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# Effects of globalization – wages, skills, offshoring, migration

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# References for this lecture

- **BBGV**
  - Chapter 14
    - Paragraphs 14.3, 14.4, 14.7

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# Trade openness and structural change

- **Openness to trade impacts on the sectoral composition of the economy**
  - **Ricardo model** → (full) **specialization** in the sector for which the country has a **comparative advantage**
  - **HOS model** → **specialization** in the sector that is **intensive** in the relative **abundant factor**

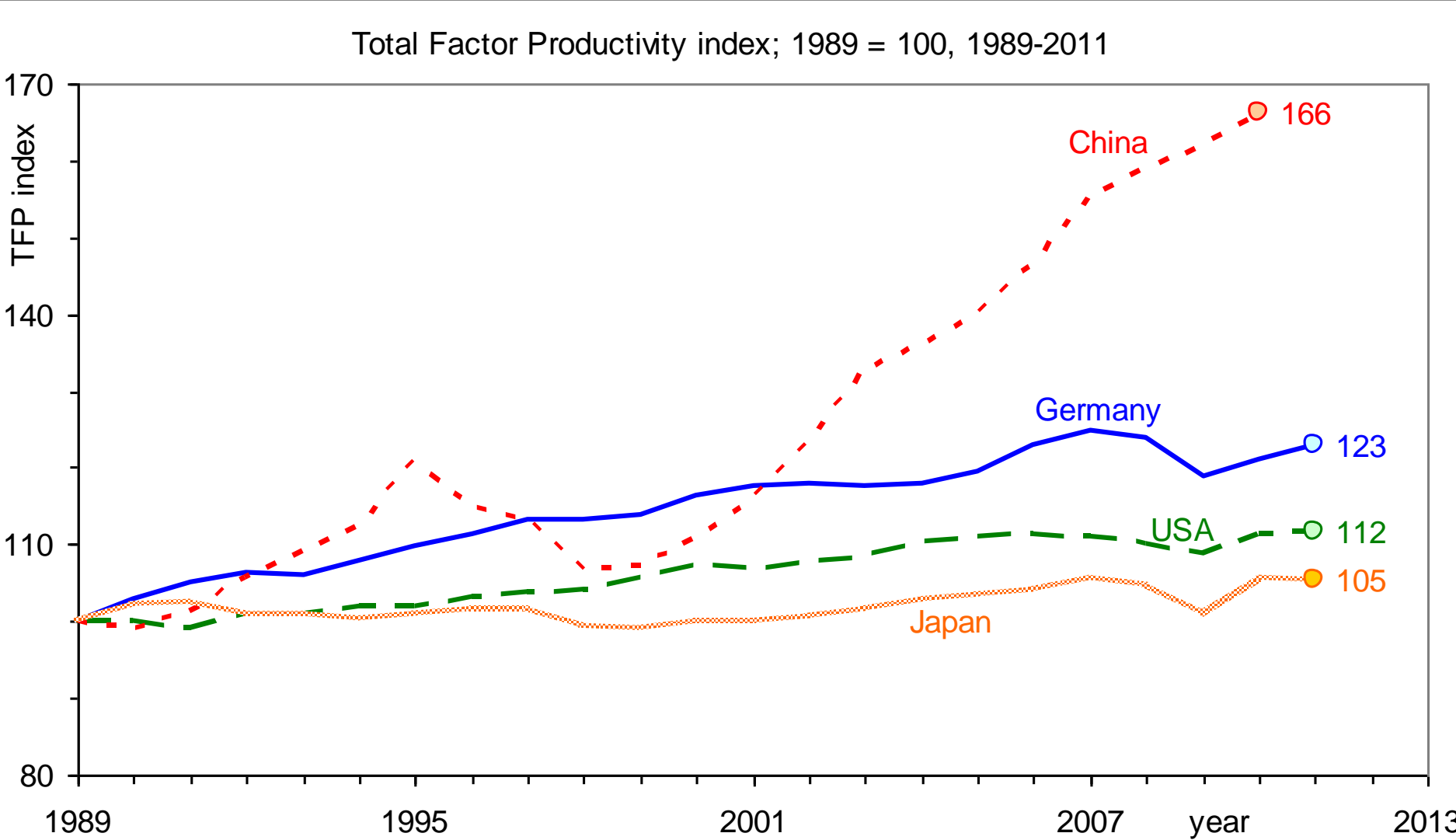
# Trade and structural change

- **Globalization** favours the **growth** in **some sectors** at the **expenses** of **other** sectors
- The structural change is **not painless**
  - According to the HOS model, **some input gains** from trade openness (i.e. the relatively abundant) and **some other lose** (i.e. the relatively scarce) in terms of compensation
  - The **shift of inputs** (capital and labour) from the **shrinking sectors** to the growing sectors is **not costless** and **smooth** (as assumed in Ricardo and HOS)

