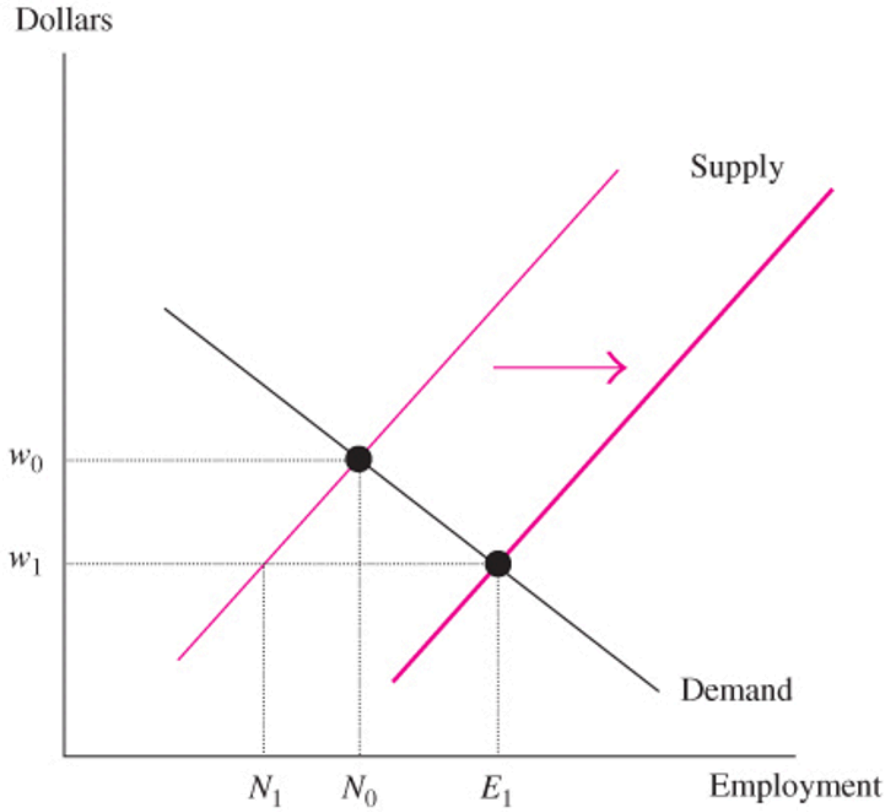
Policy Application(I): Migration

Policy Application(I): Migration

- Today, more and more people resident in a country where they were not born.
- Immigration debate in most receiving countries concerns that the impact of immigrants on the labor market opportunities of native-born workers.
- The answer is determined by the types of immigrants and native-borns, and the effect is different in the short-run and long-run.
  - **Substitution（替代）Vs Complements（互补）**
  - **short-run vs long-run**
- Key Assumption: all markets are perfectly competitive in the long-run.

When Migrants are Substitutes

FIGURE 4-10 The Short-Run Impact of Immigration When Immigrants and Natives Are Perfect Substitutes
Because immigrants and natives are perfect substitutes, the two groups are competing in the same labor market. Immigration shifts out the supply curve. As a result, the wage falls from w_0 to w_1, and total employment increases from N_0 to E_1. Note that, at the lower wage, there is a decline in the number of natives who work, from N_0 to N_1.



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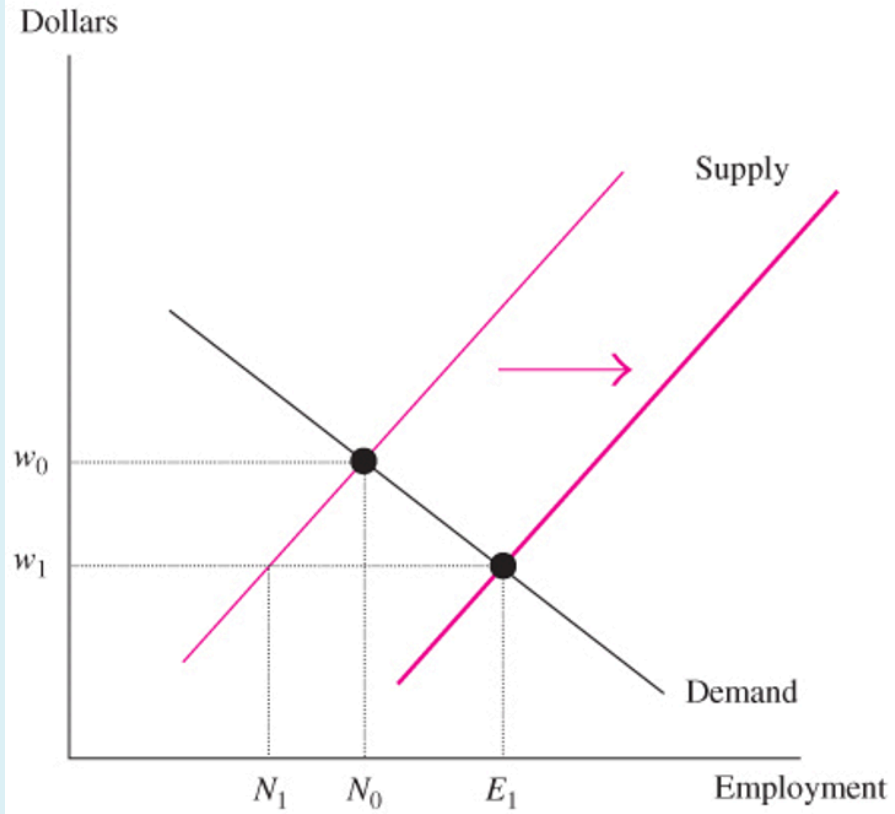
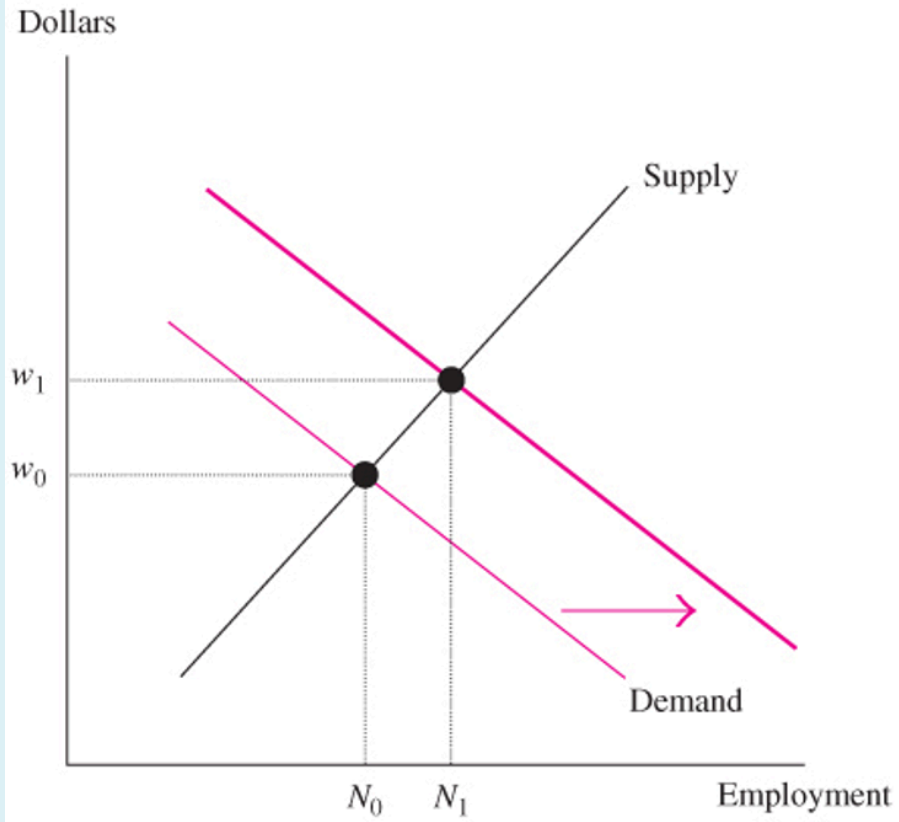


