

Public Affairs 856  
Trade, Competition, and Governance  
in a Global Economy

Lecture 23  
4/17/2019

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UW Madison  
Spring 2019

# Outline

- Immigration
- FDI

# Outline

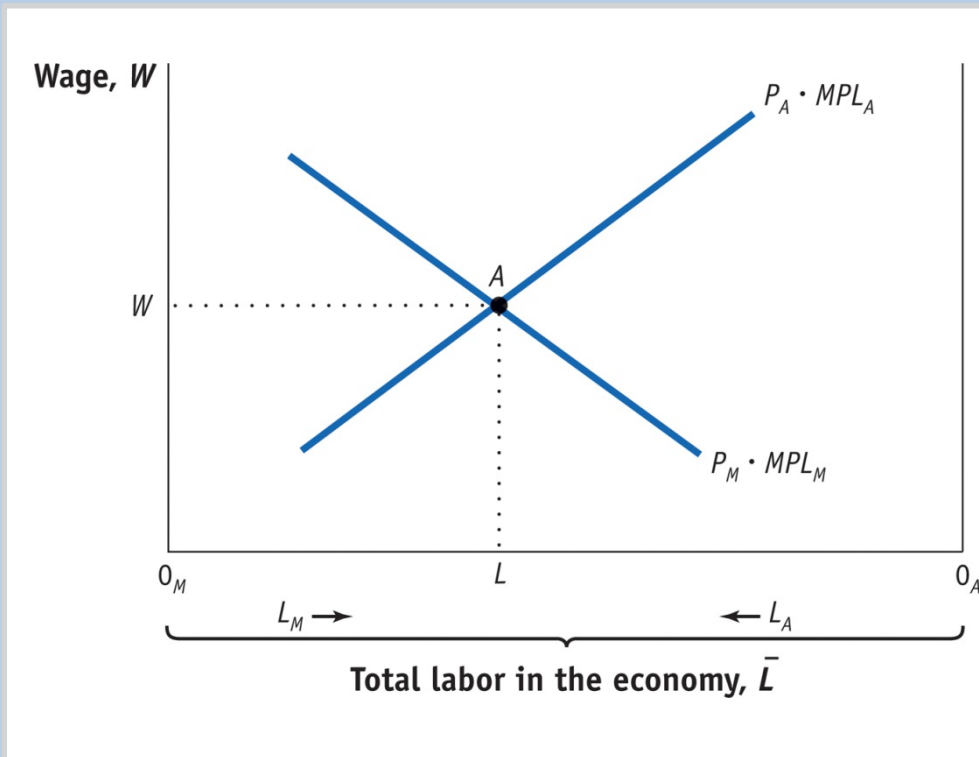
Topic: The movement of labor across countries and investigate when immigration leads to a fall in wages, as we normally expect.

- First, use the **specific-factors model**, the short-run model from Chapter 3.
- Second use the long-run Heckscher-Ohlin model, from Chapter 4, in which capital and land can also move between industries.
- In the long run, an increase in labor *will not* lower the wage, as industries have more time to respond to the inflow of workers.

# 1 Movement of Labor Between Countries: Migration

## Effects of Immigration in the Short Run: Specific-Factors Model Determining the Wage

FIGURE 5-1 Home Labor Market



$$L_M + L_A = \bar{L}$$

The Home wage is determined at point  $A$ , the intersection of the marginal product of labor curves  $P_M \cdot MPL_M$  and  $P_A \cdot MPL_A$  in manufacturing and agriculture, respectively.

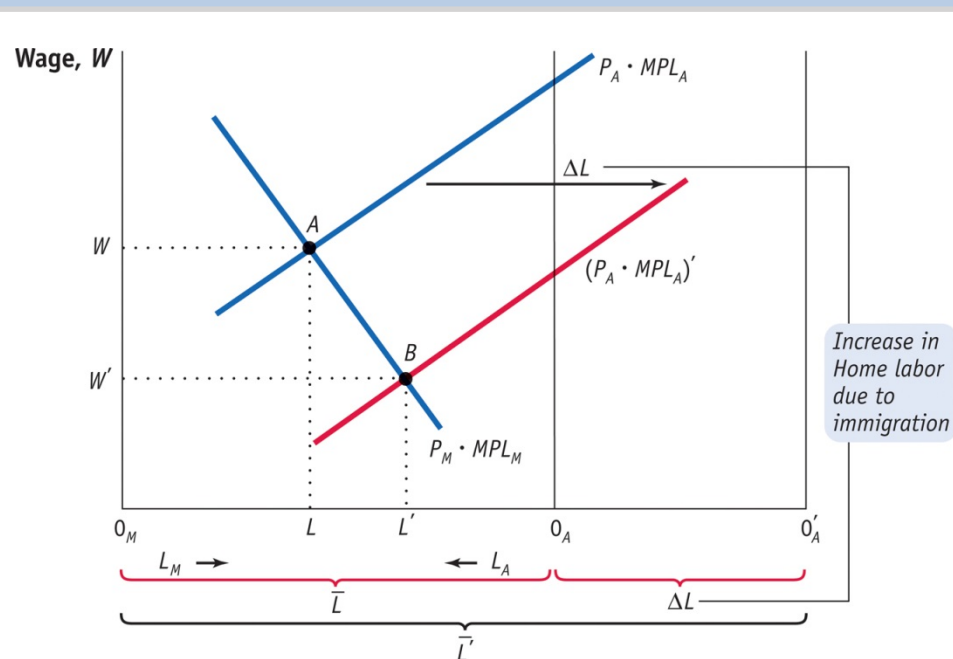
The amount of labor used in manufacturing is measured from left to right, starting at the origin  $0_M$ , and the amount of labor used in agriculture is measured from right to left, starting at the origin  $0_A$ . At point  $A$ ,  $0_M L$  units of labor are used in manufacturing and  $0_A L$  units of labor are used in agriculture.

# 1 Movement of Labor Between Countries: Migration

## Effects of Immigration in the Short Run: Specific-Factors Model

### Effect of Immigration on the Wage in Home

FIGURE 5-2 Increase in Home Labor



When the amount of labor at Home increases by the amount  $\Delta L$ , the origin for agriculture shifts to the right by that amount, from  $0_A$  to  $0'_A$ .

The marginal product of labor curve in agriculture also shifts right by the amount  $\Delta L$ .

Equilibrium in the Home labor market is now at point  $B$ : wages have fallen to  $W'$  and the amount of labor has increased in manufacturing (to  $0_M L'$ ) and in agriculture (to  $0'_A L'$ ).



# HEADLINES

## The Economic Windfall of Immigration Reform

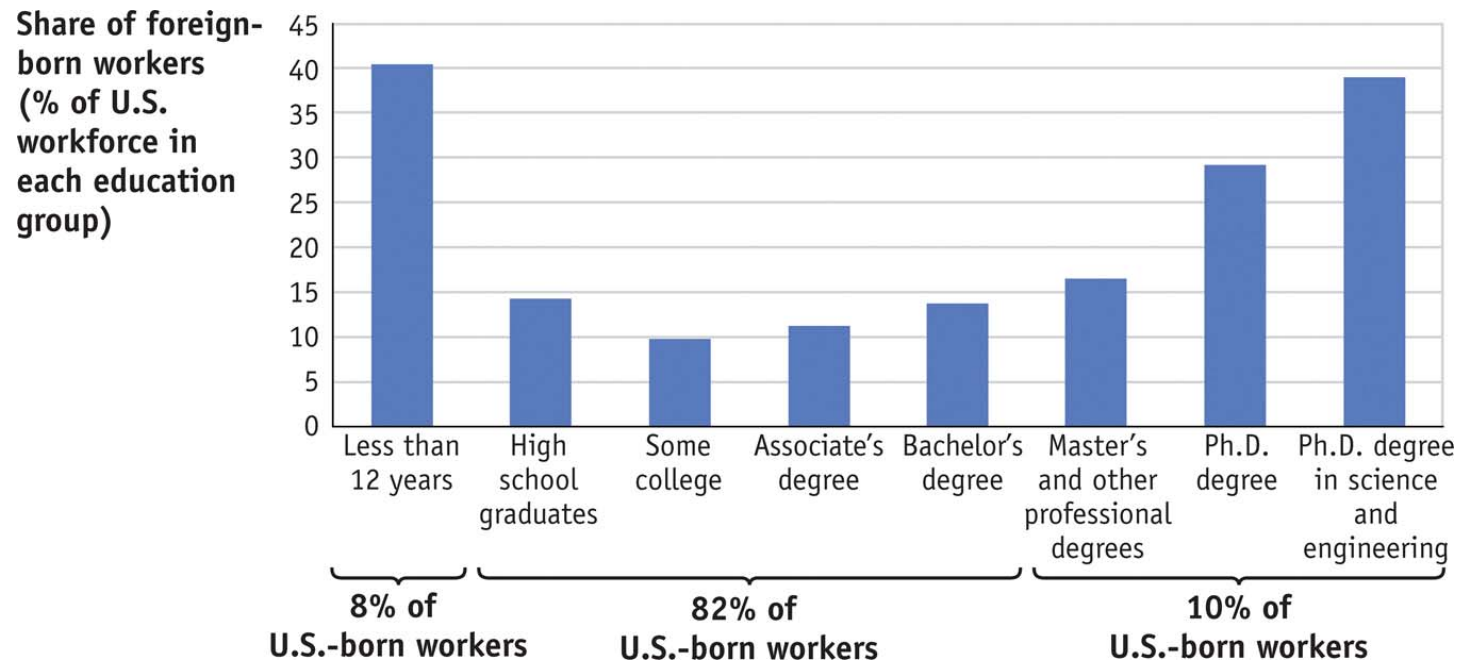
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- Professor Giovanni Peri discusses three principles that reform should follow. He argues that there are large gains from increasing the supply of highly skilled immigrants to the United States, by allowing firms to bid for temporary work permits.
- He found that foreign scientists and engineers brought into this country under the H1B visa program have contributed to 10-20% of the yearly productivity growth in the U.S. during the period 1990-2010.
- This allowed the GDP per capita to be 4% higher than it would have been without them—that's an aggregate increase of output of \$615 billion as of 2010.

# APPLICATION

## Immigration to the United States and Europe Today

**FIGURE 5-4 (3 of 3)** Share of Foreign-Born Workers in U.S. Workforce, 2010 (continued)



In the middle educational levels (high school and college graduates), there are much smaller shares of foreign-born workers, ranging from 10% to 15%. In contrast, only about 10% of U.S.-born workers are categorized in each of the low-education and high-education groups.

# 1 Movement of Labor Between Countries: Migration

## Other Effects of Immigration in the Short Run

### Rentals on Capital and Land

- U.S. and Europe have both welcomed foreign workers in specific industries: agriculture and high-tech.
- They do this even though those foreign workers compete with domestic workers in those industries.
- Therefore there must be benefits to the industries.
- We can measure these potential benefits by the payments to capital and land, called rentals.
- We use the same two measurements for rentals as in Chapter 3.



# 1 Movement of Labor Between Countries: Migration

## Other Effects of Immigration in the Short Run

### Rentals on Capital and Land

- Under the first method for computing the rentals, we take the revenue earned in either manufacturing or agriculture and subtract the payments to labor.
- If wages fall, then there is more left over as earnings of capital and land, so these rentals are higher.

# 1 Movement of Labor Between Countries: Migration

## Other Effects of Immigration in the Short Run

### Rentals on Capital and Land

- Under the second method for computing rentals, capital and land earn their marginal product in each industry times the price of the industry's good.
- As more labor is hired in each industry (because wages are lower), the marginal products of capital and land both increase. The increase in the marginal product occurs because each machine or acre of land has more workers available to it, and that machine or acre of land is therefore more productive.
- So under the second method, too, the marginal products of capital and land rise and so do their rentals.