# Trade and structural change

- **Frictions in shifting inputs** are due to
  - **Skill specificities** in growing and shrinking sectors
  - **Different technologies** in the two sectors
- Those **workers** in the **shrinking sectors** that have skills that **cannot** be easily **employed** in the **growing sectors** will experience
  - Persistent **unemployment**
  - **Income losses**

**Figure 14.2** Total factor productivity index; 1989 = 100, 1989-2011



Source: author's calculations based on Conference Board Total Economy Database

# China and US manufacturing employment

- Autor D, Dorn D, Hanson GH (2013) 'The China Syndrome: Local Labor Market Effects of Import Competition in the United States'. *American Economic Review*, 103(6):2121-2168
- Analyze the **effect** of rising **Chinese import** competition between **1990** and **2007** on **US local labor markets**
- Exploit cross-market variation in **import exposure** stemming from **initial differences** in **industry specialization**
  - US local labor markets with **initially larger share** of **employment** in sectors that produce **goods** that are intensively imported from **China** are **more exposed** to Chinese import

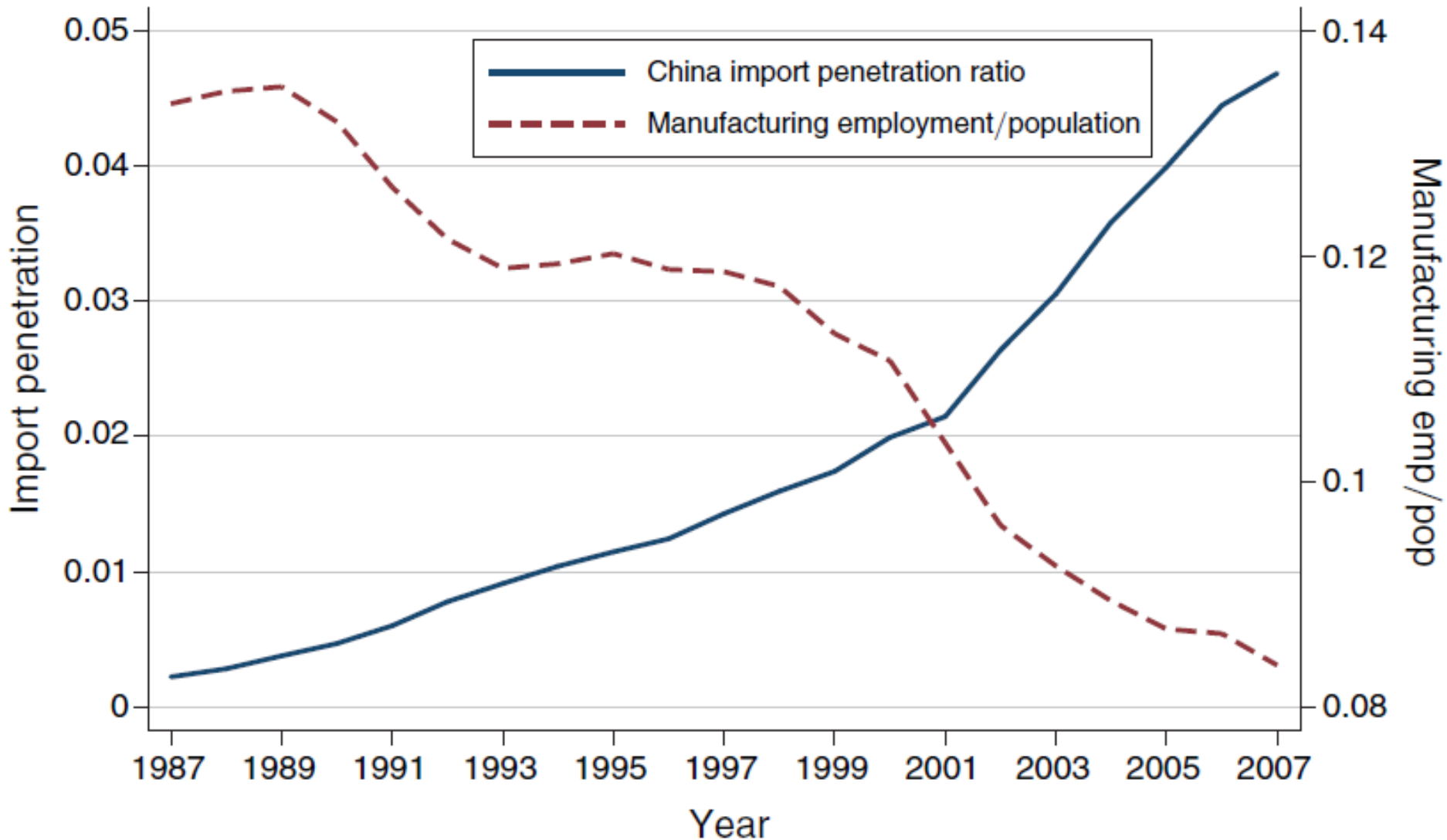


FIGURE 1. IMPORT PENETRATION RATIO FOR US IMPORTS FROM CHINA (*left scale*), AND SHARE OF US WORKING-AGE POPULATION EMPLOYED IN MANUFACTURING (*right scale*)



