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INTERNATIONAL  
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TENTH EDITION

ALWAYS LEARNING

## Chapter 2

# World Trade: An Overview

PEARSON



# Preview

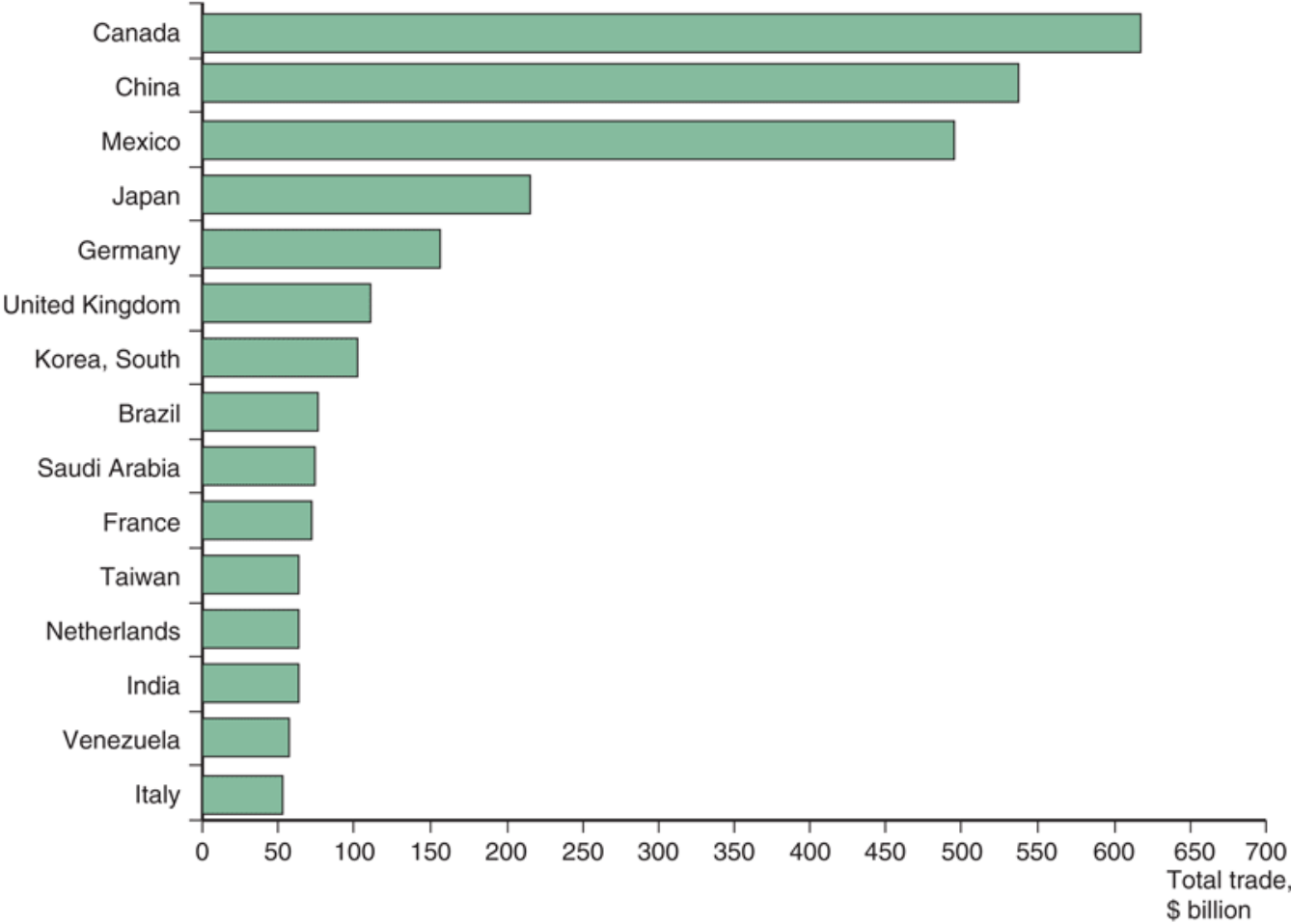
- Largest trading partners of the United States
- Gravity model:
  - influence of an economy's size on trade
  - Distance, barriers, borders and other trade impediments
- Globalization: then and now
- Changing composition of trade
- Service outsourcing



# Who Trades with Whom?

- More than 30% of world output is sold across national borders.
- The 5 largest trading partners with the U.S. in 2012 were Canada, China, Mexico, Japan, and Germany.
- The largest 15 trading partners with the U.S. accounted for 69% of the value of U.S. trade in 2012.