# 1 Movement of Labor Between Countries: Migration

## Other Effects of Immigration in the Short Run

### Rentals on Capital and Land

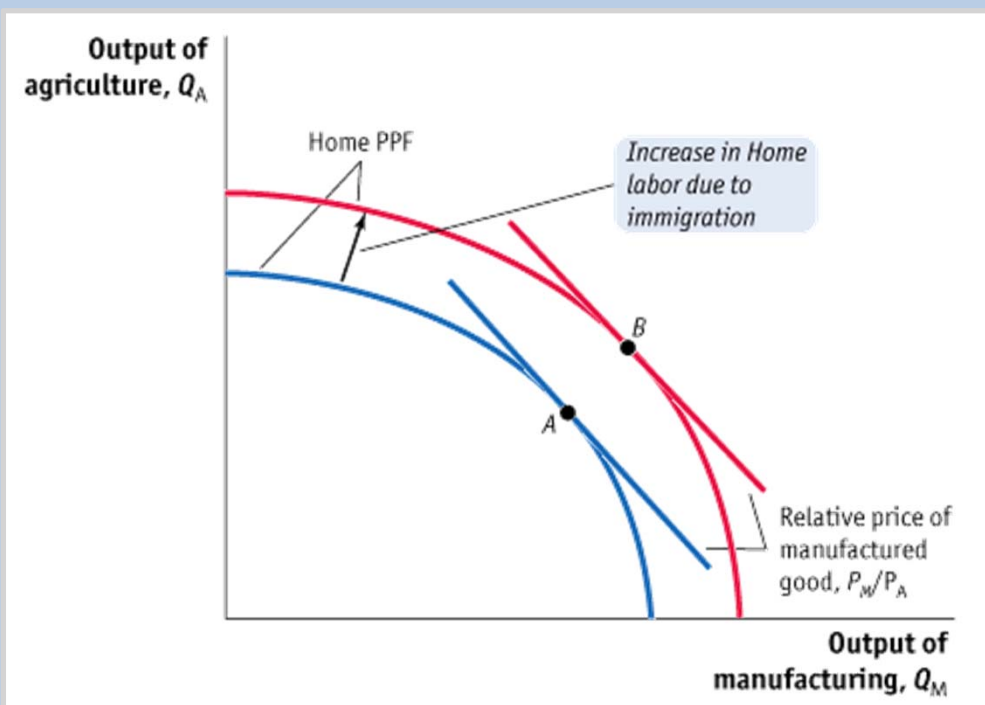
- We should not be surprised that owners of capital and land often support more open borders, which provides them with foreign workers that can be employed in their industries.
- The restriction on immigration in a country should be seen as a compromise between entrepreneurs and landowners who might welcome the foreign labor.
- Local unions and workers who view migrants as a potential source of competition leading to lower wages.
- Immigrant groups themselves, if they are large enough, might also have the ability to influence the political outcome on immigration policy.

# 1 Movement of Labor Between Countries: Migration

## Other Effects of Immigration in the Short Run

### Effect of Immigration on Industry Output

FIGURE 5-5 Shift in Home Production Possibilities Curve



With the increase in labor at Home from immigration, the production possibilities frontier shifts outward and the output of both industries increases, from point *A* to point *B*.

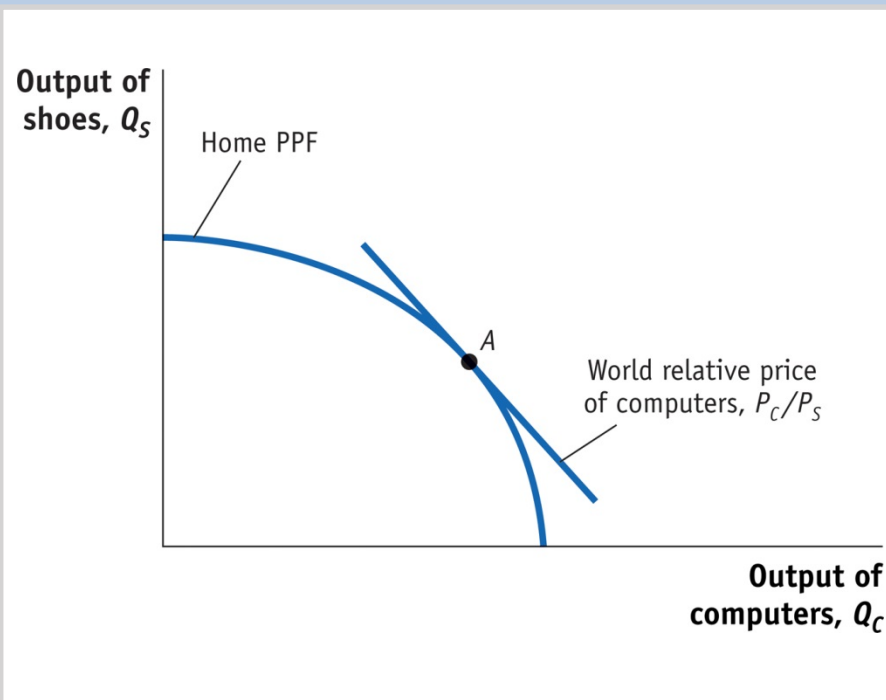
Output in both industries increases because of the short-run nature of the specific-factors model; in the short run, land and capital do not move between the industries, and the extra labor in the economy is shared between both industries.

# 1 Movement of Labor Between Countries: Migration

## Effects of Immigration in the Long Run

### Effect of Immigration on Industry Outputs

FIGURE 5-6 Production Possibilities Frontier



Shown here is the production possibilities frontier (PPF) between two manufactured goods, computers and shoes, with initial equilibrium at point *A*.

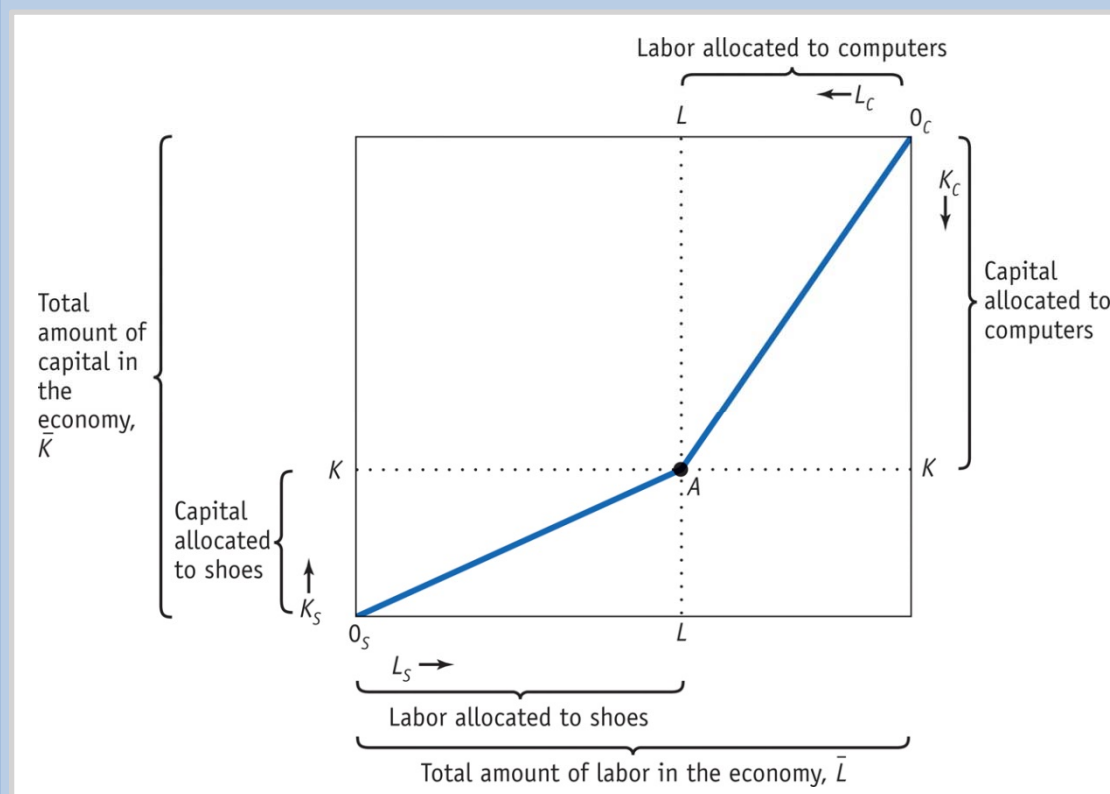
Domestic production takes place at point *A*, which is the point of tangency between the world price line and the PPF.

# 1 Movement of Labor Between Countries: Migration

## Effects of Immigration in the Long Run

### Effect of Immigration on Industry Output

FIGURE 5-7 Allocation of Labor and Capital in a Box Diagram



The top and bottom axes of the box diagram measure the amount of labor,  $\bar{L}$ , in the economy, and the side axes measure the amount of capital,  $\bar{K}$ .

At point  $A$ ,  $0_sL$  units of labor and  $0_sK$  units of capital are used in shoe production, and  $0_cL$  units of labor and  $0_cK$  units of capital are used in computers.

The  $K/L$  ratios in the two industries are measured by the slopes of  $0_sA$  and  $0_cA$ , respectively.

# 1 Movement of Labor Between Countries: Migration

## Effects of Immigration in the Long Run

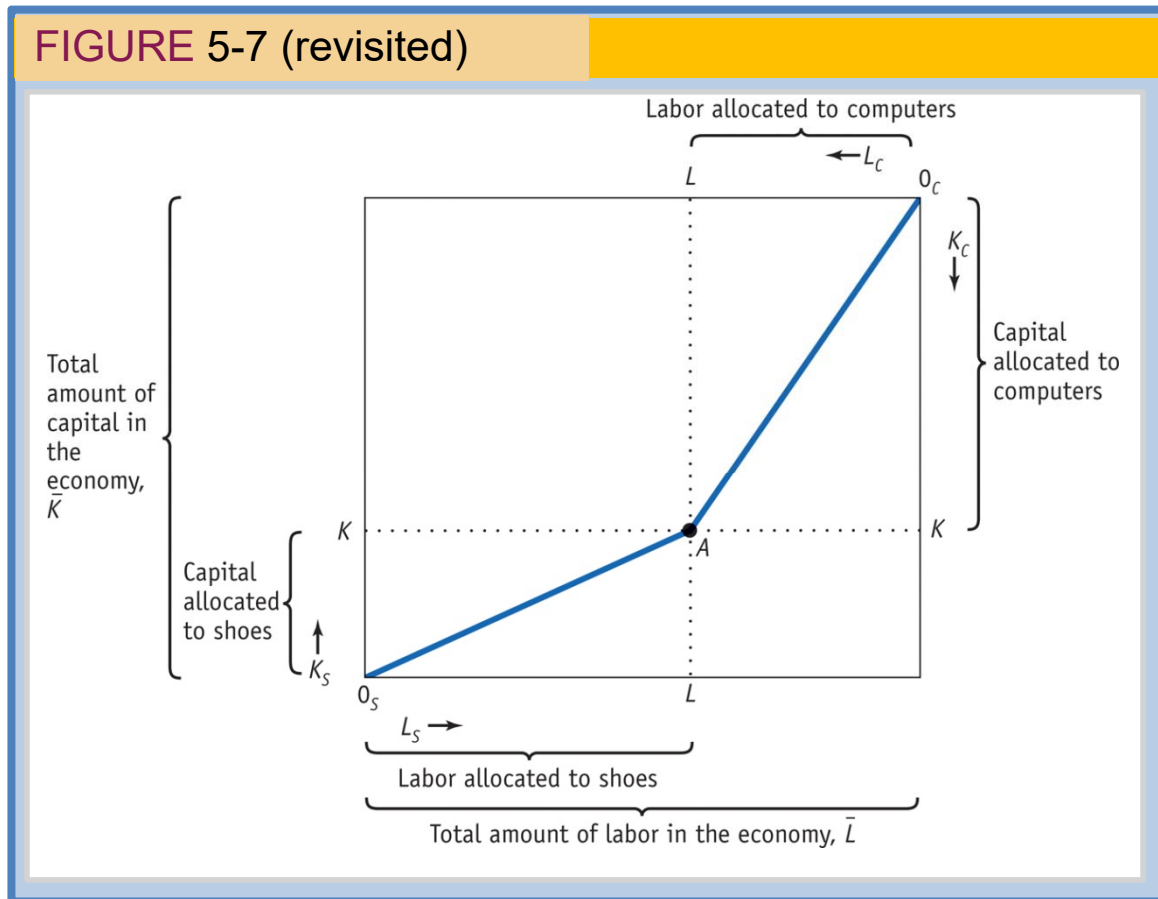
### Determination of the Real Wage and Real Rental

- To determine the wage and rental in the economy, we use the marginal products of labor and capital, *which are determined by the capital-labor ratio in either industry.*
- If there is a higher capital-labor ratio (more machines per worker), then by the law of diminishing returns, the marginal product of capital and the real rental must be lower.
- Having more machines per worker means that the marginal product of labor (and hence the real wage) is higher because each worker is more productive.