TABLE 1—VALUE OF TRADE WITH CHINA FOR THE US AND OTHER SELECTED HIGH-INCOME COUNTRIES AND VALUE OF IMPORTS FROM ALL OTHER SOURCE COUNTRIES, 1991/1992–2007

	I. Trade with China (in billions 2007 US\$)		II. Imports from other countries (in billions 2007 US\$)		
	Imports from China (1)	Exports to China (2)	Imports from other low-inc. (3)	Imports from Mexico/ CAFTA (4)	Imports from rest of world (5)
<i>Panel A. United States</i>					
1991/1992	26.3	10.3	7.7	38.5	322.4
2000	121.6	23.0	22.8	151.6	650.0
2007	330.0	57.4	45.4	183.0	763.1
Growth 1991–2007	1,156%	456%	491%	375%	137%
<i>Panel B. Eight other developed countries</i>					
1991/1992	28.2	26.6	9.2	2.8	723.6
2000	94.3	68.2	13.7	5.3	822.6
2007	262.8	196.9	31.0	11.6	1329.8
Growth 1991–2007	832%	639%	236%	316%	84%

*Notes:* Trade data is reported for the years 1991, 2000, and 2007, except for exports to China which are first available in 1992. The set of “other developed countries” in panel B comprises Australia, Denmark, Finland, Germany, Japan, New Zealand, Spain, and Switzerland. Column 3 covers imports from all countries that have been classified as low income by the World Bank in 1989, except for China. Column 4 covers imports from Mexico and the Central American and Caribbean countries covered by the CAFTA-DR. Column 5 covers imports from all other countries (primarily from developed countries).