# Fig. 2-1: Total U.S. Trade with Major Partners, 2012



Source: U.S. Department of Commerce.

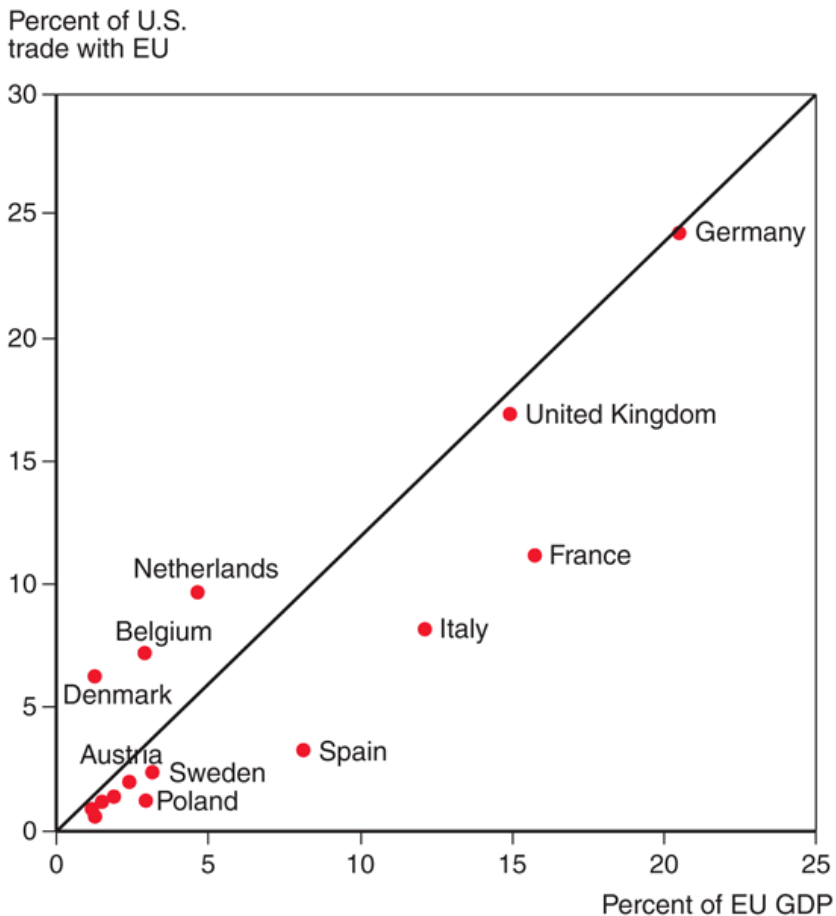


# Gravity

- 3 of the top 10 trading partners with the U.S. in 2012 were also the 3 largest European economies: Germany, the United Kingdom, and France.
- Why does the United States trade more with these European countries than with others?
  - These countries have the largest **gross domestic product**
  - Each European country's share of U.S. trade with Europe is roughly equal to its share of European GDP.



# Fig. 2-2: The Size of European Economies, and the Value of Their Trade with the United States



Source: U.S. Department of Commerce, European Commission.



# Size Matters: The Gravity Model (cont.)

- The size of an economy is directly related to the volume of imports and exports.
  - Larger economies produce more goods and services, so they have more to sell in the export market.
  - Larger economies generate more income from the goods and services sold, so they are able to buy more imports.
- Trade between any two countries is larger, the larger is either country.



# Size Matters: The Gravity Model (cont.)

- The gravity model assumes that size and distance are important for trade in the following way:

$$T_{ij} = A \times Y_i \times Y_j / D_{ij}$$

where

$T_{ij}$  is the value of trade between country  $i$  and country  $j$

$A$  is a constant

$Y_i$  the GDP of country  $i$ ,  $Y_j$  is the GDP of country  $j$

$D_{ij}$  is the distance between country  $i$  and country  $j$

- Or more generally

$$T_{ij} = A \times Y_i^a \times Y_j^b / D_{ij}^c$$

where  $a$ ,  $b$ , and  $c$  are allowed to differ from 1.