# 1 Movement of Labor Between Countries: Migration

## Effects of Immigration in the Long Run

### Determination of the Real Wage and Real Rental



Each amount of labor and capital used in Figure 5-7 along line  $O_S A$  corresponds to a particular capital-labor ratio for shoe manufacture and therefore a particular real wage and real rental.

While the total amount of labor and capital used in each industry changes, the capital-labor ratios are unaffected by immigration, which means that the immigrants can be absorbed with no change at all in the real wage and real rental.

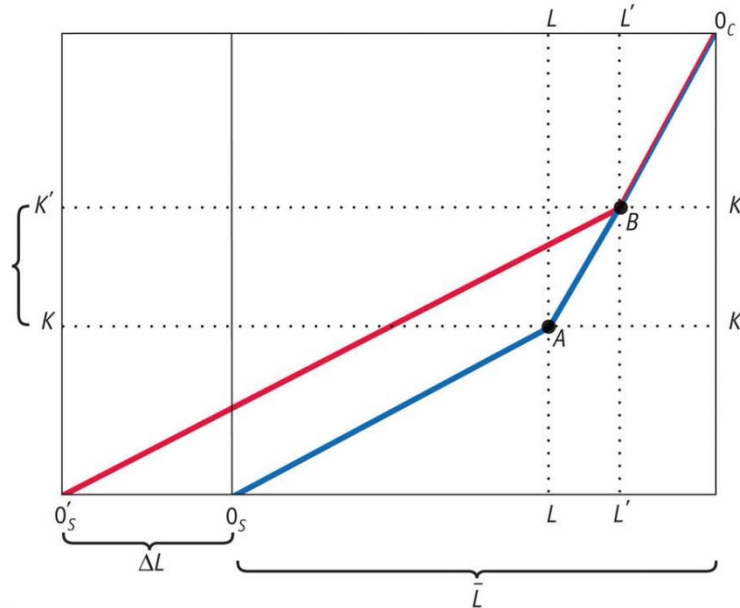


# 1 Movement of Labor Between Countries: Migration

## Effects of Immigration in the Long Run

### Increase in the Amount of Home Labor

FIGURE 5-8 (1 of 2) Increase in Home Labor



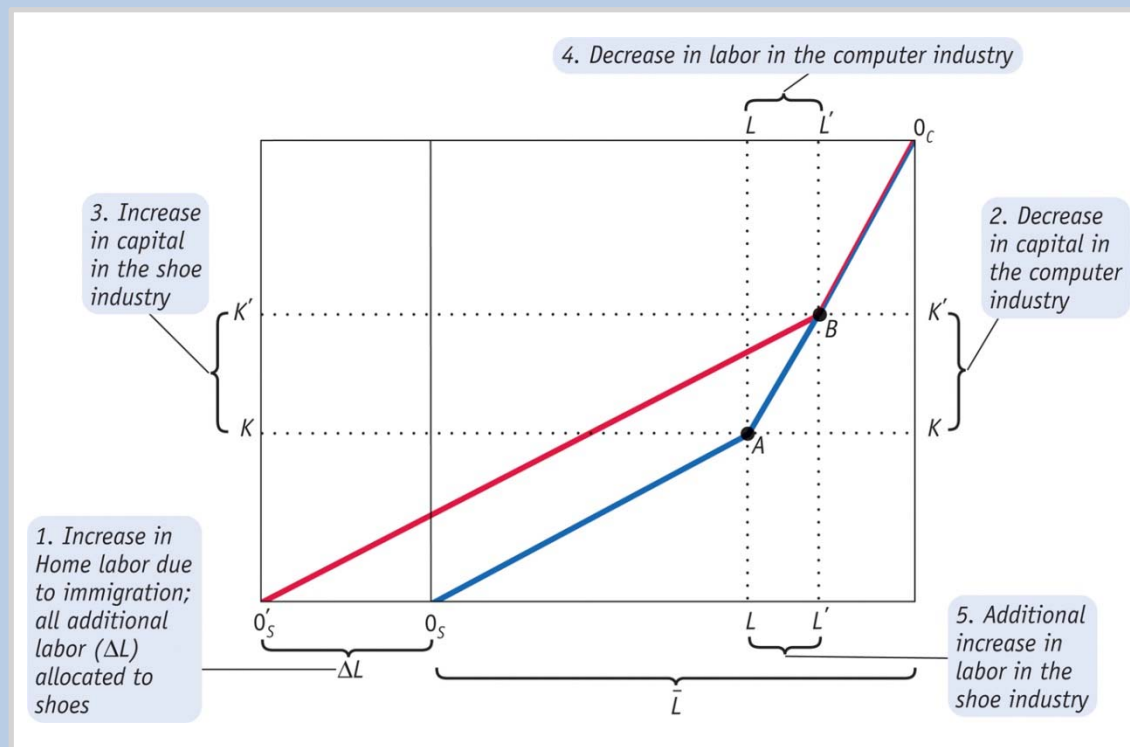
With an increase in Home labor from  $\bar{L}$  to  $\bar{L} + \Delta L$ , the origin for the shoe industry shifts from  $0_S$  to  $0'_S$ .

At point  $B$ ,  $0'_S L'$  units of labor and  $0'_S K'$  units of capital are used in shoes, while  $0_C L'$  units of labor and  $0_C K'$  units of capital are used in computers.

# 1 Movement of Labor Between Countries: Migration

## Effects of Immigration in the Long Run Increase in the Amount of Home Labor

FIGURE 5-8 (2 of 2) Increase in Home Labor (continued)



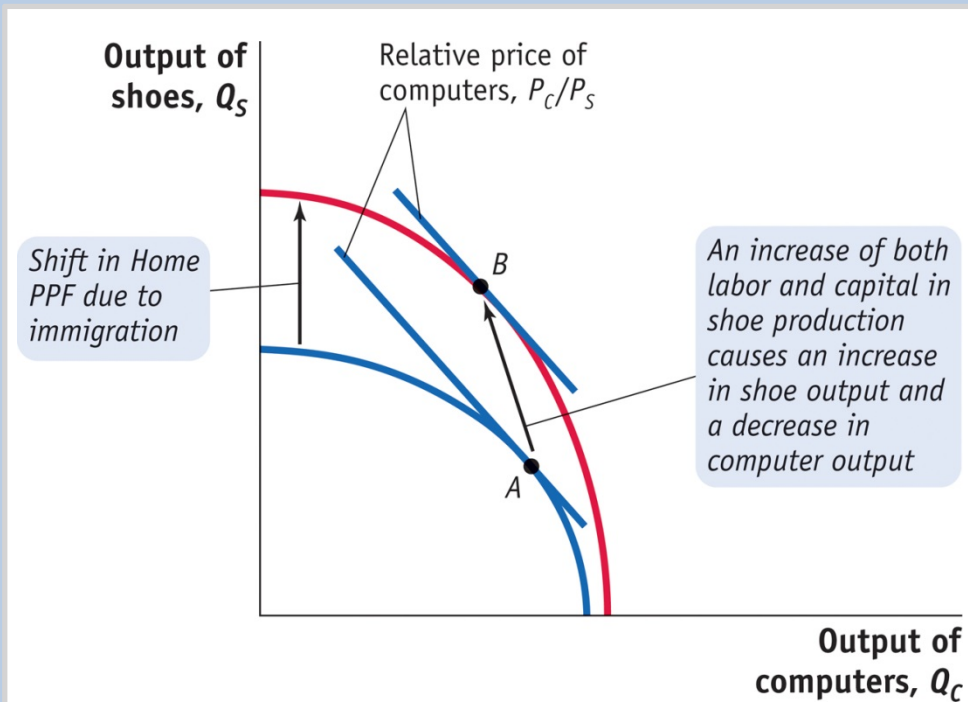
In the long run, industry outputs adjust so that the capital-labor ratios in each industry at point  $B$  (the slopes of  $O'_sB$  and  $O_cB$ ) are unchanged from the initial equilibrium at point  $A$  (the slopes of  $O_sA$  and  $O_cA$ ). To achieve this outcome, all new labor resulting from immigration is allocated to the shoe industry, and capital and *additional* labor are transferred from computers to shoes, keeping the capital-labor ratio in both industries unchanged.

# 1 Movement of Labor Between Countries: Migration

## Effects of Immigration in the Long Run

### Effect of Immigration on Industry Outputs

**FIGURE 5-9** The Long-Run Effect on Industry Outputs of an Increase in Home Labor



With an increase in the amount of labor at Home, the PPF shifts outward.

The output of shoes increases while the output of computers declines as the equilibrium moves from point *A* to *B*.

The prices of goods have not changed, so the slopes of the PPFs at points *A* and *B* (i.e., the relative price of computers) are equal.

The finding that an increase in labor will expand one industry but contract the other holds only in the long run; in the short run, as we saw in Figure 5-5, both industries will expand.

# 1 Movement of Labor Between Countries: Migration

## Rybczynski Theorem

The **Rybczynski theorem** states that, in the Heckscher-Ohlin model with two goods and two factors, an increase in the amount of a factor found in an economy will increase the output of the industry using that factor intensively and decrease the output of the other industry.

- We have proved the Rybczynski theorem for the case of immigration, where labor in the economy grows.
- Later we will show that the same theorem holds when capital in the economy grows: in this case, the industry using capital intensively expands and the other industry contracts.

# 1 Movement of Labor Between Countries: Migration

## Effect of Immigration on Factor Prices

Factor prices do not need to change as a result of immigration.

- The reason that factor prices do not need to change is that the economy can absorb the extra amount of a factor by increasing the output of the industry using that factor intensively and reducing the output of the other industry.
- The finding that factor prices do not change is sometimes called the factor price insensitivity result.

## Factor Price Insensitivity Theorem

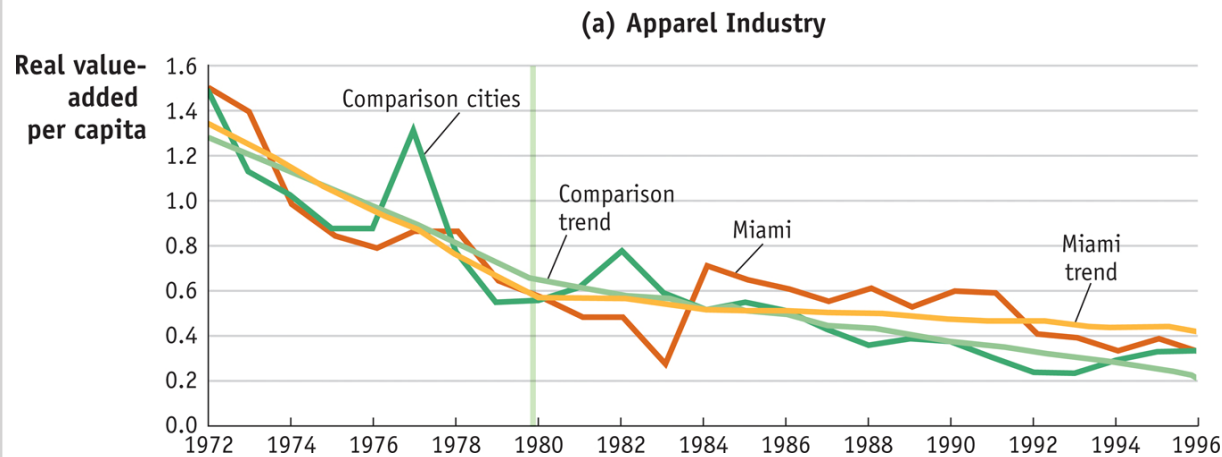
The **factor price insensitivity theorem** states that: in the HO model with two goods and two factors, an increase in the amount of a factor found in an economy can be absorbed by changing the outputs of the industries, without any change in the factor prices.