# The Parts of America Most Vulnerable to China

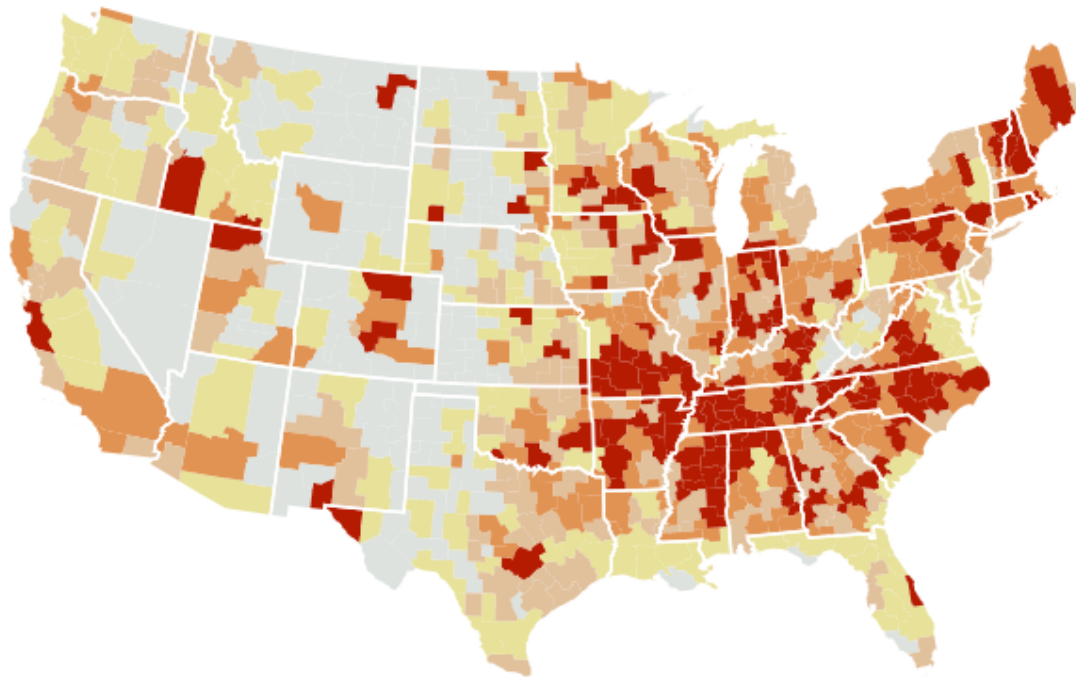
Some areas of the U.S. were hit especially hard by China's rise, partly because those areas had lots of jobs in industries where imports surged the most.



## Most-affected areas of the U.S.

Colors show which areas were most affected by China's rise, based on the increase in Chinese imports per worker in each area from 1990 to 2007. Hovering over each area on the map will show a demographic breakdown of that area, below, and its most-affected industries, at right.

Most-affected 20%   Second-highest 20%   Middle 20%   Second-lowest 20%   Least-affected 20%



## Most-affected industries

Most-affected industries, based on number of areas\*

Impact per worker†

Furniture and fixtures

196 areas

\$44k

Games, toys, and children's vehicles

114 areas

\$488k

Sporting and athletic goods

106 areas

\$82k

Electronic components

87 areas

\$65k

Plastics products

84 areas

\$11k

Motor-vehicle parts and accessories

79 areas

\$12k

Electronic computers

68 areas

\$207k

# China and US manufacturing employment

- Rising **imports** from **China** cause **higher unemployment, lower labor force participation, and reduced wages** in local labor markets that house import-competing manufacturing industries
- Import competition **explains one-quarter** of the contemporaneous aggregate **decline in US manufacturing employment**
- Transfer **benefits** payments for **unemployment, disability, retirement, and healthcare** also **rise** sharply in more trade-exposed labor markets

# Trade and firm selection

- Similarly to structural change, opening to trade induce a **firm selection**
  - The **best** firms **export** and **increase** their **market share**
  - Firms in the **middle** of the **productivity** distribution do **not export** and **reduce** their **market share**
  - The **worst** firms **leave** the market
- **Relocation of inputs** (labour and capital) across **firms** is **not frictionless**
- Firms with **low productivity** (but, eventually, with many employees) will **oppose globalization**