# Impediments to Trade: Distance, Barriers, and Borders

Other things besides size matter for trade:

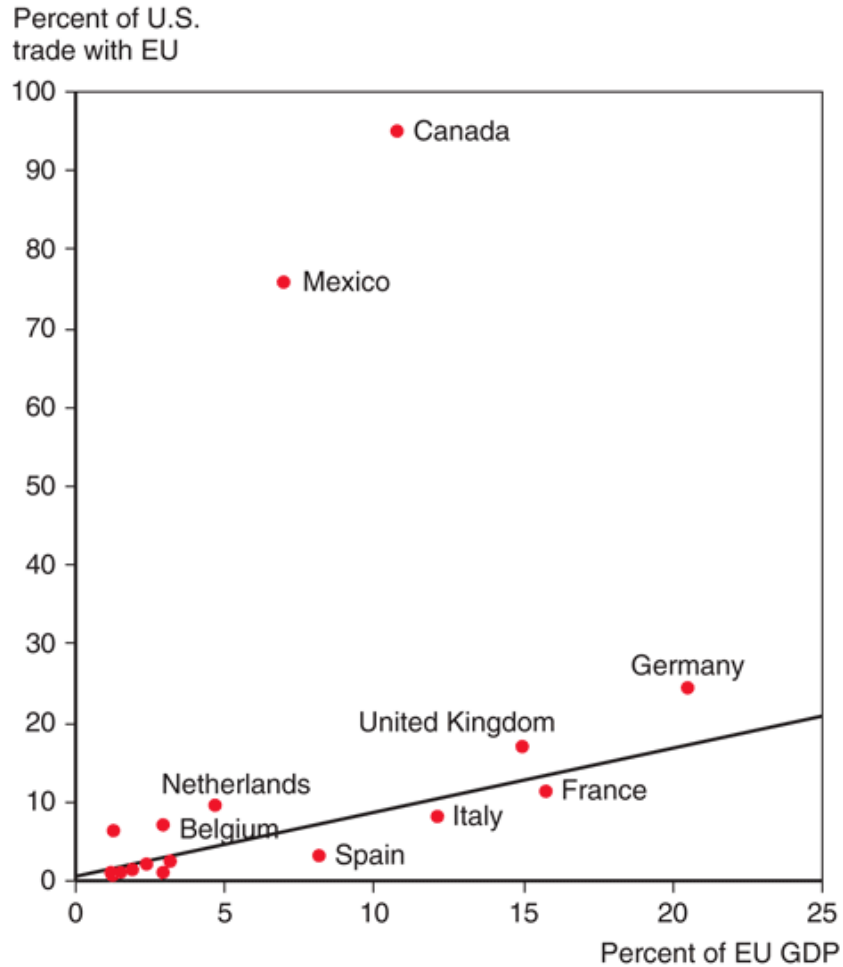
1. *Distance* between markets influences transportation costs and therefore the cost of imports and exports.
2. *Cultural affinity*: close cultural ties, such as a common language, usually lead to strong economic ties.
3. *Geography*: ocean harbors and a lack of mountain barriers make transportation and trade easier.
4. *Multinational corporations*: corporations spread across different nations import and export many goods between their divisions.
5. *Borders*: crossing borders involves formalities that take time, often different currencies need to be exchanged, and perhaps monetary costs like tariffs reduce trade.



# Impediments to Trade: Distance, Barriers, and Borders (cont.)

- The U.S. signed a free trade agreement with Mexico and Canada in 1994, the North American Free Trade Agreement (NAFTA).
- Canada's economy is roughly the same size as Spain's, but Canada trades as much with the United States as does all of Europe.

# Fig. 2-3: Economic Size and Trade with the United States



Source: U.S. Department of Commerce, European Commission.



# Impediments to Trade: Distance, Barriers, and Borders (cont.)

- Even with FTA, Border reduces trade
- Estimates indicate that the U.S.-Canadian border deters trade as much as if the countries were 1,500-2,500 miles apart.

# Fig. 2-4: Canadian Provinces and U.S. States that Trade with British Columbia



Source: Statistics Canada, U.S. Department of Commerce.