- As immigrants and natives are perfect substitutes, the two groups are competing in the same labor market. Immigration shifts out the labor supply curve.
- As a result, the wage falls from w_0 to w_1, and total employment increases from N_0 to E_1. At the lower wage, the number of natives who work declines from N_0 to N_1.

When Migrants are Complements

FIGURE 4-11 The Short-Run Impact of Immigration When Immigrants and Natives Are Complements
If immigrants and natives are complements, they are not competing in the same labor market. The labor market in this figure denotes the supply and demand for native workers. Immigration makes natives more productive, shifting out the demand curve even though capital is fixed. This leads to a higher native wage and to an increase in native employment.



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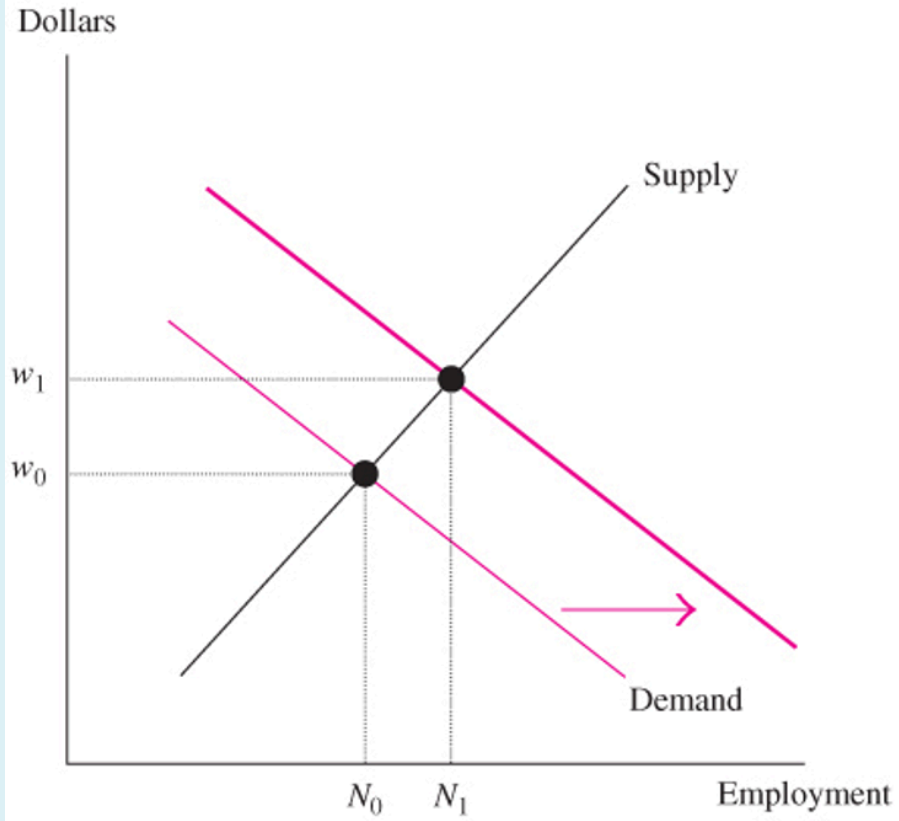

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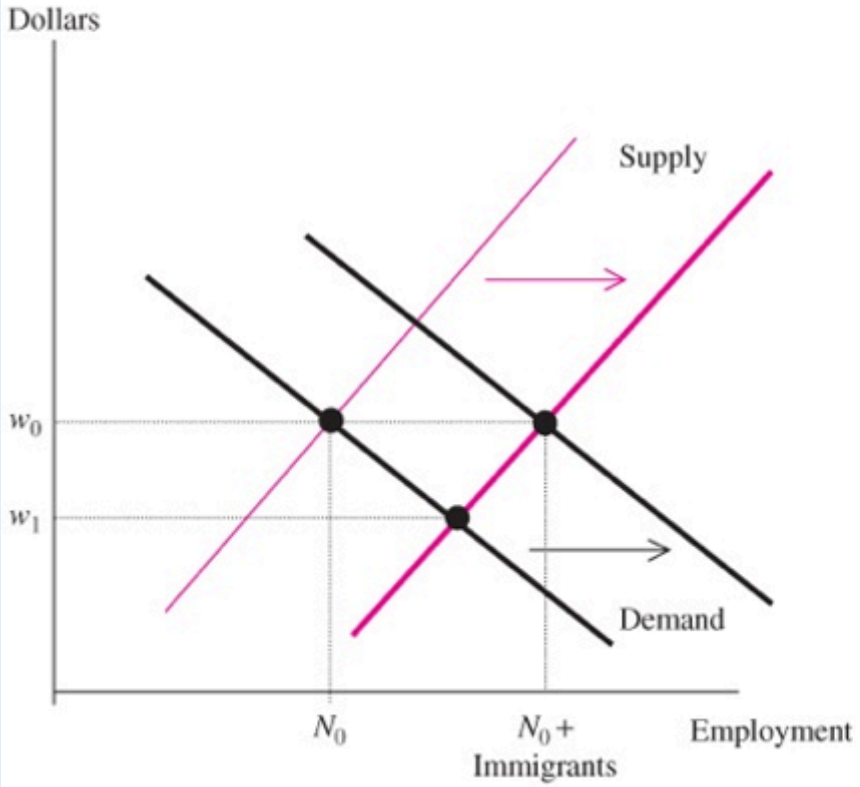
When Migrants are Substitutes in the Long-run

FIGURE 4-12 The Long-Run Impact of Immigration When Immigrants and Natives Are Perfect Substitutes

Because immigrants and natives are perfect substitutes, the two groups are competing in the same labor market. Immigration initially shifts out the supply curve. As a result, the wage falls from w_0 to w_1. Over time, capital expands as firms take advantage of the cheaper workforce, shifting out the labor demand curve. If the aggregate production function has constant returns to scale, it must be the case that, after all capital adjustments have taken place, the wage is back at its initial level of w_1. In addition, the long-run level of native employment is exactly what it was prior to the immigrant influx.