# Trade and wages

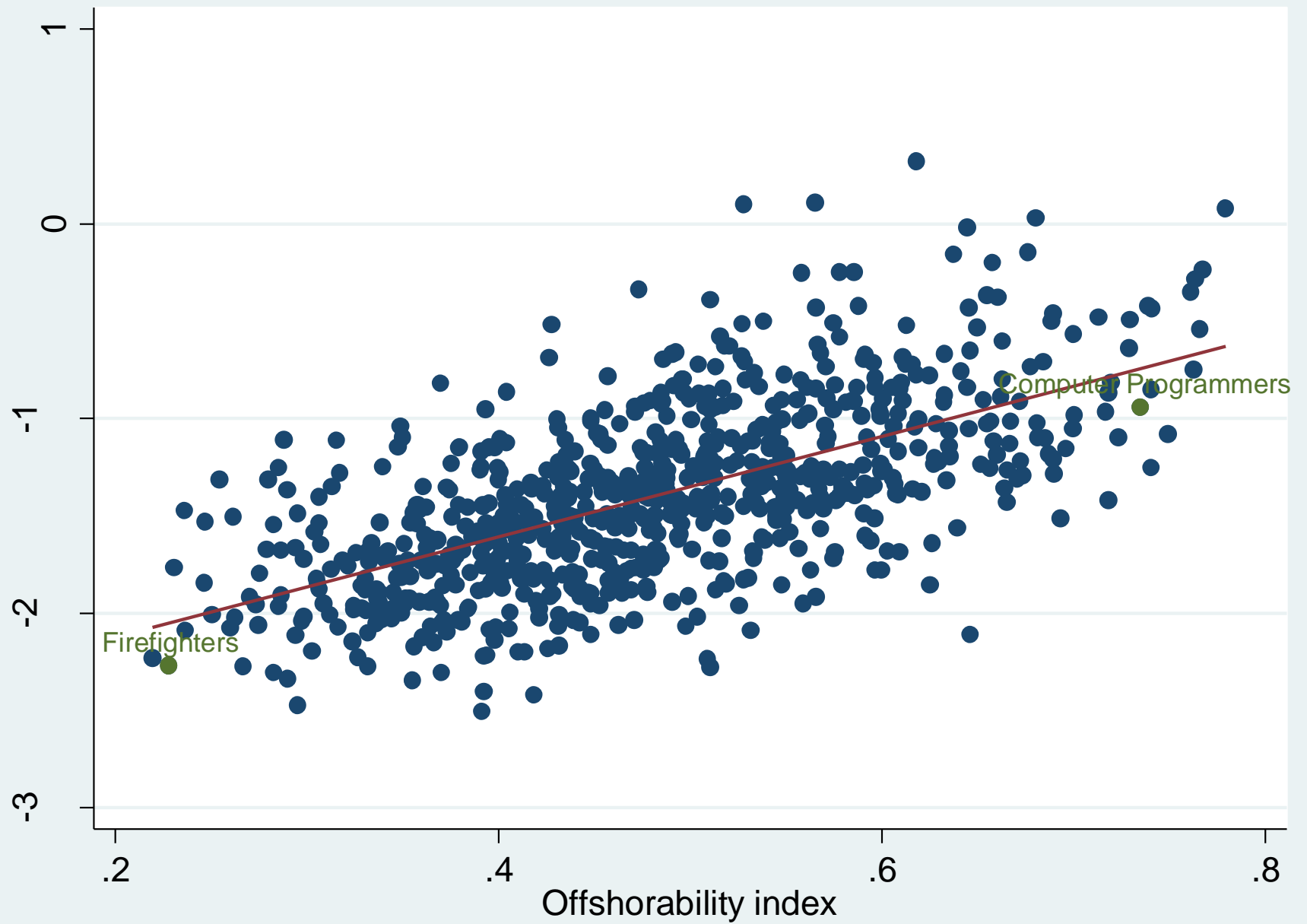
- The **HOS model** is the most **appropriate** tool to analyze the **impact of trade on wages**
- **Industrialized countries specialized** in the production of
  - **Capital-intensive** products
  - **High-skill labour intensive** products
- The **wage** of **low-skill** workers has **decreased**
- **Unemployed low-skill** workers coming from the **shrinking sectors** started **competing** with other low-skill workers employed in the **non-tradable** (e.g. service) sector
- The **decrease** in the **wage** of low-skill workers spread **all** over the economic **sectors**, even the one '**protected**' from **international competition**

# Interaction between trade and technology

- The **impact** of **technology** development on the **labour force** in developed countries was **similar** to the one of **trade**
- The **task-based model** (Autor, Levy and Murnane, 2003) models **production** as a **combination of tasks**
  - **Non-routinary tasks** (e.g. problem solving, face-to-face interaction) can be performed by **humans** (with certain **skills**)
  - **Routinary tasks** (e.g. calculus, manual tasks) can be performed either by **humans** or **machines** (ICTs)

# Interaction between trade and technology

- There is **competition** between **humans** and **machines** for performing **routinary** tasks
- Rapid **technological development** in ICTs improved spectacularly the **productivity** of **machines** in performing routinary tasks
- **Workers** that were doing **routinary** tasks are **displaced**
- To be adopted successfully, **machines** require **high-skill workers**