# Table 2-1: Trade with British Columbia, as Percent of GDP, 2009

<b>Canadian Province</b>	<b>Trade as Percent of GDP</b>	<b>Trade as Percent of GDP</b>	<b>U.S. State at Similar Distance from British Columbia</b>
Alberta	6.9	2.6	Washington
Saskatchewan	2.4	1.0	Montana
Manitoba	2.0	0.3	California
Ontario	1.9	0.2	Ohio
Quebec	1.4	0.1	New York
New Brunswick	2.3	0.2	Maine

**Source:** Statistics Canada, US Department of Commerce



# The Changing Pattern of World Trade: Has the World Gotten Smaller?

- The negative effect of distance on trade according to the gravity models is significant, but has grown smaller over time due to modern transportation and communication.
- Technologies that have increased trade:
  - Wheels, sails, compasses, railroads, telegraph, steam power, automobiles, telephones, airplanes, computers, fax machines, Internet, fiber optics, personal digital assistants, GPS satellites...



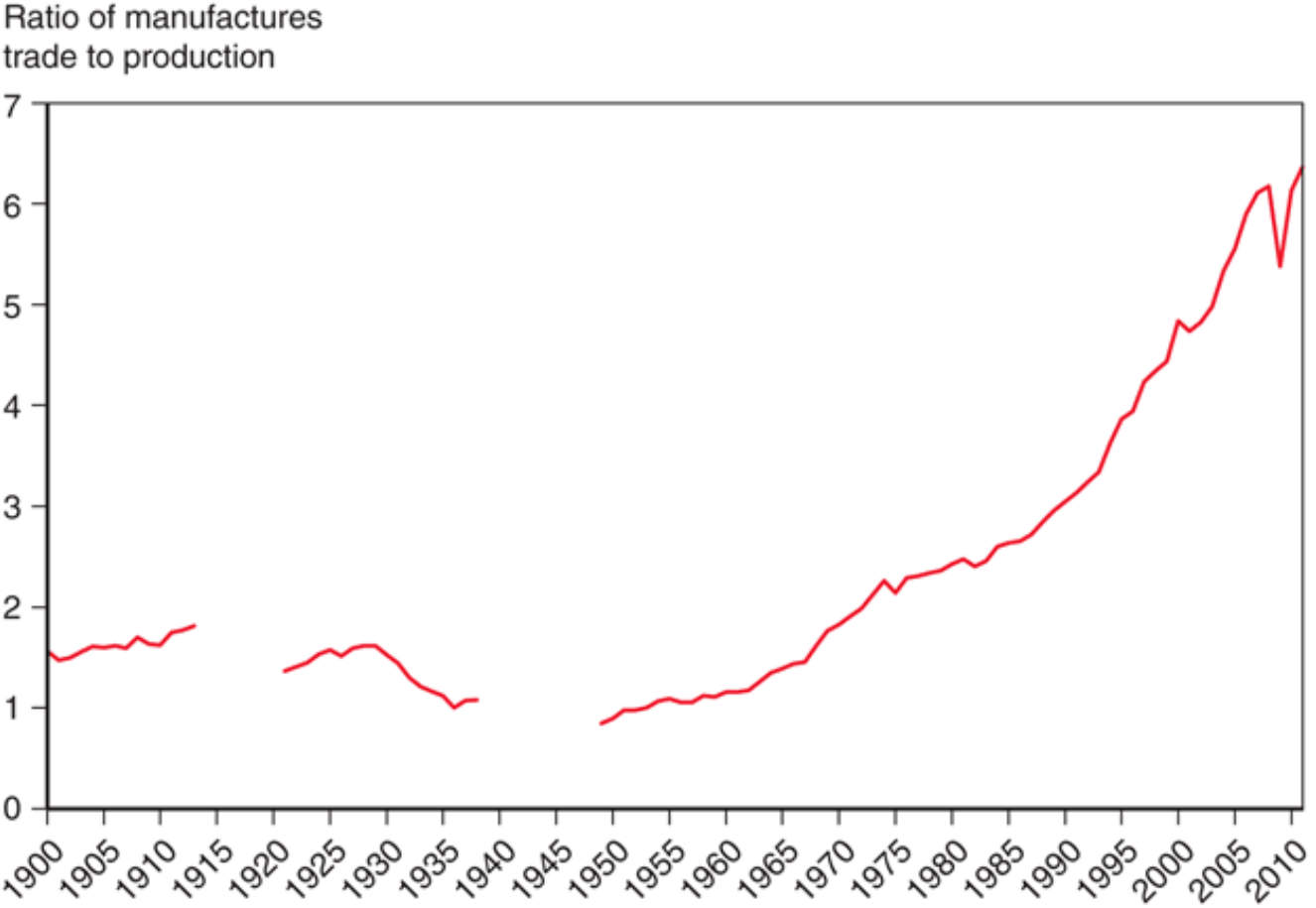
# The Changing Pattern of World Trade: Has the World Gotten Smaller? (cont.)