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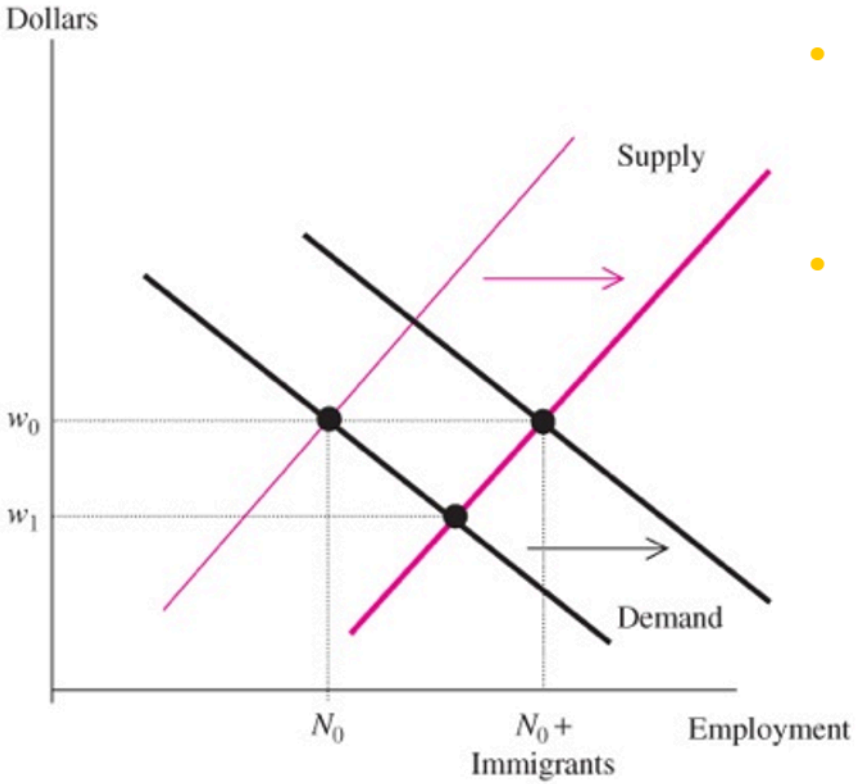


- **Immigration initially shifts out the labor supply curve so the wage falls from w_0 to w_1.**
- **Over time, capital expands as firms take advantage of the cheaper workforce, shifting out the labor demand curve and restoring the original wage and level of native employment.**

Immigration: Empirical Studies

- The basic regression model for studying immigration effects is:

$$wage_{i,t} = \beta_0 + \beta_1 immigrant_{i,t} + \beta_2 X_{i,t} + \epsilon_{i,t}$$

- where $wage_{i,t}$ is the logarithm of the average wage in city i at time t, $immigrant_{i,t}$ represents the density of immigrants in city i at time t, and $X_{i,t}$ is a vector of control variables for the city i at time t.

- The coefficient β_1 measures the effect of the density of immigrants on the wage rate in the local labor market on average.

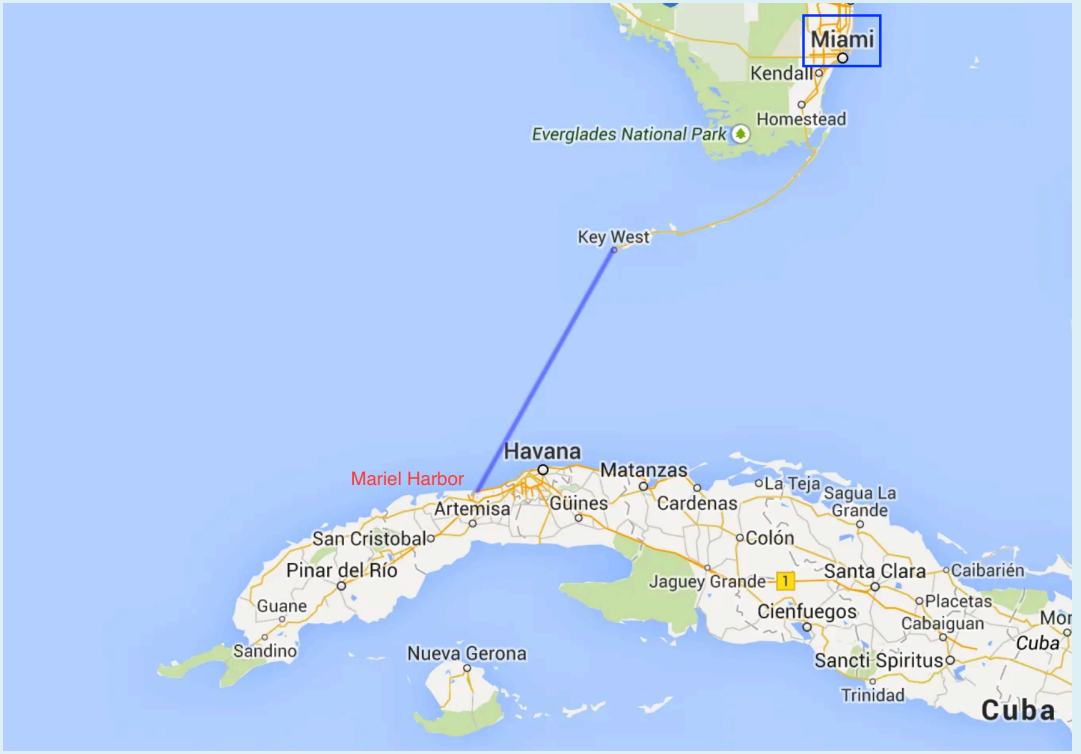
Empirical Studies for Immigration: Identification

- However, there are sevaral identification issues in this regression model.
  - the independent variable, the density of immigrants is **endogenous**.
- **Simultanous Bias**:
  - Immigrants tend to move to cities with better economic opportunities, especially where wage rates are higher.
  - As a result, immigrant density (the independent variable) is influenced by local wage rates (the dependent variable).

Empirical Studies for Immigration: Identification

- **Omitted Variable Bias**:
  - migrants are not randomly distributed across cities, but are also determined by the wage rate and other factors.
  - If we can not control or observe these potential factors, then the coefficient β_1 will be also biased.
- To address the identification issues, we should underscore the value of a natural experiment that corresponds more closely to an exogenous increase in the supply of immigrants to a particular labor market.
  - for instance, the experiences of the Miami labor market in the aftermath of the Mariel Boatlift.