# APPLICATION

## The Effects of the Mariel Boat Lift on Industry Output in Miami

FIGURE 5-10 (1 of 2)

Industry Value-Added in Miami



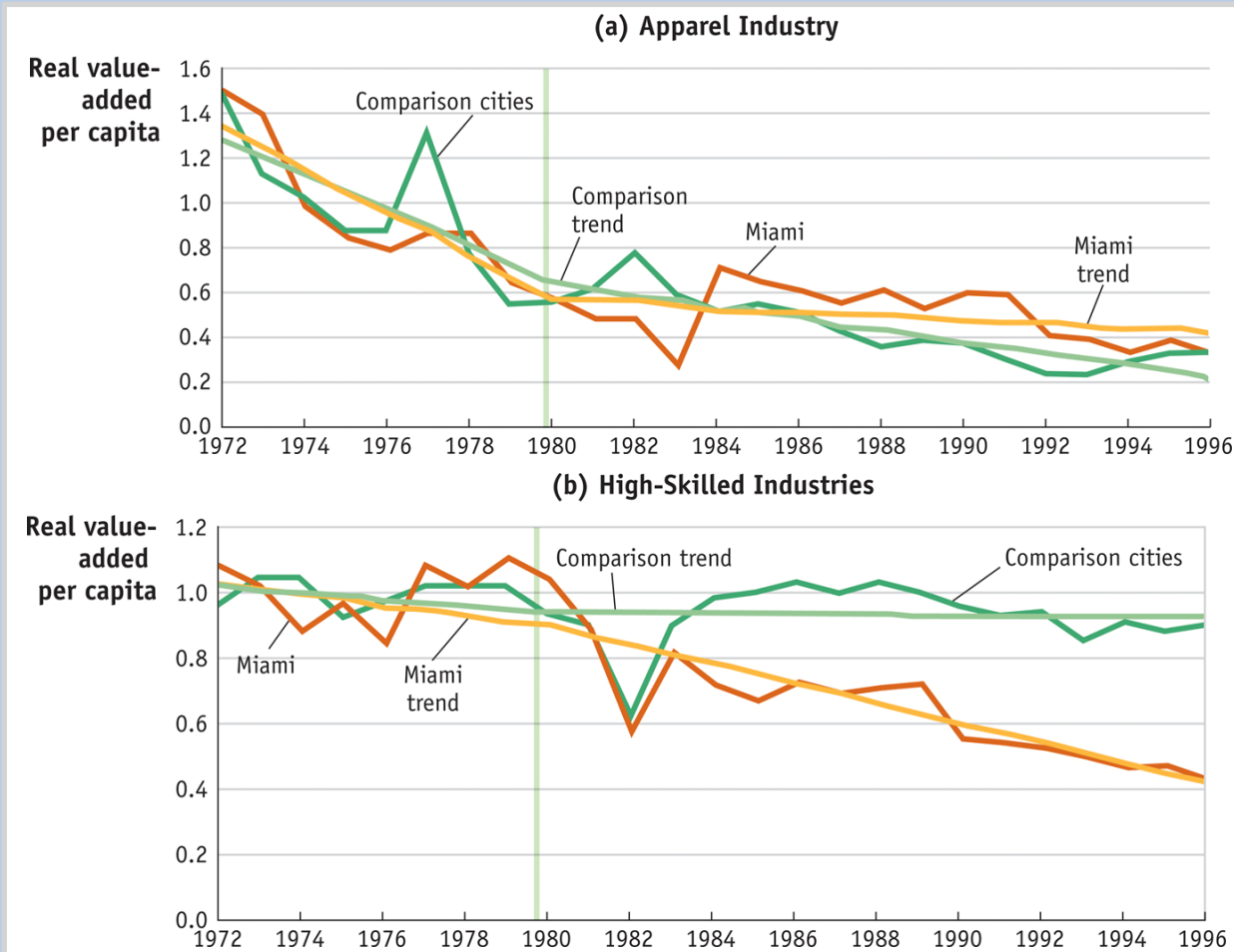
In panel (a), with the inflow of refugees from Cuba in 1980, **real value-added** in the apparel industry in Miami rose from 1983 to 1984, and the trend decline of this industry in Miami was slower (i.e., value-added did not fall as fast) after 1980 than in the comparison cities.

# APPLICATION

## The Effects of the Mariel Boat Lift on Industry Output in Miami

FIGURE 5-10 (2 of 2)

Industry Value-Added in Miami (continued)



In panel (b), real value-added in Miami in high-skilled industries fell faster after 1980 than in the comparison cities. Both of these findings are consistent with the Rybczynski theorem.

# APPLICATION

## Immigration and U.S. Wages, 1990-2006

**TABLE 5-1**

**Immigration and Wages in the United States** This table shows the estimated effect of immigration on the wages of workers, depending on their educational level. Short-run estimates hold capital and land fixed, while long-run estimates allow capital to adjust so that the capital/labor ratio and real rental are constant in the economy. Immigration has the greatest impact on workers with very low or high levels of education and only a small impact on those workers with middle levels of education (12 to 15 years). The impact is even smaller in the long run.

	PERCENTAGE CHANGE IN THE WAGE OF WORKERS WITH EDUCATIONAL LEVEL				
	Less Than 12 Years	High School Graduate	Some College	College Graduates	Overall Average
<b>Part A: Effect of Immigration on All U.S. Workers</b>					
<i>Method:</i>					
Short run	-7.8	-2.2	-0.9	-4.7	-3.0
Long run	-4.7	0.9	2.2	-1.7	0.1
<b>Part B: Long-Run Effect of Immigration, by Type of Worker</b>					
<i>Type of Worker:</i>					
U.S. born	0.3	0.4	0.9	0.5	0.6
Foreign born	-4.9	-7.0	-4.0	-8.1	-6.4



## 2 Movement of Capital Between Countries: Foreign Direct Investment

### Direct Investment

We continue our examination of what happens to wages and rentals when factors can move across borders by considering the effect of changes in the capital stock.

- We turn now to look at how capital can move from one country to another through foreign direct investment (FDI).
- FDI occurs when a firm from one country owns a company in another country.
- According to the Department of Commerce, if a foreign company acquires 10% or more of a U.S. firm, that is counted as an FDI inflow to the United States, and if a U.S. company acquires 10% or more of a foreign firm, that is counted as an FDI outflow for the United States.

## 2 Movement of Capital Between Countries: Foreign Direct Investment

### Greenfield Investment

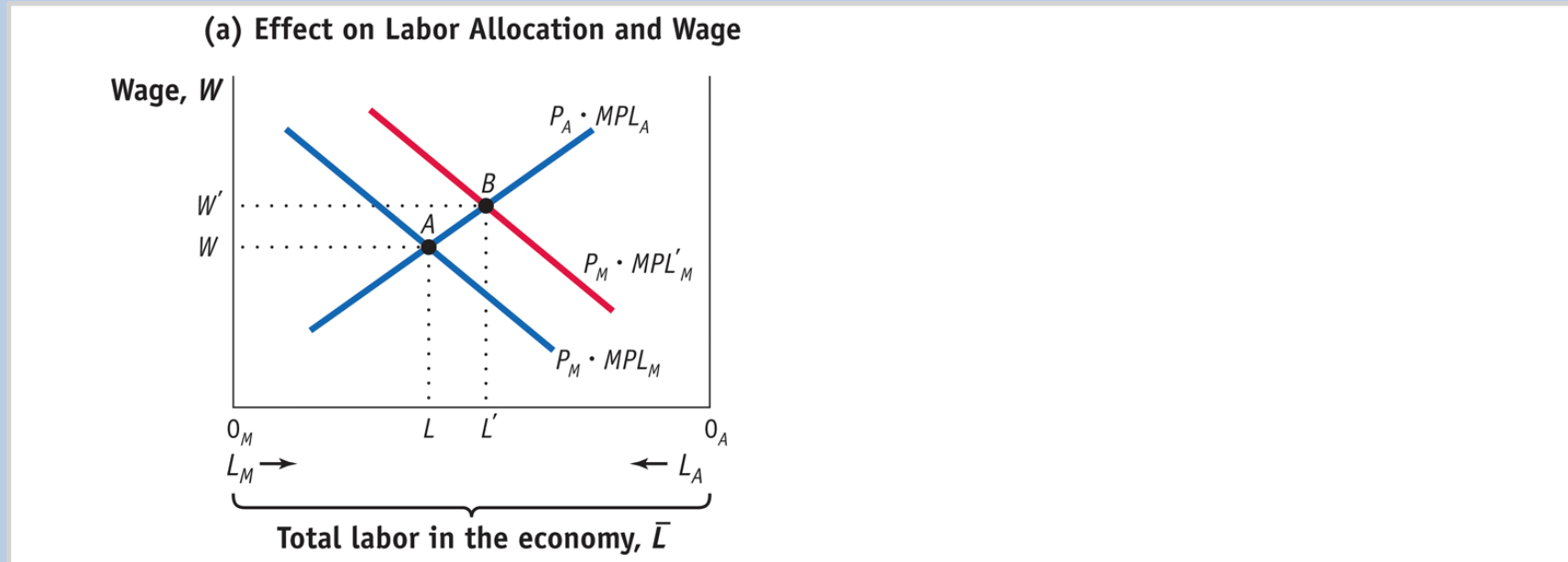
- Our focus in this section will be on Greenfield investment, that is, the building of new plants abroad.
- We model FDI as a movement of capital between countries, just as we modeled the movement of labor between countries.
- The key question we ask is: How does the movement of capital into a country affect the earnings of labor and capital there?
- This question is similar to the one we asked for immigration, so the earlier graphs that we developed can be modified to address FDI.

## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Short Run: Specific-Factors Model

FIGURE 5-11 (1 of 2)

Increase in the Capital Stock in the Short Run



In panel (a), an inflow of capital into the manufacturing sector shifts out the marginal product of labor curve in that sector.

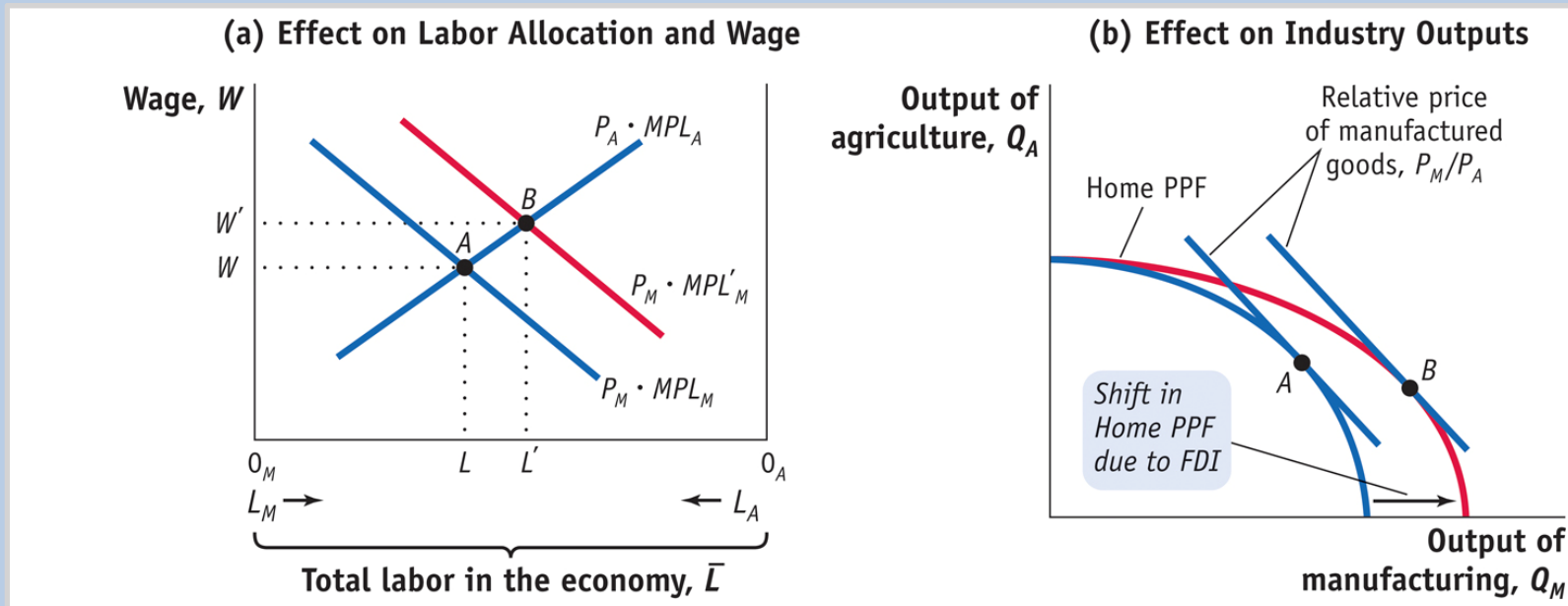
The equilibrium in the labor market moves from point  $A$  to  $B$ , and the wage increases from  $W$  to  $W'$ . Labor used in the manufacturing industry increases from  $0_M L$  to  $0_M L'$ . These workers are pulled out of agriculture, so the labor used there shrinks from  $0_A L$  to  $0_A L'$ .

## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Short Run: Specific-Factors Model

FIGURE 5-11 (2 of 2)

Increase in the Capital Stock in the Short Run (continued)



In panel (b), with the inflow of capital into manufacturing, and the extra labor used in that sector, the output of manufacturing increases.

Because labor has been drawn out of agriculture, the output of that sector falls. These changes in outputs are shown by the outward shift of the PPF (due to the increase in capital) and the movement from point  $A$  to point  $B$ .

## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Short Run: Specific-Factors Model

#### Effect of FDI on the Wage

- As a result of the shift in  $P_M \cdot MPL_M$ , the equilibrium *wage increases*, from  $W$  to  $W'$ . More workers are drawn into the manufacturing industry, and the labor used there increases.

#### Effect of FDI on the Industry Outputs

- An FDI inflow and the shift in  $P_M \cdot MPL_M$  will cause workers to be pulled out of agriculture, and since there is no change in the amount of land used there, *output of the agriculture industry must fall*.
- Since both capital and labor used in manufacturing increases, *output in manufacturing also increases*.

## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Short Run: Specific-Factors Model

#### Effect of FDI on the Rentals

- With regard to the rental on land, we know that with an inflow of FDI, fewer workers are employed in agriculture, and each acre of land cannot be used as intensively.
- The value of marginal product of land,  $R_K = P_A \cdot MPT_A$ , falls.
- If  $MPT_A$  falls and  $P_A$  remains unchanged, then land rental must fall.
- One way to measure the impact of FDI on the rental of capital is by the value of the marginal product of capital, or  $R_K = P_M \cdot MPK_M$ . However, using this method is difficult to determine how the rental on capital changes.

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- The textbook models FDI as a movement of capital between countries, just as it modeled the movement of labor between countries.
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- This question is similar to the one we asked for immigration, so the earlier graphs that we developed can be modified to address FDI.

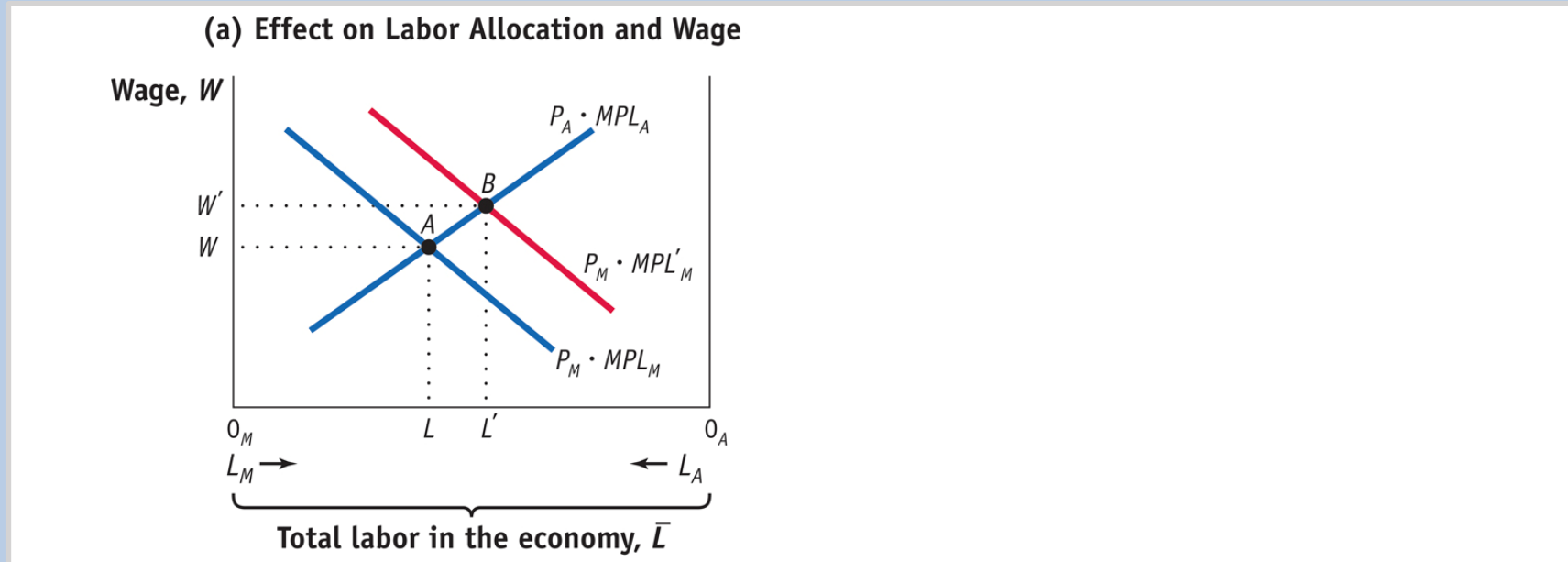


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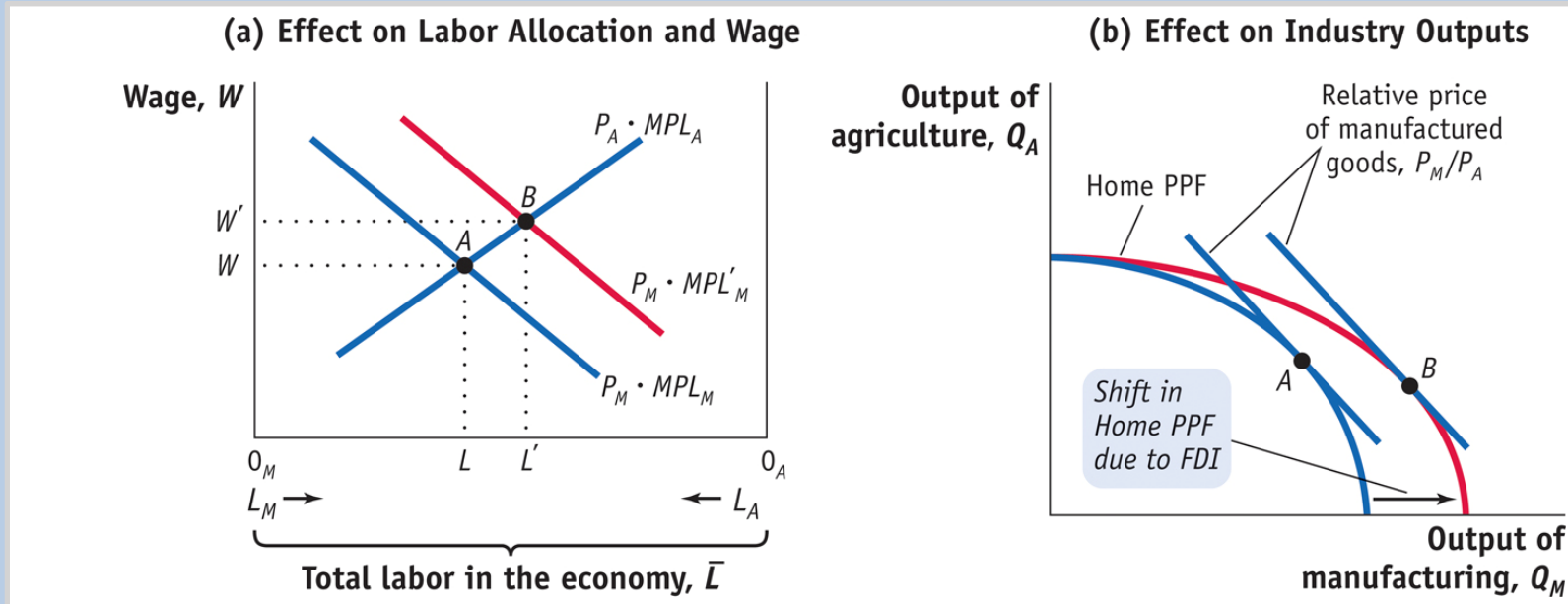
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## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Short Run: Specific-Factors Model

FIGURE 5-11 (2 of 2)

Increase in the Capital Stock in the Short Run (continued)



In panel (b), with the inflow of capital into manufacturing, and the extra labor used in that sector, the output of manufacturing increases.

Because labor has been drawn out of agriculture, the output of that sector falls. These changes in outputs are shown by the outward shift of the PPF (due to the increase in capital) and the movement from point  $A$  to point  $B$ .

## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Short Run: Specific-Factors Model

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#### Effect of FDI on the Industry Outputs

- An FDI inflow and the shift in  $P_M \cdot MPL_M$  will cause workers to be pulled out of agriculture, and since there is no change in the amount of land used there, *output of the agriculture industry must fall*.
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## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Short Run: Specific-Factors Model

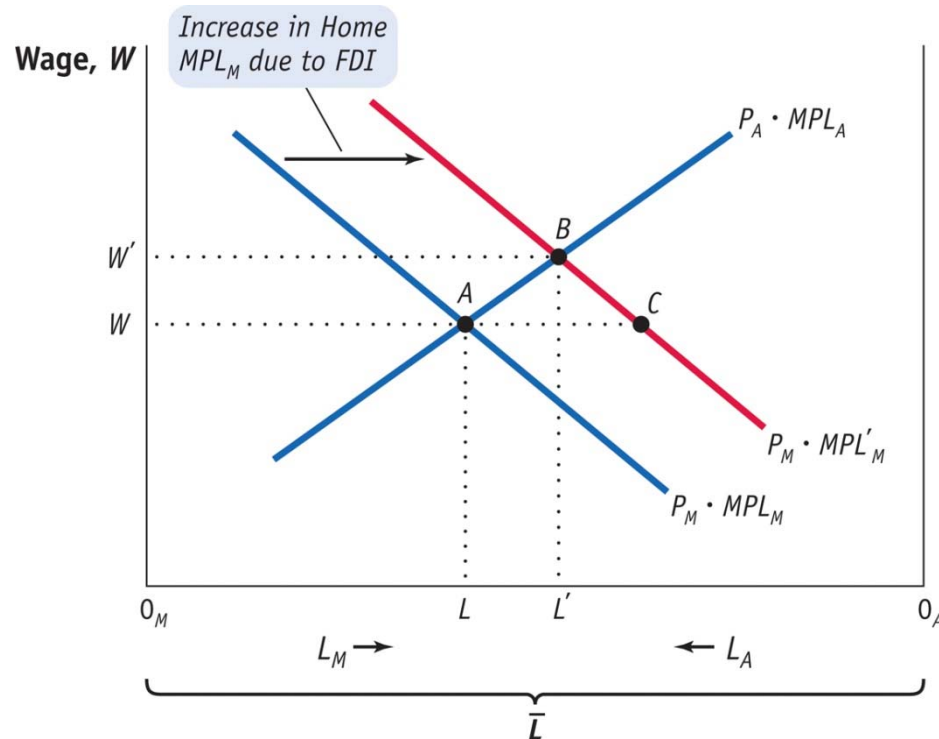
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## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Short Run: Specific-Factors Model

**FIGURE 5-12** The Effect of an Increase in Capital Stock on the Rental on Capital



By carefully tracing through how the capital-labor ratio in manufacturing is affected by the movement from  $A$  to  $C$  (where wages and hence the capital-labor ratio do not change), and then the movement from  $C$  to  $B$  (where wages and the capital-labor ratio both increase), we conclude that the rental on capital is lower at point  $B$  than at point  $A$ . Therefore, the rental on capital declines when the capital stock increases through FDI.

## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Long Run

To analyze the impact of FDI in the long run, we continue with the same assumptions as before.

- There are two industries, computers and shoes.
- There are two factors of production: labor and capital.
- Computers are capital-intensive and shoes are labor-intensive, meaning that  $K_C/L_C$  exceeds  $K_S/L_S$ .
- However, now we consider an increase in capital due to FDI.