- Political factors, such as wars, can change trade patterns much more than innovations in transportation and communication.
- World trade grew rapidly from 1870 to 1913.
  - Then it suffered a sharp decline due to the two world wars and the Great Depression.
  - It started to recover around 1945 but did not recover fully until around 1970.
- Since 1970, world trade as a fraction of world GDP has achieved unprecedented heights.
  - Vertical segmentation of production has contributed to the rise in the value of world trade





# Fig. 2-5: The Fall and Rise of World Trade



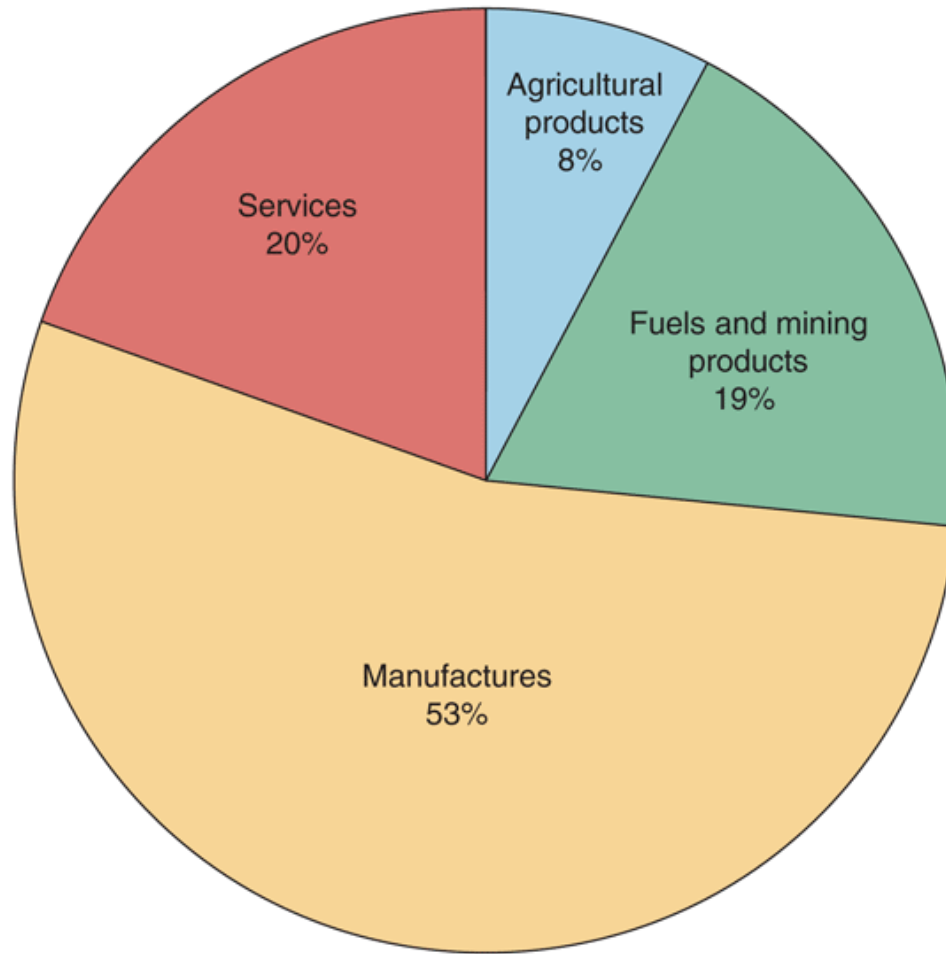
Source: UN Monthly Bulletin of Statistics, World Trade Organization



# What Do We Trade?

- Today, most (about 53%) of the volume of trade is in *manufactured products* such as automobiles, computers, and clothing.
  - *Services* such as shipping, insurance, legal fees, and spending by tourists account for about 20% of the volume of trade.
  - *Mineral products* (ex., petroleum, coal, copper) remain an important part of world trade at 19%
  - *Agricultural products* are a relatively small (8%) part of trade.

# Fig. 2-6: The Composition of World Trade, 2011



Source: World Trade Organization.