Mariel Boatlift: Geographic Background



Mariel Boatlift: Background

- The Mariel Boatlift was a mass emigration of Cubans who departed from Cuba's Mariel Harbor for the United States between April 15 and October 31, 1980.
- On April 20,1980, Castro declared that Cuban nationals wishing to move to the United Sates could leave freely from the port of Mariel.
- From May to September 1980, over 125,000 Cuban immigrants arrived in Miami on a flotilla of privately chartered boats,thus 7% growth to Miami labor market. This was a massive shock to the local labor market.
- It provides a natural experiment for exogenous labor supply to test the effect of immigrants on on natives.

Mariel Boatlift: Historical Photographs

Card(1990): Mariel Boatlift Study

- Card, D. (1990). The impact of the Mariel Boatlift on the Miami labor market. Industrial and Labor Relations Review, 43(2), 245–257.
- He used this political event as a natural experiment to study the effect of immigrants on the wages and employment of native workers in Miami labor market.
- More specifically, he compared the Miami labor market with nearby large cities such as Atlanta, Houston, LA... which experienced same economic trends during 1980-1985.
- The shocking result is that the Mariel Boatlift had essentially **no effect** on wages or employment of native workers in Miami.

Immigration: Mariel Boatlift

TABLE 4-2 Immigration and the Miami Labor Market

Sources: The Mariel flow data are drawn from David Card, "The Impact of the Mariel Boatlift on the Miami Labor Market," *Industrial and Labor Relations Review* 43 (January 1990), p. 251. The data for the Mariel flow that did not happen are drawn from Joshua D. Angrist and Alan B. Krueger, "Empirical Strategies in Labor Economics," in Orley C. Ashenfelter and David Card, editors, *Handbook of Labor Economics,* vol. 3A, Amsterdam: Elsevier, 1999, Table 7. The comparison cities are Atlanta, Houston, Los Angeles, and Tampa–St. Petersburg.

	The Mariel Flow		The Mariel Flow That Did Not Happen	
	Before	After	Before	After
Unemployment rate of blacks in				
Miami	8.3	9.6	10.1	13.7
Comparison cities	10.3	12.6	11.5	8.8
Difference-in-differences	−1.0		+6.3	

- Potential explanations for the results:
  - Cuban immigrants were **complements** rather than **substitutes** to native workers in Miami labor market at least in the short-run.
  - Cuban migrants also **create new jobs** for native workers as they may increase demand for goods and services running by native workers.

Policy Application(II): Minimum Wage

Policy Application: Minimum Wage

- A minimum wage is the lowest hourly, daily or monthly payment that employers may legally pay to workers.
- New Zealand was the first country to implement minimum wage as a public policy in 1894. Australia followed in 1896, and UK is the third country to implement minimum wage in 1909.
  - It is designed to prevent exploitation in "sweated industries" (manufacturing sectors with poor working conditions).

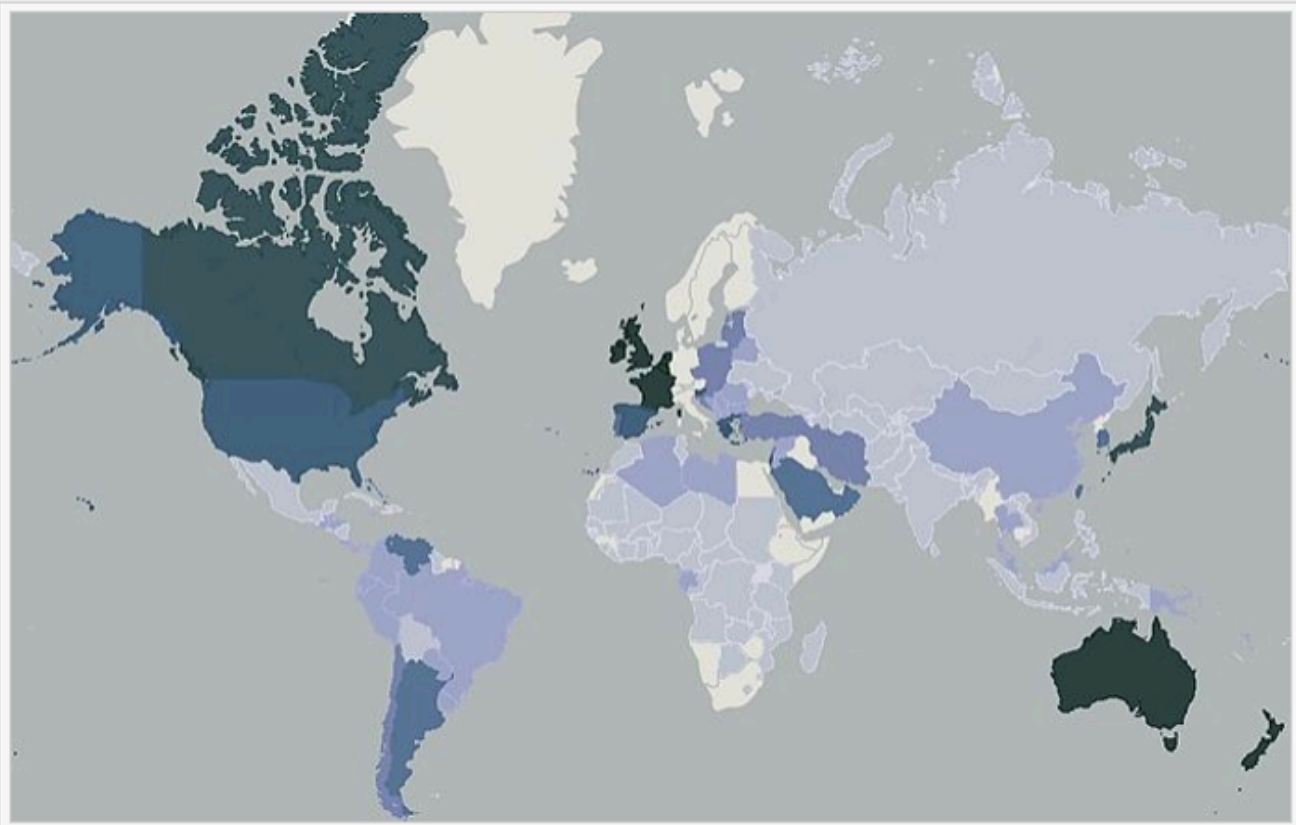
A Brief History of Minimum Wage as Public Policy

- International Labor Organization(ILO) Convention No. 26 - the Minimum Wage Agreement(1928-1930)

> the minimum amount of remuneration that an employer is required to pay wage earners for the work performed during a given period, which cannot be reduced by collective agreement or an individual contract

- The United States passed the **Fair Labor Standards Act (FLSA)** in 1938, which established the federal minimum wage and overtime pay standards.
  - For unskilled workers in manufacturing industries,especially for female and child workers, who are not protected by the Union.
- Nowadays, the minimum wage is one of the most widely implemented global labor market policies, and more than 100 countries have implemented it.

Global Minimum Wage(World Bank,2013)



Map of global minimum wages per hour in U.S. dollars.