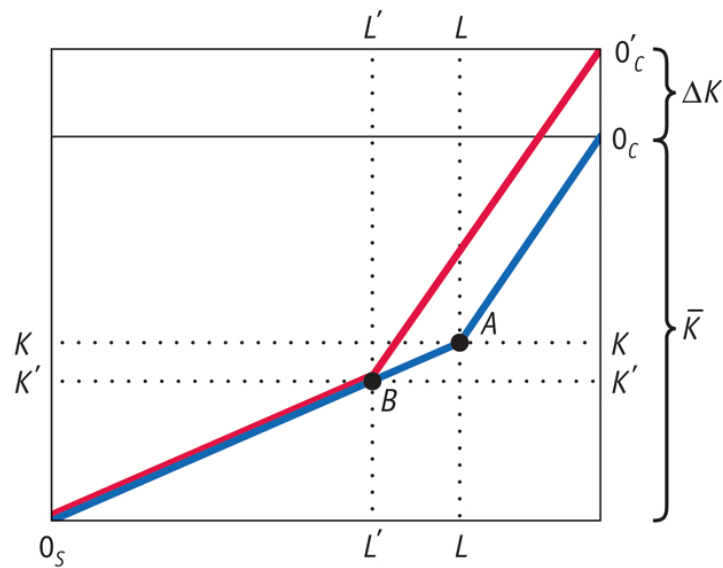
## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Long Run

FIGURE 5-13 (1 of 2)

Increase in the Capital Stock in the Long Run

(a) Effect on the Allocation of Labor and Capital



In panel (a) the top and bottom axes of the box diagram measure the amount of labor in the economy, and the right and left axes measure the amount of capital. The initial equilibrium is at point *A*.

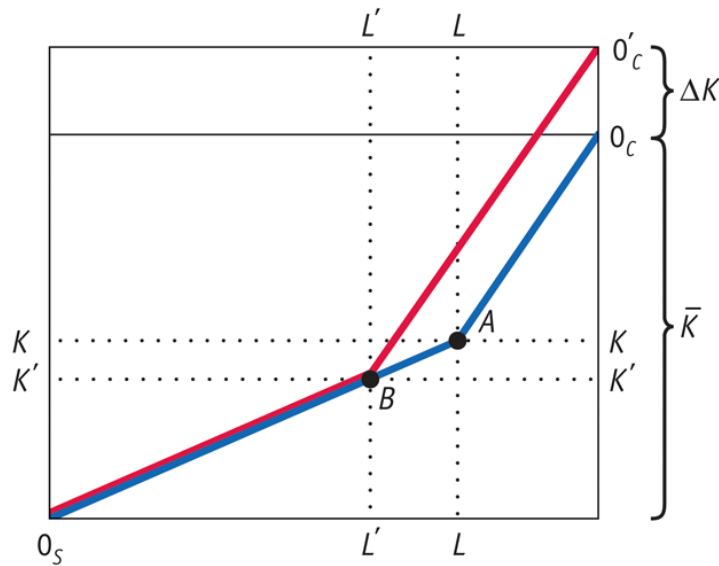
## 2 Movement of Capital Between Countries: Foreign Direct Investment

### FDI in the Long Run

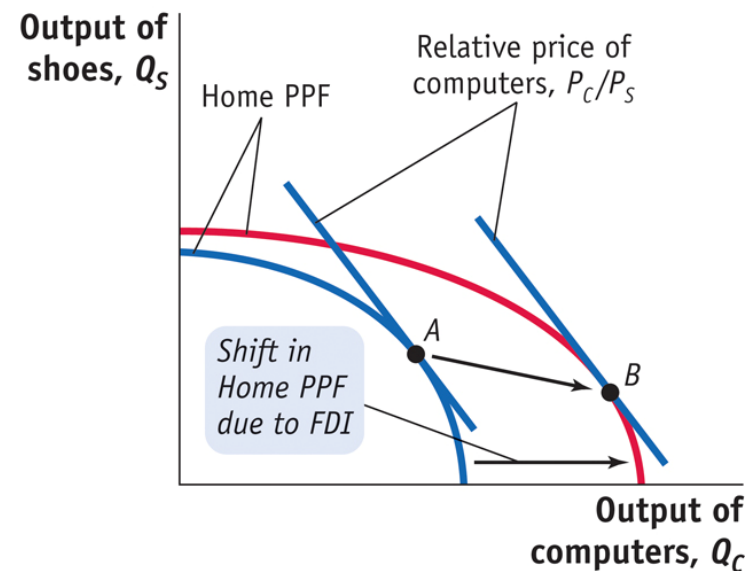
FIGURE 5-13 (2 of 2)

Increase in the Capital Stock in the Long Run (continued)

(a) Effect on the Allocation of Labor and Capital



(b) Effect on Industry Outputs



In panel (b), with the increase in the amount of capital at Home from increased FDI, the PPF shifts outward.



## 2 Movement of Capital Between Countries: Foreign Direct Investment

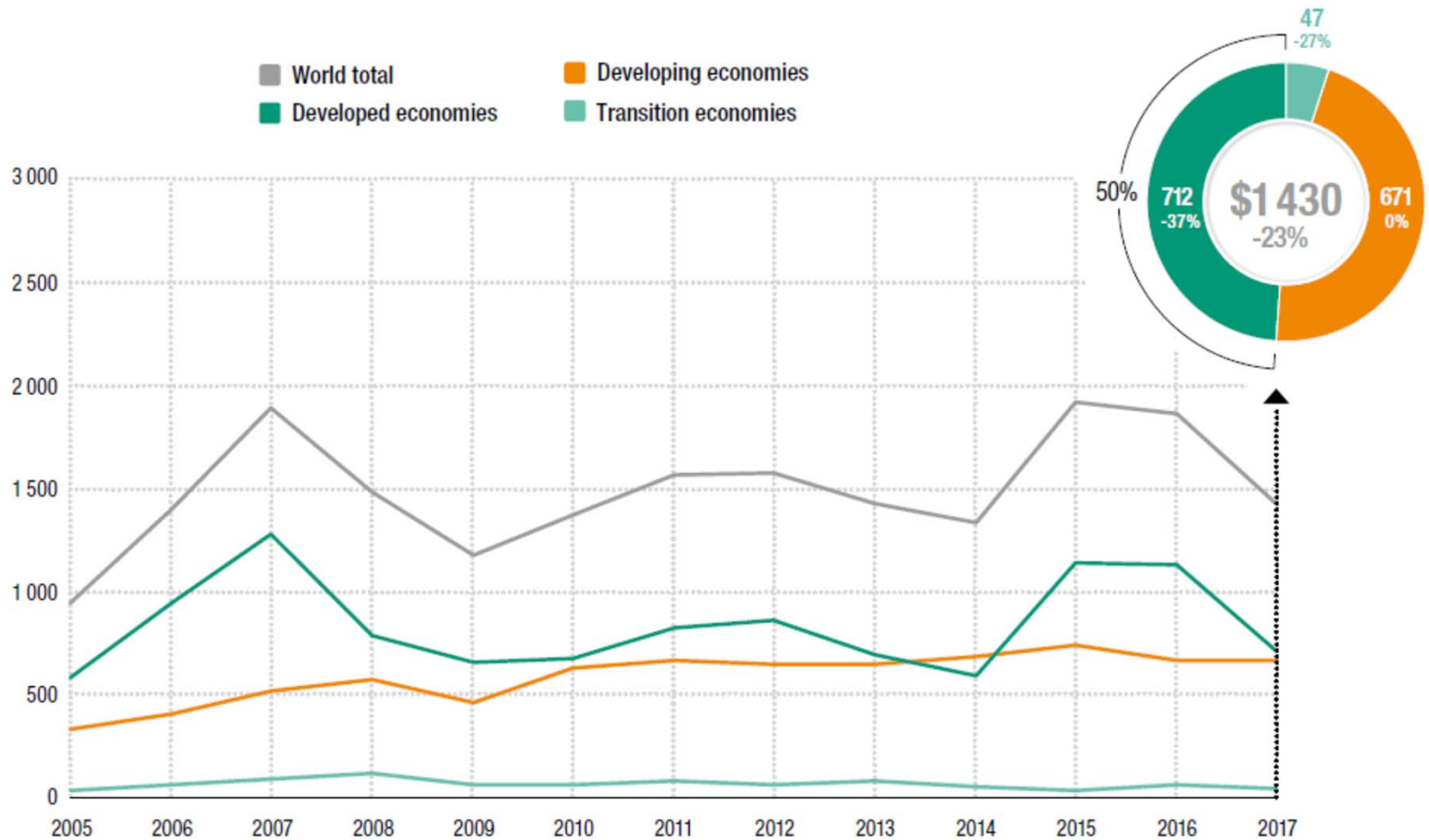
### FDI in the Long Run

#### Effect of FDI on Outputs and Factor Prices

- As the Rybczynski theorem states, the increase in capital has increased the output of the capital-intensive industry and reduced the output of the labor-intensive industry.
- This change in output is achieved *without* a change in the capital labor ratios in either industry.
- Because capital-labor ratios are unchanged, the wage and the rental on capital are also unchanged.
- In the long-run model, an inflow of either factor of production will leave factor prices unchanged.

# Global Trends

Figure I.1. FDI inflows, global and by group of economies, 2005–2017 (Billions of dollars and per cent)



Source: UNCTAD, FDI/MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).

[https://unctad.org/en/PublicationsLibrary/wir2018\\_en.pdf](https://unctad.org/en/PublicationsLibrary/wir2018_en.pdf)

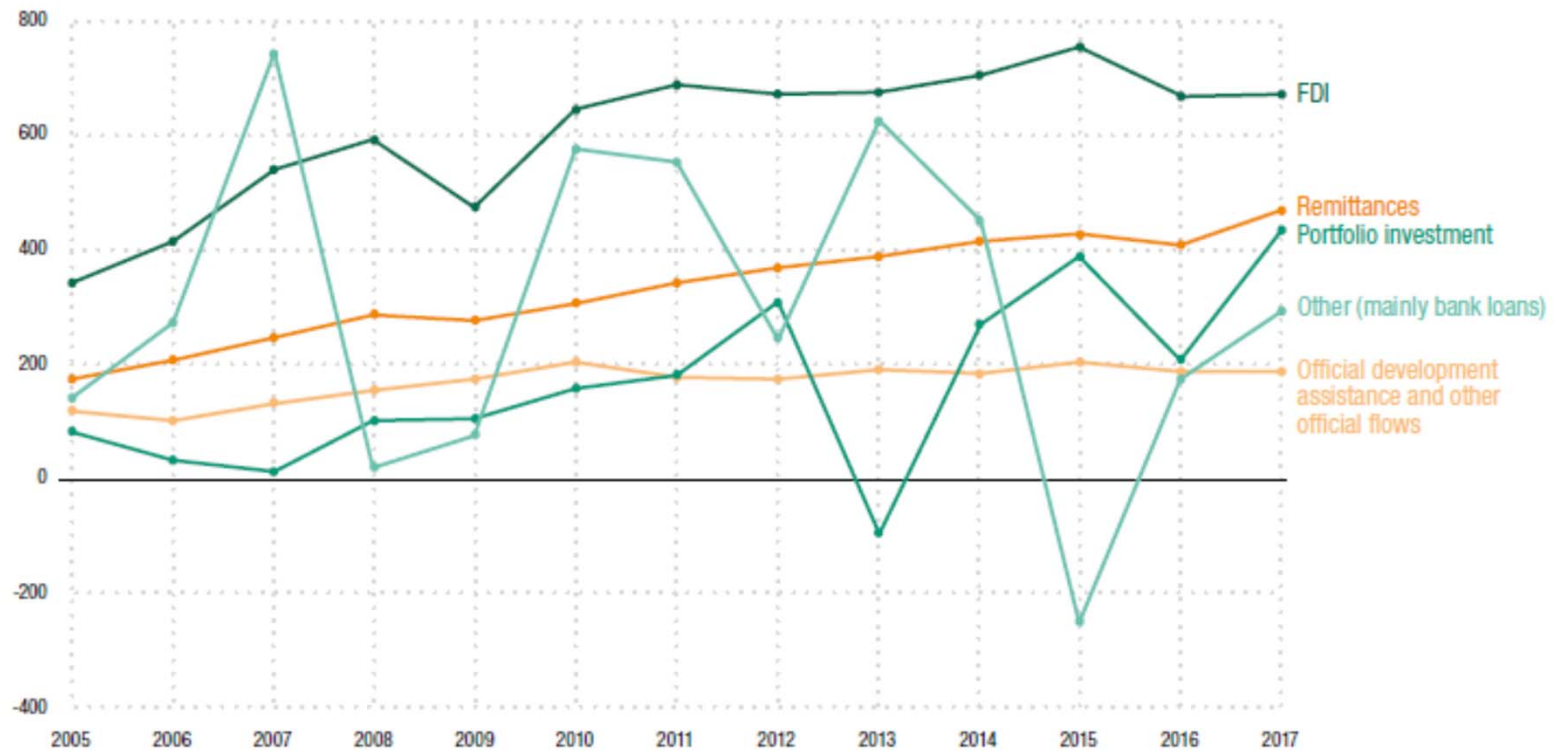
# Motivations for FDI

**Table 2 Motivation-based Classification of FDI**

Motive	General Definition	Relevant Alternatives	Internalisation Determinants	Localisation Determinants
Resource seeking (RS)	FDI is taken to acquire particular and specific resources at a lower cost than could be obtained in the home country	International Outsourcing International Trade	Asset Specificity (+) Uncertainty(+) Asset Intangibility(+) Asset Complementarity (+)	Real cost of the resource (-) Absolute scarcity of the resource (+) Relative productivity of the resource (+)
Market seeking (MS)	FDI is taken to exploit a foreign market which is of some appeal to the firm, by supplying either the market of the host country (host-market FDI) or that of adjacent ones (export-platform FDI)	Exports Licenses	Policy Barriers (+) Transportation/Communication Costs(+) Easiness of Imitation(-) Degree of Patentability (mixed)	<u>Host-Market FDI</u> Absolute market size(+) Growth rate of the market(+) Absolute advantage(+) Comparative advantage(+) <u>Export-Platform FDI</u> Differences in norms and regulations(+) Labour costs differentials(+)
Non-marketable asset seeking (NMAS)	FDI is taken to acquire assets which are not directly transferable through market transactions	Joint Venture Acquisition of Core Personnel	Degree of competition into the market(+) Degree of transferability of knowledge through direct contact(-) Extent of organisational capabilities (+)	Basic and advanced infrastructure(+) Degree of closeness of the technological frontier between home and host country (+)