# Table 2-2: Manufactured Goods as a Percent of Merchandise Trade

	United Kingdom		United States	
	Exports	Imports	Exports	Imports
1910	75.4	24.5	47.5	40.7
2011	72.1	69.1	65.3	67.2

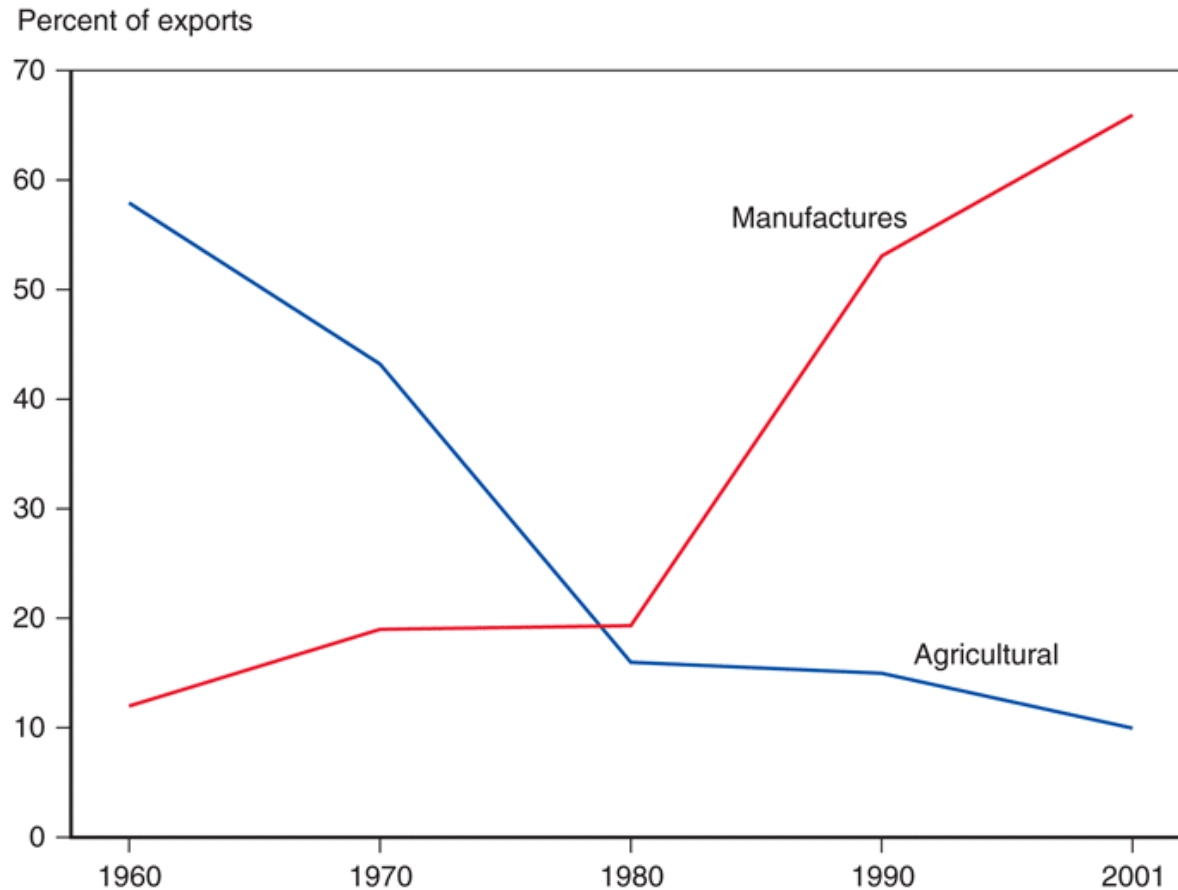
**Source:** 1910 data from Simon Kuznets, *Modern Economic Growth: Rate, Structure and Speed*. New Haven: Yale Univ. Press, 1966. 2011 data from World Trade Organization.



# What Do We Trade? (cont.)

- Low- and middle-income countries have also changed the composition of their trade.
  - In 2001, about 65% of exports from low- and middle-income countries were manufactured products, and only 10% of exports were agricultural products.
  - In 1960, about 58% of exports from low- and middle-income countries were agricultural products and only 12% of exports were manufactured products.
- More than 90 percent of the exports of China, the largest developing country and a rapidly growing force in world trade, consist of manufactured goods.

# Fig. 2-7: The Changing Composition of Developing-Country Exports



Source: United Nations Council on Trade and Development.