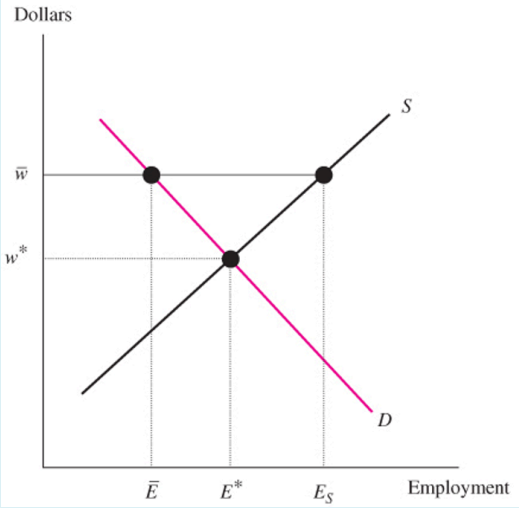
Minimum Wage is Controversial

Pro vs Cons

- Supporters: it increases the standard of living of workers, reduces povert and inequality.
- Critics: it actually increases poverty, increases unemployment (particularly among low productivity workers), and damages businesses.

Minimum Wage in Theory

FIGURE 3-19 The Impact of the Minimum Wage on Employment
A minimum wage set at $\overline{w}$ forces employees to cut employment (from E^* to $\overline{E}$). The higher wage also encourages ($E_S - E^*$) additional workers to enter the market. The minimum wage, therefore, creates unemployment.



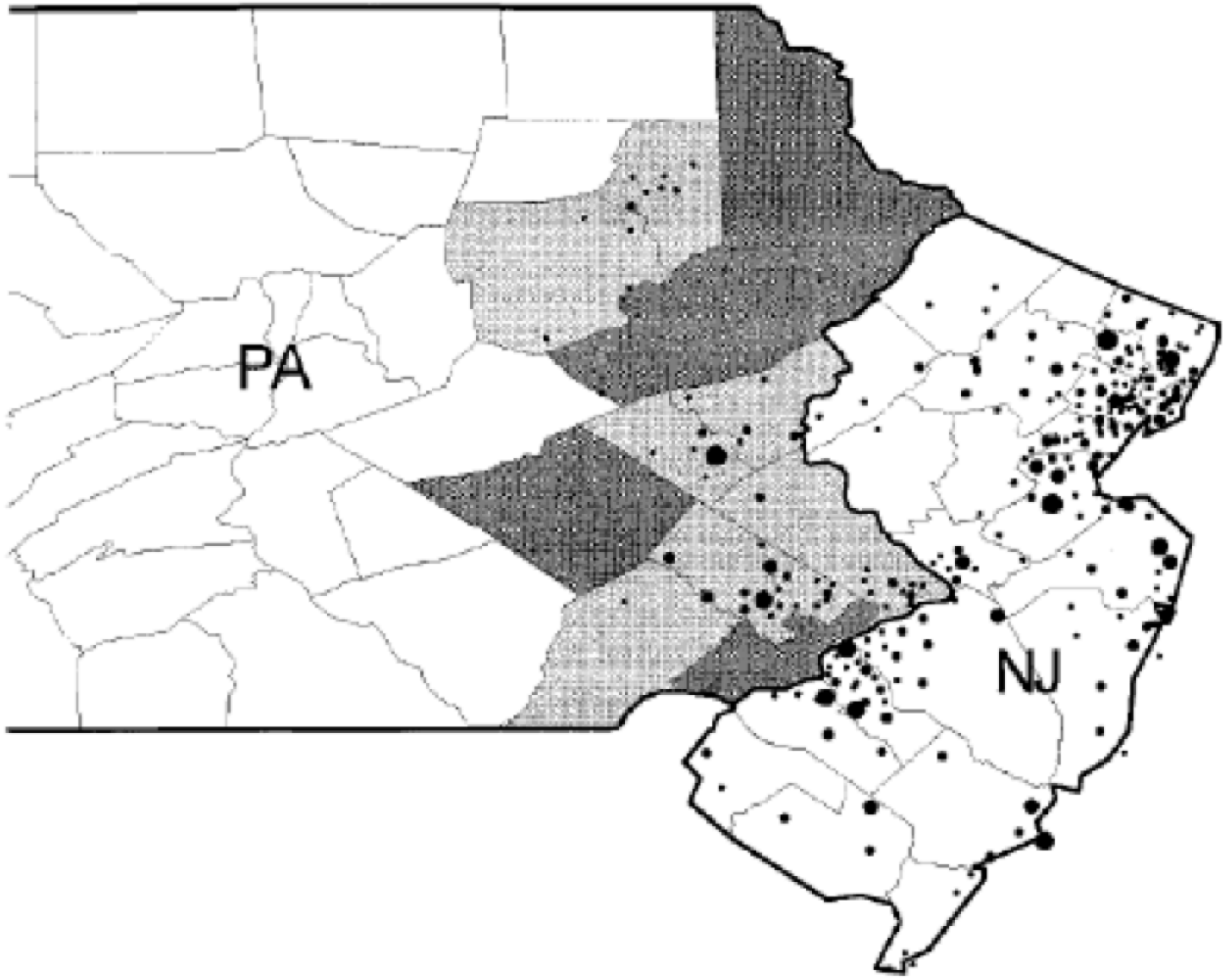
Minimum Wage: Empirical Evidence

- **Ideal experiment**: randomly assign labor markets to a control group(minimum wage kept constant) and treatment group (minimum wage increased), compare outcomes.
- **Natural experiment**: Policy changes affecting some areas and not others create natural experiments.
  - Unlike ideal experiment, control and treatment groups here are not randomly assigned.
- Card, D., and Krueger, A. B. (1994). Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania. The American Economic Review,84(4)

Card and Krueger(1994): Backgroud

- Policy Change: in April 1992
  - Minimum wage in New Jersey from $4.25 to $5.05
  - Minimum wage in Pennsylvania constant at $4.25
- Research Design:
  - Collecting the data on employment at 400 fast food restaurants in NJ(treatment group) in Feb.1992 (before treatment)and again in November 1992(after treatment).
- Also collecting the data from the same type of restaurants in eastern Pennsylvania(PA) as control group where the minimum wage stayed at $4.25 throughout this period.

Card & Krueger(1994): Geographic Background



Regression DD - Card and Krueger

- DID model:

$$Y_{st} = \alpha + \gamma NJ_s + \lambda d_t + \delta(NJ \times d)_{st} + u_{st}$$

- NJ is a dummy equal to 1 if the observation is from NJ(treat).Otherwise equal to 0 from Penny(control).
- d is a dummy equal to 1 if the observation is from November (the post period),otherwise equal to 0(Feb. the pre period)
- $(NJ \times d)$ is the interaction term of NJ and d.
- u_{st} is the error term.