# FDI in Perspective

Figure I.10. Sources of external finance, developing economies, 2005–2017 (Billions of dollars)

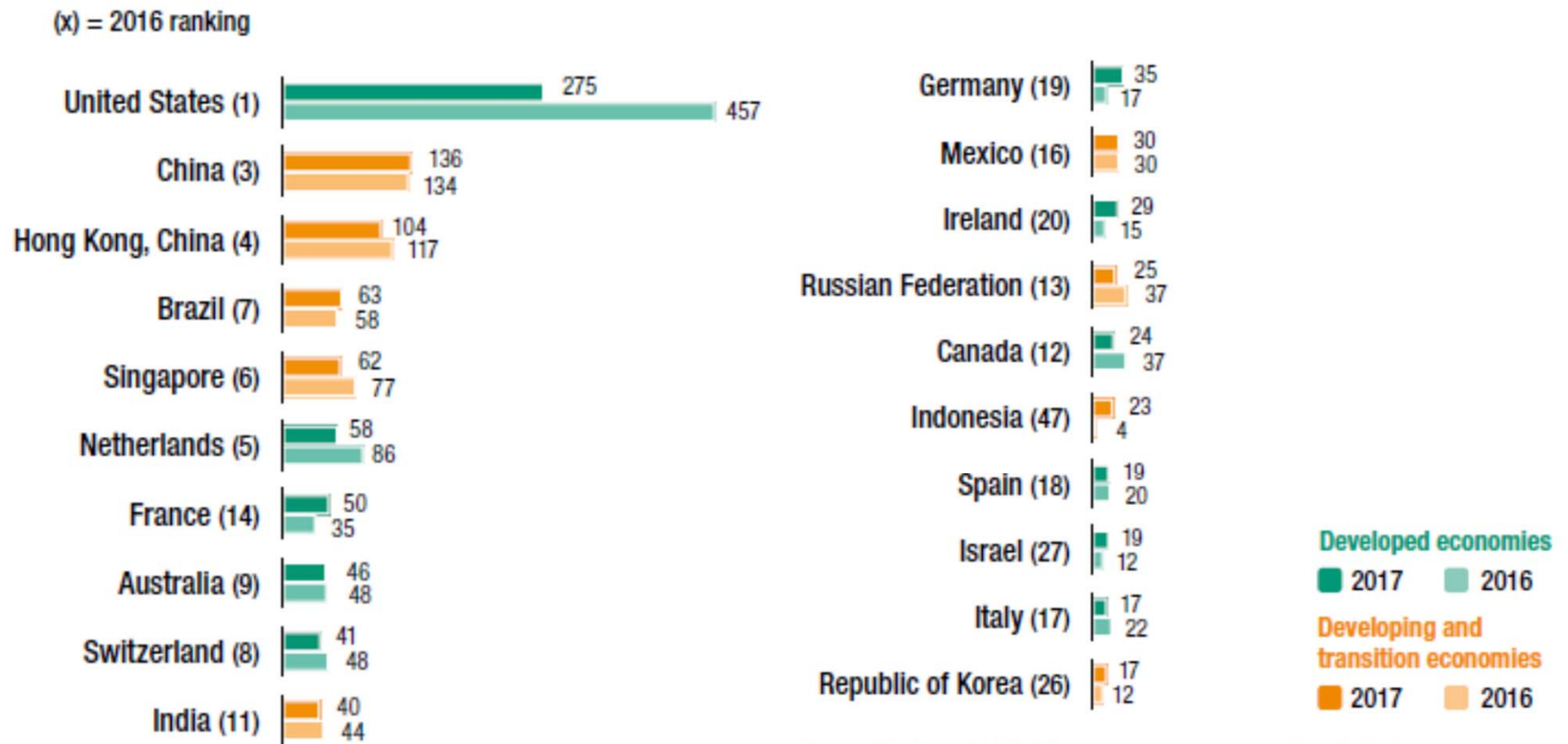


Source: UNCTAD, based on World Bank World Development Indicators (for remittances), UNCTAD (for FDI), IMF World Economic Dataset (for portfolio investment and other investment) and OECD (for ODA and other official flows).

Notes: ODA and other official flows is the sum of net disbursements from Development Assistance Committee (DAC) countries, non-DAC countries and multilateral donors, from OECD DAC Table 2a, and net other official flows from all donors, from OECD DAC Table 2b. Remittances data for 2017 are World Bank estimates. ODA and other official flows data for 2017 are estimated using preliminary OECD data on the annual growth rate of disbursements by OECD DAC countries.

# Countries as Host

**Figure I.3.** FDI inflows, top 20 host economies, 2016 and 2017 (Billions of dollars)

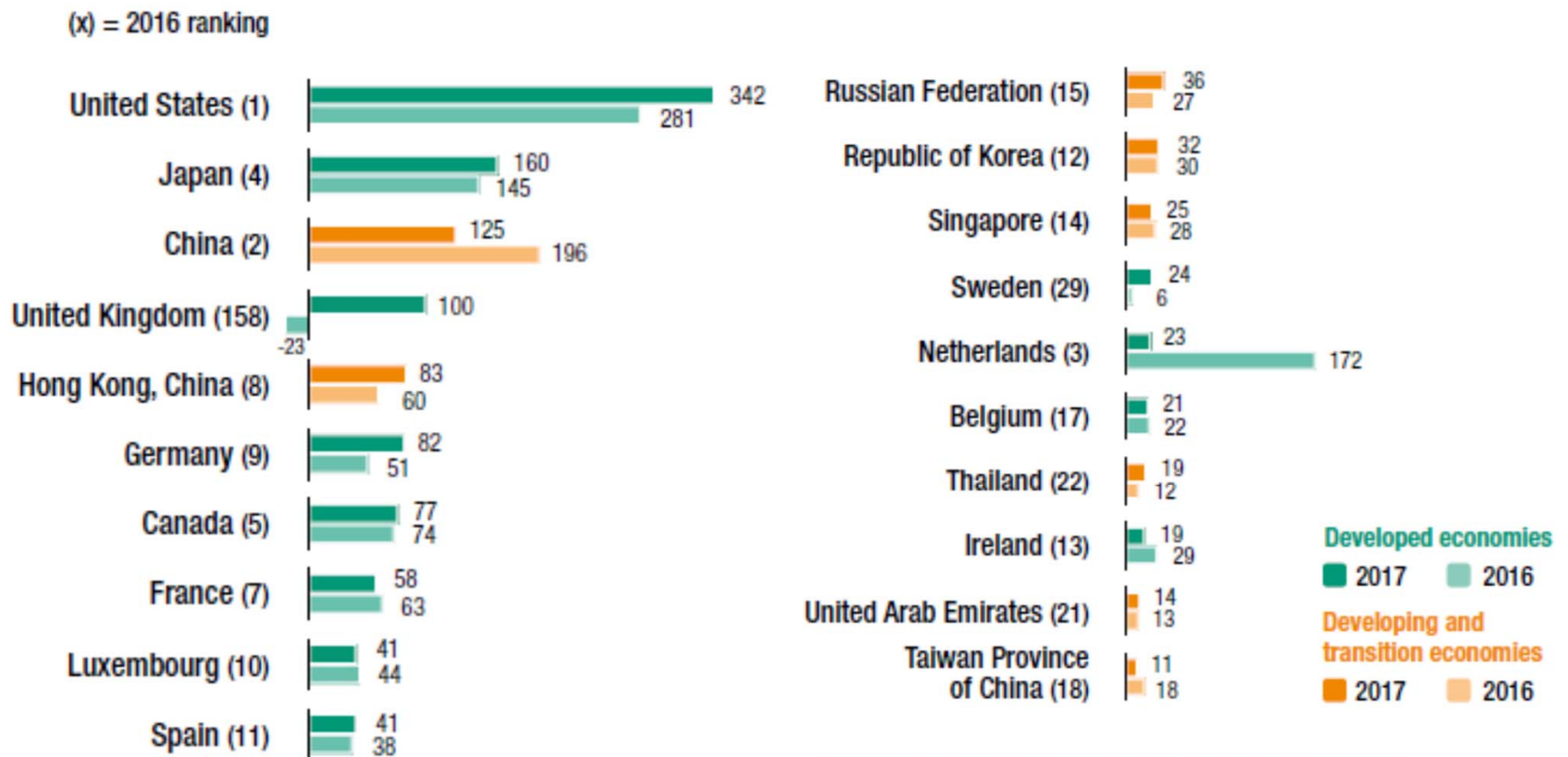


Source: UNCTAD, FDI/MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).



# Countries as Source

**Figure I.6.** FDI outflows, top 20 home economies, 2016 and 2017 (Billions of dollars)

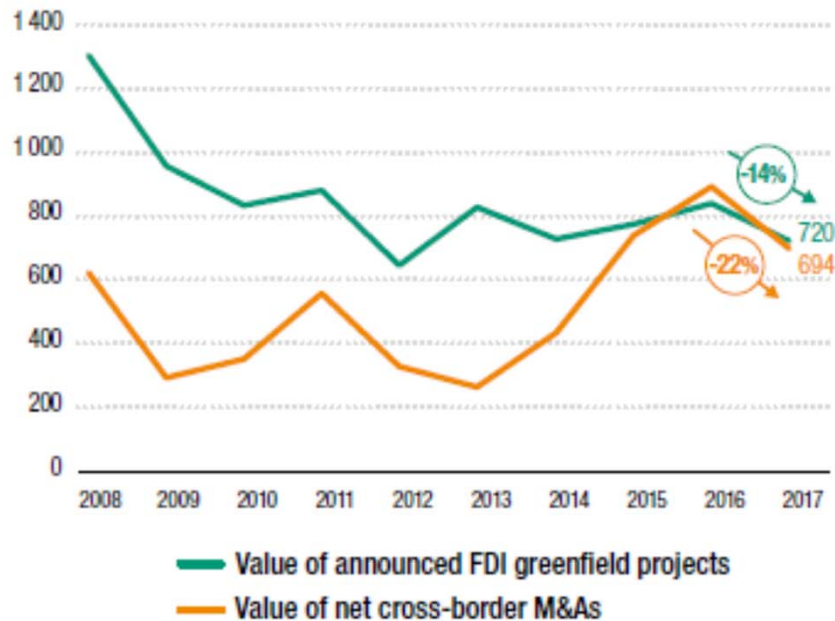


Source: UNCTAD, FDI/MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).