# Service Outsourcing

- **Service outsourcing (or offshoring)** occurs when a firm that provides services moves its operations to a foreign location.
  - Service outsourcing can occur for services that can be transmitted electronically.
    - A firm may move its customer service centers whose telephone calls can be transmitted electronically to a foreign location.
  - Other services may not lend themselves to being performed remotely.

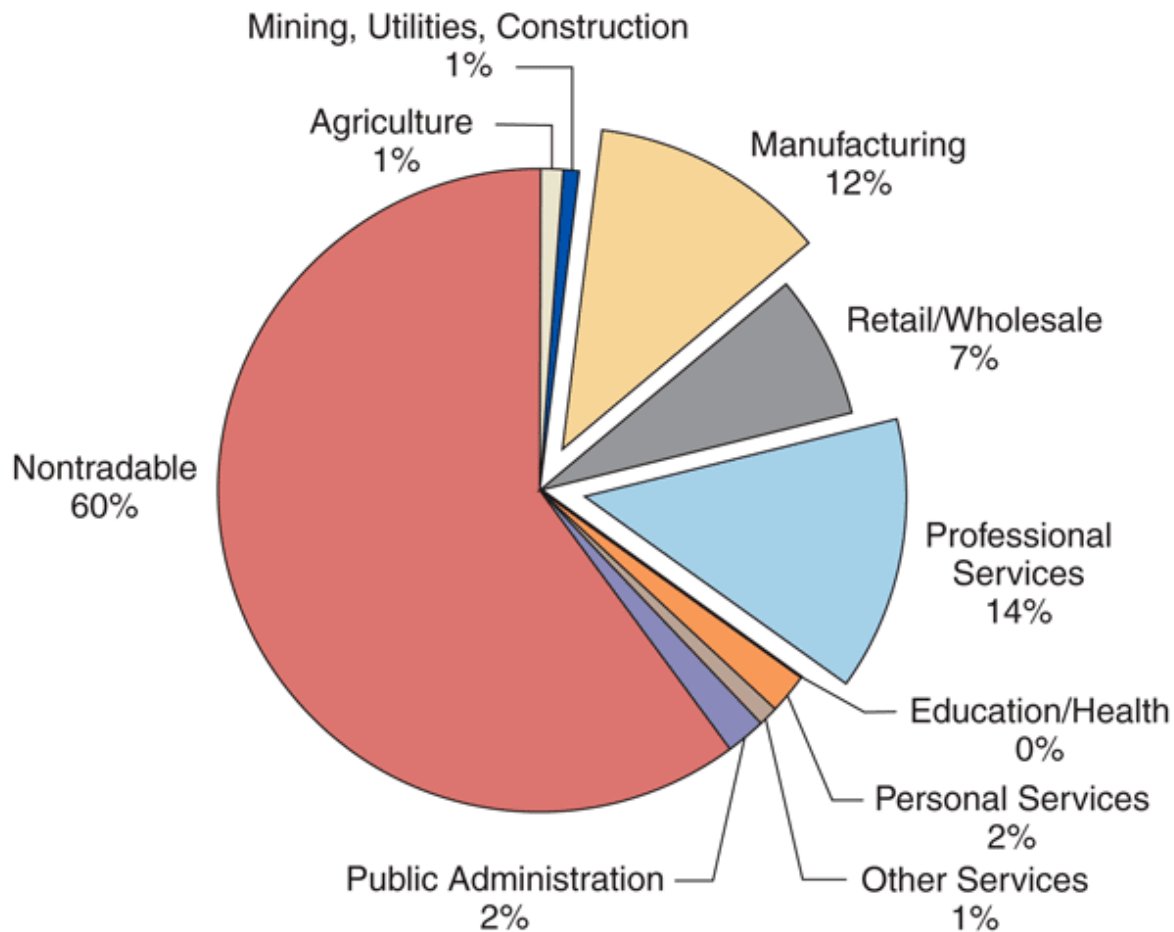


# Service Outsourcing (cont.)

- Service outsourcing is currently not a significant part of trade.
  - Some jobs are “tradable” and thus have the *potential* to be outsourced.
  - Most jobs (about 60%) need to be done close to the customer, making them nontradable.



# Fig. 2-8: Tradable Industries' Share of Employment



**Source:** J. Bradford Jensen and Lori. G. Kletzer, "Tradable Services: Understanding the Scope and Impact of Services Outsourcing," Peterson Institute of Economics Working Paper 5-09, May 2005.