Card & Krueger(1994): Results

Table 5.2.1: Average employment per store before and after the New Jersey minimum wage increase

Variable	PA (i)	NJ (ii)	Difference, NJ-PA (iii)
1. FTE employment before,	23.33	20.44	-2.89
all available observations	(1.35)	(0.51)	(1.44)
2. FTE employment after,	21.17	21.03	-0.14
all available observations	(0.94)	(0.52)	(1.07)
3. Change in mean FTE	-2.16	0.59	2.76
employment	(1.25)	(0.54)	(1.36)

Notes: Adapted from Card and Krueger (1994), Table 3. The

- The estimated coefficient of the interaction term is **2.76**, which is positive but not statistically significant.

Card & Krueger(1994): Explanation

- **Question**: Why MW did not cause unemployment like the standard model predicted?
- **Answer**: Monopsony Power
  - When the firm has monopsony power in labor market,though the product market is competitive, the firm can still set the wage rate below the competitive market wage rate.
  - The minimum wage restore the equilibrium wage level in the labor market instead of creating unemployment.
- **Implication**: The minimum wage may not cause unemployment like the standard model predicted. So it can be a good policy to reduce the wage inequality without causing unemployment.

Minimum Wage in China

Minimum Wage in China: a brief history

- 1929年南京国民政府颁布《工厂法》，现代中国历史上第一部全面规范工厂劳动关系的法律。
- 1930年正式批准了此前签署的国际劳动组织(ILO)第26号公约—《最低工资办法公约》。
- 1936年颁布和实施《最低工资法》，「成年工資以維持其本身足以供給無工作能力親屬二人之必要生活為準」，正式建立最低工资制度。
- 后来因为抗日战争和内战，这个制度没有得到有效实施。

Minimum Wage in China: a brief history

- 1984年中华人民共和国承认《最低工资办法公约》，之后1993年发布了《企业最低工资规定》，这是新中国第一个关于最低工资的法律法规。
- 1995年1月1日实施《中华人民共和国劳动法》规定"国家实行最低工资保障制度"。
- 2004年3月，原劳动和社会保障部发布了《最低工资规定》取代1993年施行的《企业最低工资规定》。
  - 包含简要的最低工资测算方法，并要求"最低工资标准每两年至少调整一次"。
- 2008年1月1日实施《中华人民共和国劳动合同法》规定"用人单位支付劳动者的工资不得低于当地最低工资标准"。

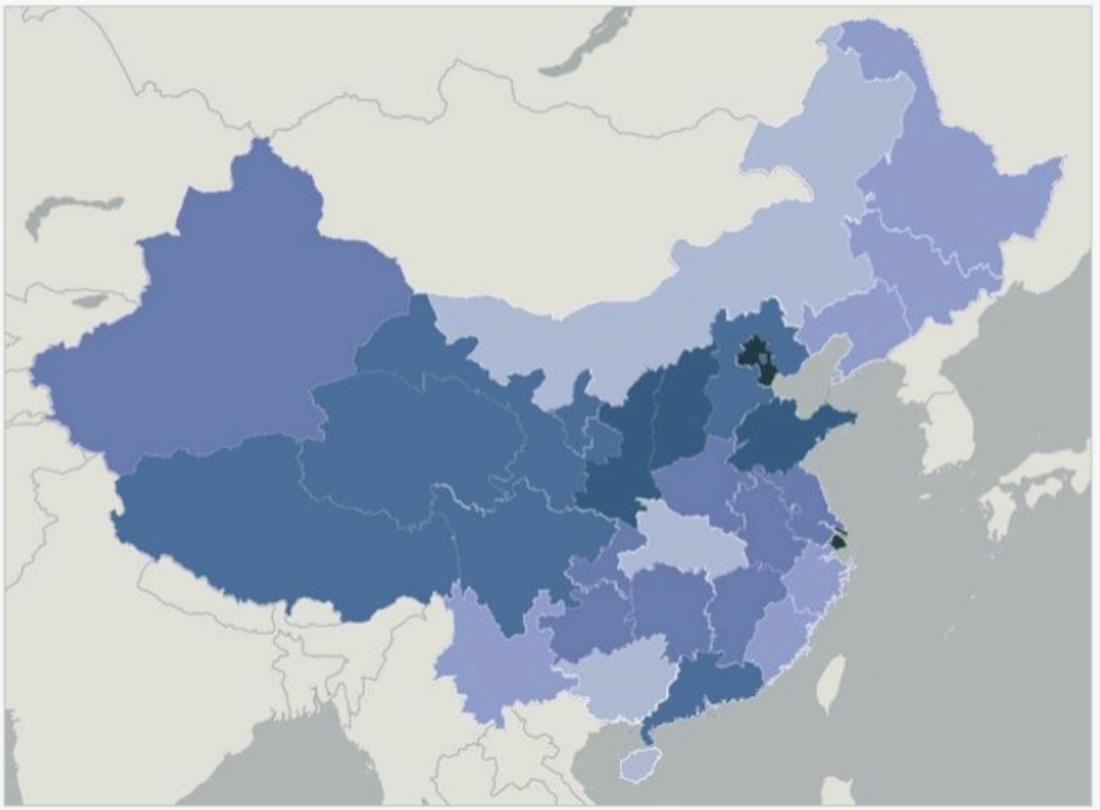
Minimum Wage in China: Measurement

- **比重法**:根据城镇居民家计调查资料，确定一定比例的最低人均收入户为贫困户，统计出贫困户人均生活费用支出水平，乘以每一就业者的赡养系数，再加上一个调整数。
- **恩格尔系数法**：根据国家营养学会提供的年度标准食物谱及标准食物摄取量，结合标准食物的市场价格，计算出最低食物支出标准，除以恩格尔系数，得出最低生活费用标准，再乘以每一就业者的赡养系数，再加上一个调整数。
- 在计算的最低月工资的标准上，再考虑职工个人缴纳社会保险费、住房公积金、职工平均工资水平、社会救济金、失业保险金标准、就业状况和经济发展水平等因素影响进行必要的修正。

Minimum Wage in China: Dynamics

- "十一五"（2006至2010年）期间，我国最低工资标准年均提高 10% 。但因为初始标准较低，多数地区的最低工资标准仍达不到当地平均工资的 30% 。
- "十二五"期间，最低工资标准年均增长 13% 以上，绝大多数地区最低工资标准达到当地城镇从业人员平均工资的 40% 以上。"十二五"期间，全国平均最低工资标准年均增长速度为 13.4% 。
- 2016至2019年，分别有9个、19个、15个和8个省份上调最低工资标准。全国平均月最低工资标准由2016年的1598元每月提高到2019年的1810元每月，年均增长率为 4.2% 。月最低工资标准占社会平均工资的比重保持在35%左右。
- 2020年，因疫情影响、为支持企业复工复产，而暂缓最低工资标准的调整。仅有三个省份（广西、福建、青海）上调最低工资标准。
- 2021年以来，恢复调整，标准涨幅在每月80元至200元不等。

Minimum Wage in China(World Bank,2013)



Map of the lowest district minimum wage per hour in China's different provinces, 2013. The minimum wage in China ranges from ¥7.00 – ¥15.20, $1.12 – $2.43, or €0.84 – €1.82.