# Interaction between trade and technology

- Many **routinary tasks** can be easily **offshored** (e.g. through **FDI**)
  - **Competition** not only with **machines**, but also with **foreign workers** that earn **low wages**!
  - Rapid **increases** in **TFP** in **emerging countries** make them **attractive** to **offshore production**
  - **Offshoring** resulted in an increasing **fragmentation** of **value chains**
- **Low-skill workers** in **developed countries** are the ones that **suffered the most** the **costs** of **globalization** and **technological change**
- **Low-skill workers support 'protectionist'** politicians

Source: Sethupathy G (2013)  
Offshoring, wages, and employment:  
Theory and evidence. *European  
Economic Review*, 62:73-97

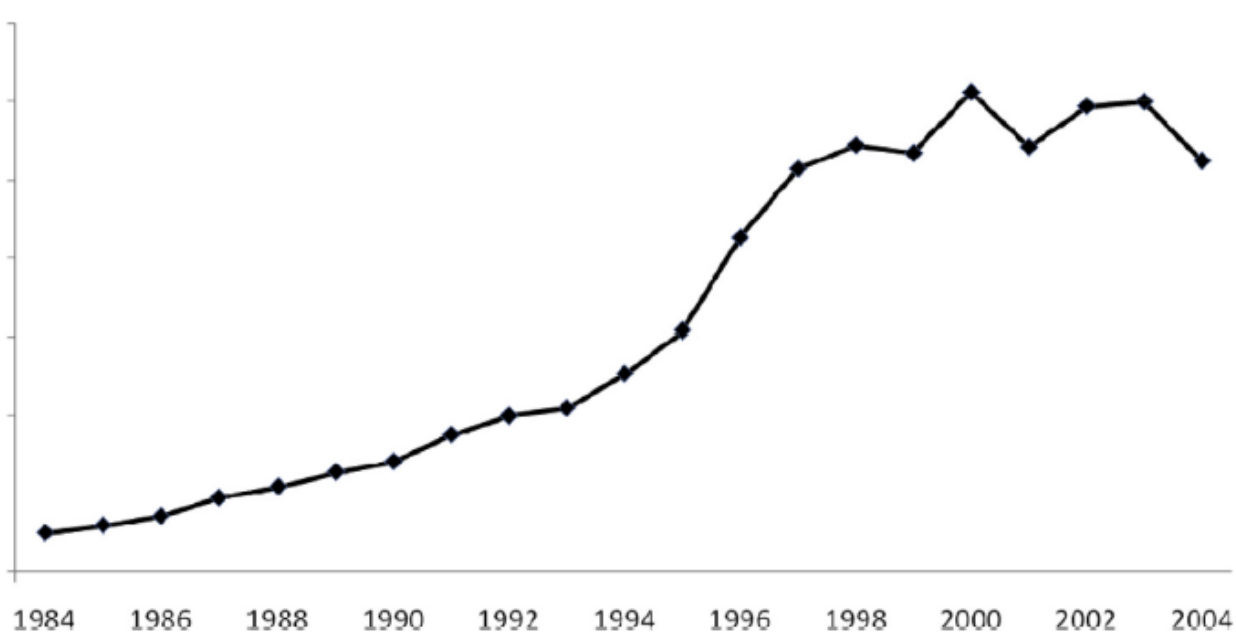


Fig. 5. Intrafirm Mexican affiliate sales of US manufacturing MNCs (\$Bn).