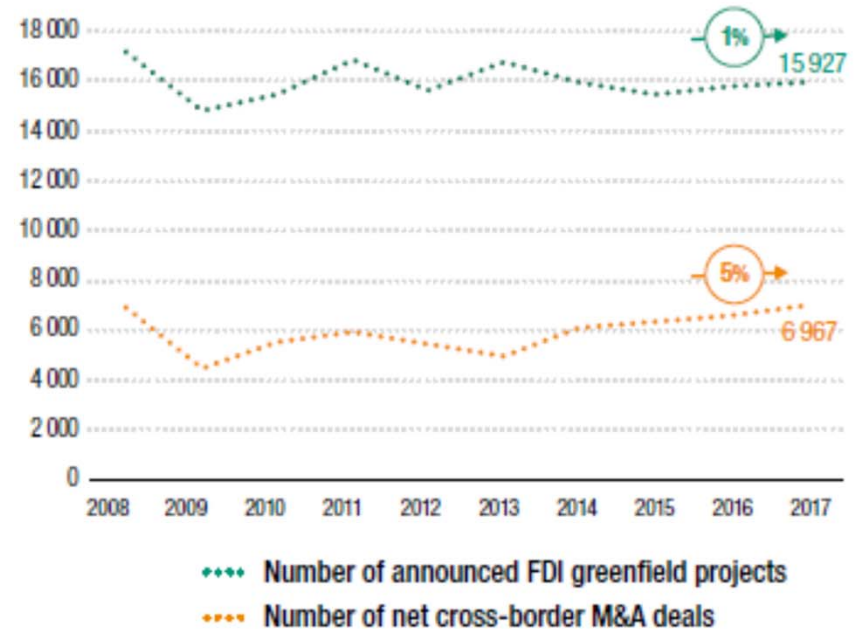
# Greenfield vs. M&A

**Figure I.7.** Value and number of net cross-border M&As and announced greenfield FDI projects, 2008–2017 (Billions of dollars and numbers)

## a. Value



## b. Number

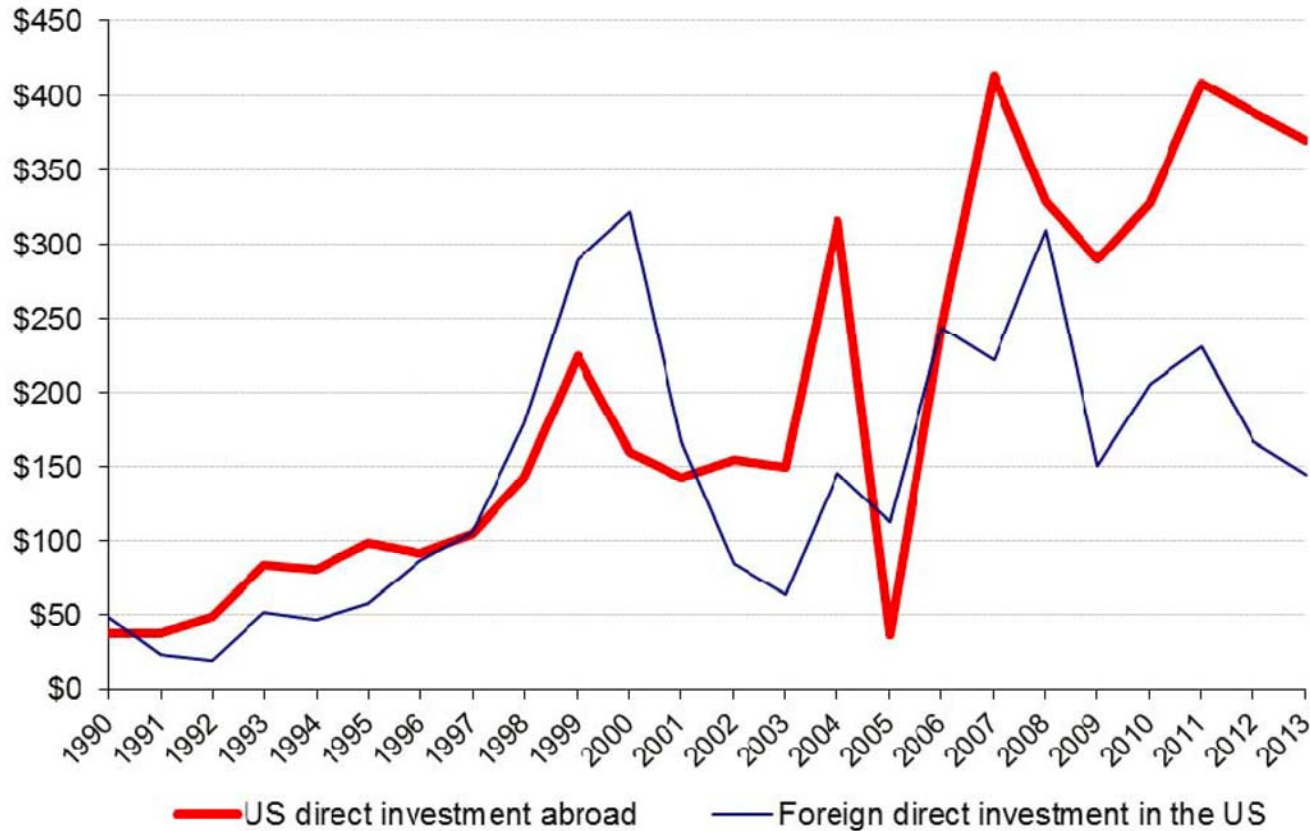


Source: UNCTAD, cross-border M&A database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)) and information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)) for announced greenfield FDI projects.

# United States

**Figure I. Foreign Direct Investment in the United States and U.S. Direct Investment Abroad, Annual Flows, 1990-2012**

(in billions of dollars)



Source: U.S. Department of Commerce.



**Table 1. Foreign Direct Investment Position in the United States on a Historical-Cost Basis at Year-End 2012**  
(in billions of U.S. dollars)

<b>All</b>	<b>All industries</b>	<b>Manufacturing</b>	<b>Wholesale trade</b>	<b>Retail trade</b>	<b>Information</b>	<b>Banking</b>	<b>Finance</b>	<b>Real estate</b>	<b>Services</b>	<b>Other industries</b>
<b>All countries</b>	<b>\$2,650.8</b>	<b>\$898.9</b>	<b>\$292.4</b>	<b>\$51.7</b>	<b>\$123.8</b>	<b>\$198.1</b>	<b>\$365.8</b>	<b>\$50.5</b>	<b>\$106.7</b>	<b>\$562.8</b>
Canada	225.3	39.9	5.3	(D)	1.4	(D)	64.4	2.2	(D)	67.6
<b>Europe</b>	<b>1,876.2</b>	<b>717.6</b>	<b>142.3</b>	<b>38.8</b>	<b>113.5</b>	<b>108.8</b>	<b>279.8</b>	<b>25.5</b>	<b>75.9</b>	<b>374.1</b>
Belgium	88.7	55.3	17.0	7.1	0.0	(D)	(D)	(D)	0.0	7.7
France	209.1	75.8	21.4	5.0	12.5	17.3	30.1	0.5	6.4	40.3
Germany	199.0	67.4	16.6	(D)	40.9	14.0	26.1	90	(D)	11.7
Ireland	24.9	10.7	0.8	0.0	0.0	0.1	3.4	0.0	(D)	(D)
Italy	23.3	7.2	1.4	3.5	0.2	(D)	(D)	0.2	(D)	(D)
Luxembourg	202.3	73.7	(D)	2.8	14.1	0.0	45.5	2.2	(D)	50.7
Netherlands	274.9	118.3	19.5	2.6	6.9	(D)	58.1	2.8	(D)	(D)
Spain	47.4	6.2	0.0	(D)	0.0	28.6	3.0	0.3	(D)	8.9
Sweden	42.4	29.0	6.6	(D)	0.5	(D)	0.2	(D)	(D)	1.8
Switzerland	204.0	106.6	10.6	6.5	(D)	(D)	42.5	1.6	0.5	38.1
UK	486.8	137.6	26.1	3.3	22.9	(D)	67.8	5.0	(D)	(D)
<b>L. America</b>	<b>98.6</b>	<b>12.3</b>	<b>3.6</b>	<b>(D)</b>	<b>0.9</b>	<b>5.1</b>	<b>-16.8</b>	<b>13.1</b>	<b>(D)</b>	<b>56.7</b>
<b>Africa</b>	<b>5.3</b>	<b>(D)</b>	<b>0.6</b>	<b>(D)</b>	<b>0.0</b>	<b>(D)</b>	<b>(D)</b>	<b>0.1</b>	<b>0.0</b>	<b>3.9</b>
<b>Mid. East</b>	<b>20.6</b>	<b>(D)</b>	<b>7.2</b>	<b>(D)</b>	<b>0.7</b>	<b>(D)</b>	<b>(D)</b>	<b>1.6</b>	<b>(D)</b>	<b>3.0</b>
<b>Asia</b>	<b>427.7</b>	<b>123.4</b>	<b>133.5</b>	<b>5.4</b>	<b>7.3</b>	<b>45.6</b>	<b>37.4</b>	<b>8.0</b>	<b>9.7</b>	<b>57.6</b>
Australia	42.7	3.8	0.7	(D)	0.1	3.0	3.6	0.9	(D)	29.8
Japan	308.3	93.4	105.9	5.1	6.2	36.9	29.5	6.4	6.5	18.4
Korea	24.5	3.9	16.8	0.0	0.0	0.6	0.2	0.1	0.0	2.8
Singapore	26.2	15.8	3.9	(D)	0.0	0.4	(D)	(D)	(D)	1.4
OPEC	15.5	(D)	(D)	(D)	0.0	1.1	(D)	1.2	0.0	2.8

# National Security

**Table 1. National Definitions of Critical Infrastructure**

Australia	"Critical infrastructure is defined as those physical facilities, supply chains, information technologies and communication networks which, if destroyed, degraded or rendered unavailable for an extended period, would significantly impact on the social or economic well-being of the nation, or affect Australia's ability to conduct national defence and ensure national security."
Canada	"Canada's critical infrastructure consists of those physical and information technology facilities, networks, services and assets which, if disrupted or destroyed, would have a serious impact on the health, safety, security or economic well-being of Canadians or the effective functioning of governments in Canada."
Germany	"Critical infrastructures are organisations and facilities of major importance to the community whose failure or impairment would cause a sustained shortage of supplies, significant disruptions to public order or other dramatic consequences."
Netherlands	"Critical infrastructure refers to products, services and the accompanying processes that, in the event of disruption or failure, could cause major social disturbance. This could be in the form of tremendous casualties and severe economic damage..."
United Kingdom	"The [Critical National Infrastructure] comprises those assets, services and systems that support the economic, political and social life of the UK whose importance is such that loss could: 1) cause large-scale loss of life; 2) have a serious impact on the national economy; 3) have other grave social consequences for the community; or 3) be of immediate concern to the national government."
United States	The general definition of critical infrastructure in the overall US critical infrastructure plan is: "systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters." For investment policy purposes, this definition is narrower: "systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on national security."

# CFIUS

- The Committee on Foreign Investment in the United States (CFIUS) is an interagency committee that serves the President in overseeing the national security implications of foreign investment in the economy.
- Originally established by an Executive Order of President Ford in 1975.

# CFIUS

## Formal Actions

P.L. 110-49 established CFIUS by statutory authority and designated the Secretary of the Treasury to serve as the Chairman of CFIUS. The measure followed the same pattern that had been set by Executive Order by allotting the Committee:

- 30 days to conduct a review;
- 45 days to conduct an investigation; and
- 15 days for the President to make his determination.

The President retained his authority as the only officer with the authority to suspend or prohibit mergers, acquisitions, and takeovers, and the measure placed additional requirements on firms that resubmitted a filing after previously withdrawing a filing before a full review was completed.

**Table 2. Foreign Investment Transactions Reviewed by CFIUS, 2008-2014**

<b>Year</b>	<b>Number of Notices</b>	<b>Notices Withdrawn During Review</b>	<b>Number of Investigations</b>	<b>Notices Withdrawn During Investigation</b>	<b>Presidential Decisions</b>
2008	155	18	23	5	0
2009	65	5	25	2	0
2010	93	6	35	6	0
2011	111	1	40	5	0
2012	114	2	45	20	1
2013	97	3	48	5	0
2014	147	3	51	9	0
<b>Total</b>	<b>782</b>	<b>38</b>	<b>267</b>	<b>43</b>	<b>1</b>

**Source:** *Annual Report to Congress, Committee on Foreign Investment in the United States, February 2016.*

# US in Context