Minimum Wage in China in 2024

单位：元

地区	月最低工资标准				小时最低工资标准			
	第一档	第二档	第三档	第四档	第一档	第二档	第三档	第四档
北 京	2420				26.4			
天 津	2320				24.4			
河 北	2200	2000	1800		22	20	18	
山 西	1980	1880	1780		21.3	20.2	19.1	
内蒙古	1980	1910	1850		20.8	20.1	19.5	
辽 宁	1910	1710	1580	1420	19.2	17.2	15.9	14.3
吉 林	1880	1760	1640	1540	19	18	17	16
黑龙江	1860	1610	1450		18	14	13	
上 海	2690				24			
江 苏	2490	2260	2010		24	22	20	
浙 江	2490	2260	2010		24	22	20	
安 徽	2060	1930	1870	1780	21	20	19	18
福 建	2030	1960	1810	1660	21	20.5	19	17.5
江 西	1850	1730	1610		18.5	17.3	16.1	
山 东	2200	2010	1820		22	20	18	

Minimum Wage in China in 2024

广 东	2300	1900	1720	1620	22.2	18.1	17	16.1
其中：深圳	2360				22.2			
广 西	1990	1840	1690		20.1	18.6	17	
海 南	2010	1850			17.9	16.3		
重 庆	2100	2000			21	20		
四 川	2100	1970	1870		22	21	20	
贵 州	1890	1760	1660		19.6	18.3	17.2	
云 南	1990	1840	1690		19	18	17	
西 藏	2100				20			
陕 西	2160	2050	1950		21	20	19	
甘 肃	2020	1960	1910	1850	21	20.5	20	19.5
青 海	1880				18			
宁 夏	1950	1840	1750		18	17	16	
新 疆	1900	1700	1620	1540	19	17	16.2	15.4

注：本表数据时间截至2024年1月1日。

MW across Asia Pacifics (NWPC,PhL,2022)

COMPARATIVE WAGES
IN SELECTED COUNTRIES & REGIONS
as of 29 December 2021

Country/City/Region	Daily Minimum Wages		Monthly Minimum Wage		Exchange Rate Per US$1*
	In Country Currency	In US$	In Country Currency	In US$	
Myannmar (Kyat)	4,800.00 1/	2.73	144,000.00 b/	81.88	1758.7400
Bangladesh *(Taka)*	270.00 a/	3.21	8,100.00 2/	96.19	84.2040
Lao PDR *(Kip)*	36,666.67 a/	3.34	1,100,000.00 3/	100.14	10984.4000
Pakistan *(Rupee)*	666.67 - 833.33 a/	3.76 - 4.70	20,000.00 - 25,000.00 4/	112.72 - 140.90	177.4270
Mongolia *(Tugrik)*	14,000.00 a/	5.34	420,000.00 5/	160.31	2620.0000
Cambodia *(Camb Riel)*	24,933.33 - 25,600.00 a/	6.40	748,000.00 - 768,000.00 6/	187.00 - 192.00	4000.0000
Vietnam (Region I & II) *(Dong)*	130,666.67 - 147,333.33 a/	5.72 - 6.45	3,920,000.00 - 4,420,000.00 7/	171.66 - 193.55	22836.4000
PhL./Region XI	381.00 - 396.00 8/	7.56 - 7.85	- 11,880.00 b/	- 235.58	50.4297
Phl/Region IV-A	317.00 - 400.00 9/	6.29 - 7.93	9,510.00 - 12,000.00 b/	188.58 - 237.96	50.4297
Phl/Region VII	356.00 - 404.00 10/	7.06 - 8.01	10,680.00 - 12,120.00 b/	211.78 - 240.33	50.4297
Phl./Region III	369.00 - 420.00 11/	7.32 - 8.33	11,070.00 - 12,600.00 b/	219.51 - 249.85	50.4297
Malaysia (Ringgit)	36.67 - 40.00 a/	8.77 - 9.57	1,100.00 - 1,200.00 12/	263.11 - 287.03	4.1807
Indonesia *(Rupiah)*	58,833.33 - 147,206.20 a/	4.14 - 10.35	1,765,000.00 - 4,416,186.00 13/	124.11 - 310.54	14221.0000
Thailand *(Baht)*	313.00 - 336.00 14/	9.35 - 10.03	9,390.00 - 10,080.00 b/	280.40 - 301.01	33.4875
Phl/NCR	500.00 - 537.00 15/	9.91 - 10.65	15,000.00 - 16,110.00 b/	297.44 - 319.45	50.4297
China *(Yuan Renminbi)*	52.67 - 86.33 a/	8.27 - 13.56	1,580.00 - 2,590.00 16/	248.16 - 406.79	6.3669
Hongkong *($HK)*	300.00 17/	38.47	9,000.00 b/	1,154.01	7.7989
Taiwan *(Taiwan Dollar)*	1,280.00 18/	46.30	38,400.00 b/	1,389.03	27.6452
South Korea *(Won)*	69,760.00 19/	58.77	2,092,800.00 b/	1,763.12	1186.9900
Japan *(Japan Yen)*	6,560.00 - 8,328.00 20/	57.13 - 72.53	196,800.00 - 249,840.00 b/	1,714.00 - 2,175.95	114.8190
New Zealand *(NZ Dollar)*	128.00 - 160.00 21/	87.16 - 108.95	3,840.00 - 4,800.00 b/	2,614.72 - 3,268.40	1.4686
Australia *(Aus. Dollar)*	162.64 22/	117.73	4,879.20 b/	3,531.92	1.3815

MW in East Asian Countries/Regions(2025)

Country/Region	Minimum Wage (Local Currency)	Minimum Wage/Month (USD)	Average/Median Wage/Month (USD)	Min Wage Ratio	Notes
China	¥1,690-2,740/month	$234-378/month	$1,385/month	17-27%	Varies by province and city
- Shanghai	¥2,740/month	$378/month	$1,670/month	23%	Highest monthly wage
- Beijing	¥2,540/month	$350/month	$2,049/month	17%	Highest hourly ¥27.7
Japan	¥1,054/hour	$1,240/month	$2,109/month	~59%	Based on 173 hrs/month
South Korea	₩10,030/hour	$1,570/month	$2,846/month	~55%	Based on 209 hrs/month
Taiwan	NT$28,590/month	$868/month	$1,420/month	~61%	Adjusted Jan 2025
Hong Kong	HK$42.10/hour	$1,063/month	$2,500-3,000/month	~35-42%	Effective May 2025
Vietnam	₫3,450,000-4,960,000/month	$136-195/month	$314/month	~43-62%	Varies by region
Thailand	฿337-400/day	$228/month	$500-600/month	~38-46%	Varies by province
Malaysia	RM1,700/month	$402/month	$814/month	~49%	Adjusted Feb 2025