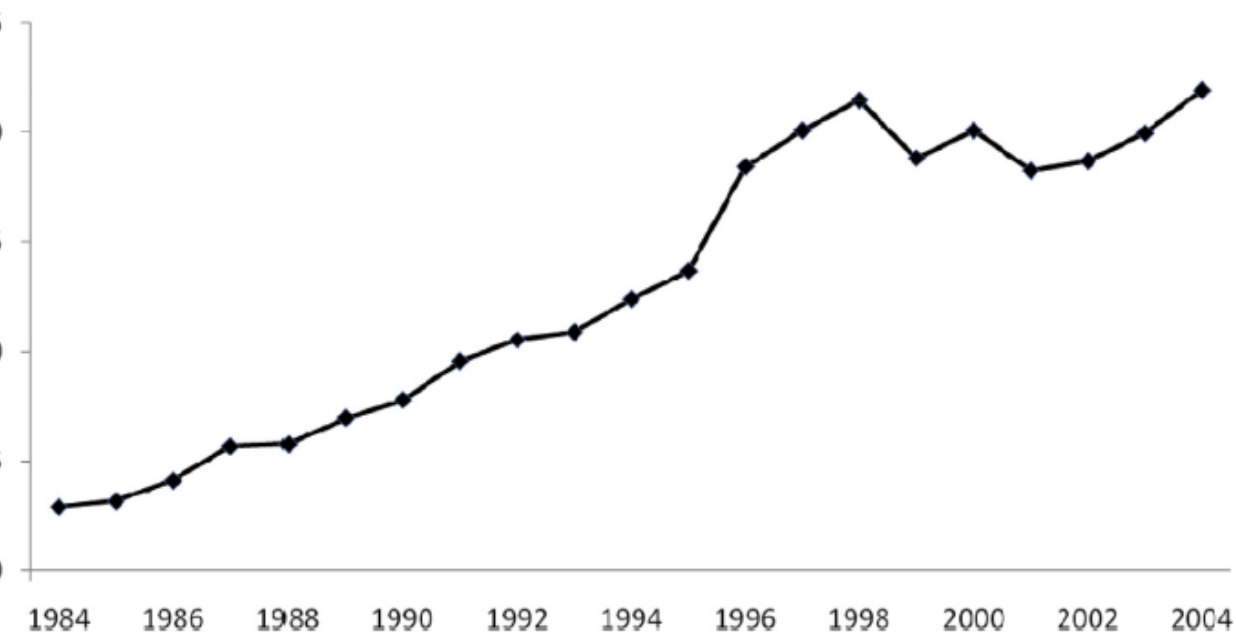


Fig. 6.  $\frac{\text{Intrafirm Mexican affiliate sales of the US parent}}{\text{Total global sales of the US parent}}$  for US manufacturing MNCs.

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# Globalization and labour migration

- **Labour** (i.e. people) **migrates** in search of higher returns from work → **higher wages**
- **Differences** between **labour** migration and FDI (**capital**)
  - There are substantial **sunk costs** related to **migration** (monetary and non-monetary)
  - **Migrating back** to the home country is also **costly** (for capital is less costly)
- An **indirect confirmation** of these differences is that **cross-country heterogeneity** in the rate of **return on capital** is **lower** than cross-country heterogeneity of **wages**

# Globalization and labour migration

- As for FDI, (**inward**) labour **migration** is a **substitute** for **import**
- A **country** that is relatively **poorly endowed** with **labour** can:
  - **Import** the **labour intensive good** from abroad
  - **Import labour** through migration

# Globalization and labour migration

- If **foreign wages** are **lower** than **home wages** (corrected for **differences in productivity**) **foreign products** will be **cheaper** than home products
- **Adjustment** mechanisms
  - The country **imports** the product from abroad → **unemployed home workers** will claim **lower wages** in the same sector or in other sectors
  - **Workers** from the **foreign** country **migrate** to the **home** country,
    - Increased **labour supply**
    - **Lower wages** at home
    - **Higher wages** in **foreign** country

# Migration and native workers

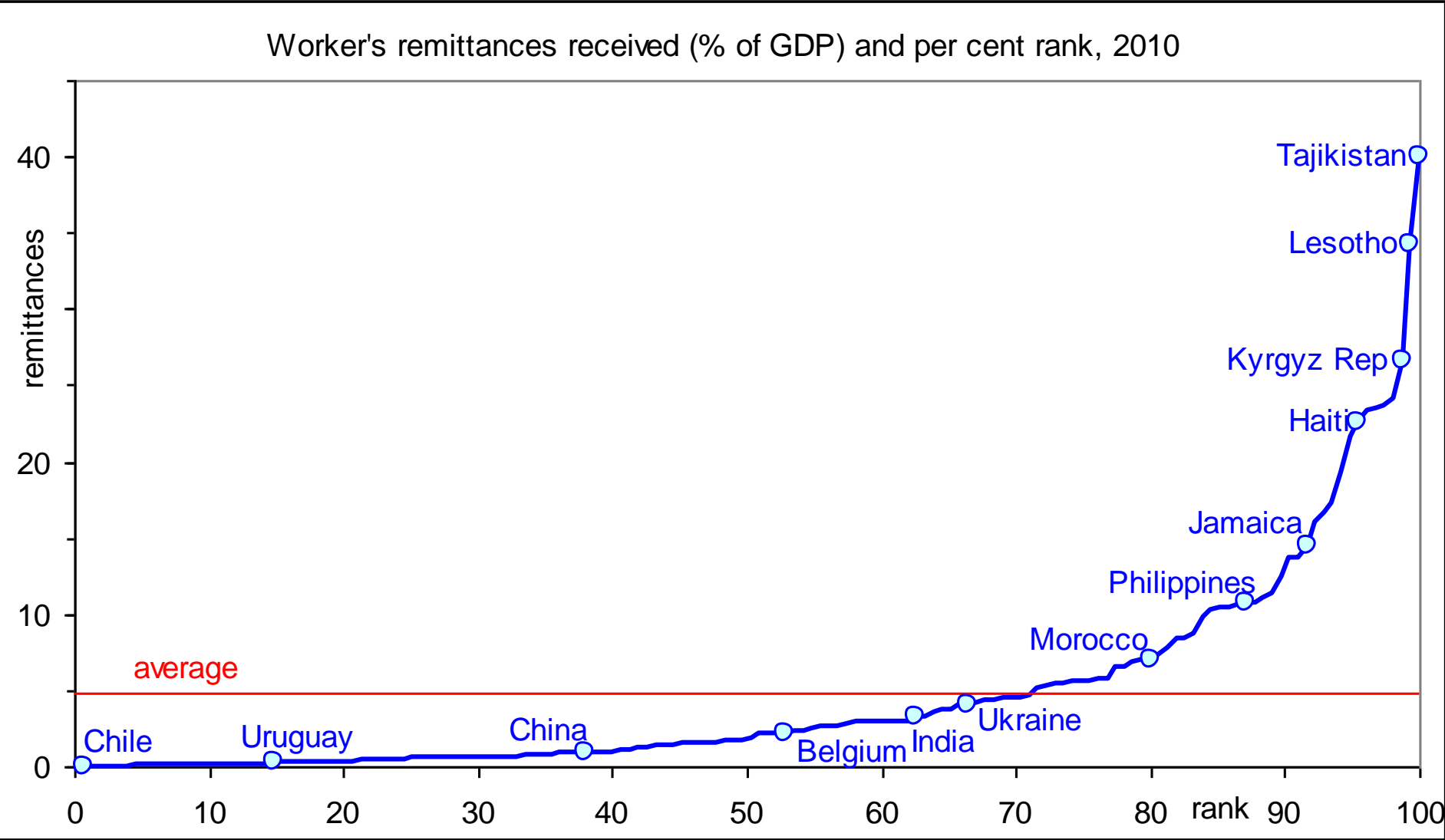
- Recent studies have suggested that **immigrants** may generate **productivity-enhancing effects** by **increasing** the **demand** for **native workers**, especially in production **tasks** that are **complementary** to those performed by **immigrants**
- “If **immigrants** and **native** workers **specialise** in **different** segments of the **task-specialisation** spectrum, then **more immigrants** can generate **higher demand** for **natives**”
- **Immigrants** enable a **skill-upgrading** of **native** workers **shifting** to **complex-non-routine** tasks
- The effect of immigration is **neutral** in term of **employment**, as **routine manual** tasks performed by **immigrants** are **not appealing** enough for **natives**

<http://www.voxeu.org/article/how-immigration-can-benefit-native-workers>

# Globalization and labour migration

- The **'migration channel'** is generally **not so relevant**
- **Paradox**
  - **Africa** is one of the **poorest** regions in the world
  - But it is **not** a primary **source** of (economic) **migration** to advanced countries
  - **Reasons**
    - Migration **restrictions**
    - **Poverty trap** → migration is too costly

**Figure 14.4** Worker's remittances received; per cent of GDP, 2010



Source: based on data from World Development Indicators online; worker's remittances and compensation of employees received (% of GDP), based on 155 countries