Notes:

Exchange rates calculated based on January 2025 real-time rates

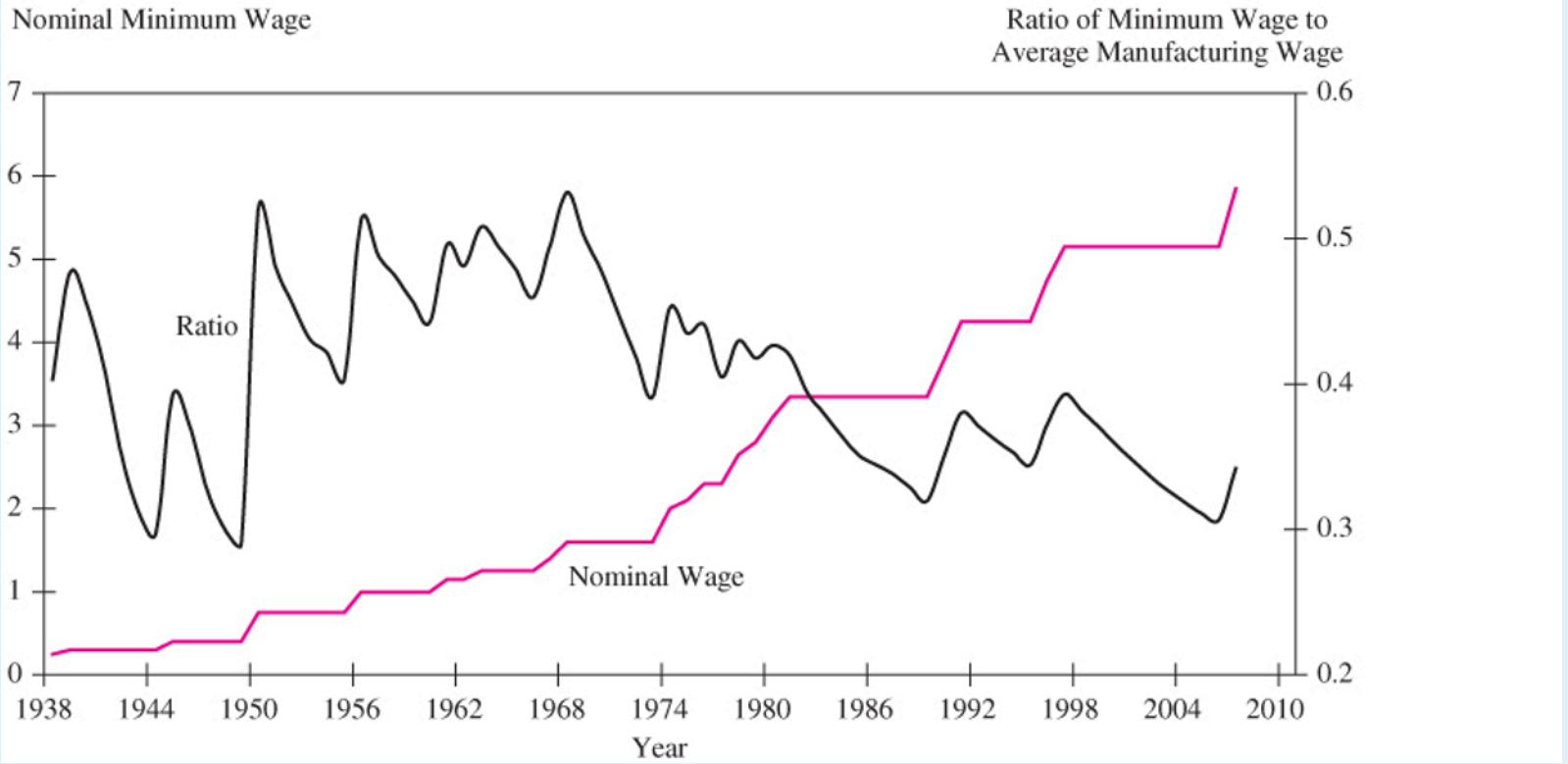
Data Sources: China Ministry of Human Resources and Social Security; Japan Ministry of Health, Labour and Welfare; South Korea Ministry of Employment and Labor; Taiwan Ministry of Labor; Hong Kong Labour Department; Vietnam Ministry of Labour, Invalids and Social Affairs; Thailand Ministry of Labour; Malaysia Ministry of Human Resources; International Labour Organization (ILO) Database; Official National Statistics Bureaus (2025).

Minimum Wage in Reality

- Real vs nominal wage

FIGURE 3-18 **Minimum Wages in the United States, 1938–2007**

Source: U.S. Bureau of the Census, *Statistical Abstract of the United States,* Washington, DC: Government Printing Office, various issues; U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970,* Washington, DC: Government Printing Office, 1975; and U.S. Bureau of Labor Statistics, *Employment and Earnings,* Washington, DC: Government Printing Office, January 2006.



Minimum Wage in Reality

- **Compliance with the Minimum Wage Law**
  - There seems to be a great deal of noncompliance with the law.
  - Because the penalties are relative trivial to the companies.
- In China, the government takes a "first order to correct, then pay compensation" graded approach, with the maximum compensation up to 5 times the unpaid wages or 100% of the payable amount.
- But in practice, the punishment is relatively mild, mainly relying on the enforcement of labor inspection departments.

Minimum Wage in Reality

- How to adjust the minimum wage level?
  - **Price-level adjustment**: adjust the minimum wage level according to the price level.
  - **Three-Party Negotiation**: adjust the minimum wage level through negotiations between workers, employers and government.
- In China, the minimum wage level is adjusted through the three-party negotiation mechanism but the process and the timing are spontaneous and less transparent.

Minimum Wage in Reality

- Everything is local: Each region sets its own minimum wage level.
- For example, in China, whether the minimum wage includes the "five insurances and one fund" (social insurance and housing fund) can vary by region.
  - In Beijing, Shanghai, and Anhui, the minimum wage *does not* include the "five insurances and one fund," whereas in most other provinces, the minimum wage *does* include them (altogether, these contributions account for about 40-50% of the wage, with the employee's share around 20%).
  - As a result, the minimum wage level in Beijing, Shanghai, and Anhui appears higher than in other provinces.
  - In practice, however, many workers who earn the minimum wage do not actually receive the "five insurances and one fund," so the real difference is less significant than it seems.

Empirical Study: Minimum Wage in China

- 马双、张劼 和朱喜，《最低工资对中国就业和工资水平的影响》，《经济研究》，2012年第5期。
- 主题：最低工资对就业和工资的影响
- 数据:最低工资数据、工业企业调查数据(1998-2007)
- 方法：Difference-in-Differences
- 结论：

1. 最低工资上涨可以从整体上提高员工的工资水平。 最低工资每增加 10%， 企业平均工资将增加0.3%-0.6%左右。
2. 最低工资每增加10%，企业雇佣人数将显著减少0.6%左右.