

Chapter 8

Firms in the Global Economy: Export Decisions, Outsourcing, and Multinational Enterprises



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Trade Costs and Export Decisions

- Most U.S. firms do not report *any* exporting activity at all — sell only to U.S. customers.
 - In 2002, only 18% of U.S. manufacturing firms reported any sales abroad.
- Even in industries that export much of what they produce, such as chemicals, machinery, electronics, and transportation, fewer than 40 percent of firms export.

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Trade Costs and Export Decisions

- Trade costs help explain why only a subset of firms export, and why exporters are relatively larger and more productive (lower marginal costs).
- In the United States, an exporting firm in a typical manufacturing industry is on average more than twice as large as a firm that does not export.

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Table 8-3: Proportion of U.S. Firms Reporting Export Sales by Industry, 2002

Printing	5%
Furniture	7%
Apparel	8%
Wood Products	8%
Fabricated Metals	14%
Petroleum and Coal	18%
Transportation Equipment	28%
Machinery	33%
Chemicals	36%
Computer and Electronics	38%
Electrical Equipment and Appliances	38%

Source: A. B. Bernard, J. B. Jensen, S. J. Redding, and P. K. Schott, "Firms in International Trade," *Journal of Economic Perspectives* 21 (Summer 2007), pp. 105–130.

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Multinationals and Outsourcing

- **Foreign direct investment** refers to investment in which a firm in one country *directly controls or owns* a subsidiary in another country.
- If a foreign company invests in at least 10% of the stock in a subsidiary, the two firms are typically classified as a **multinational corporation**.
 - 10% or more of ownership in stock is deemed to be sufficient for direct control of business operations.

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Multinationals and Outsourcing

- *Greenfield* FDI is when a company builds a new production facility abroad.
- *Brownfield* FDI (or cross-border mergers and acquisitions) is when a domestic firm buys a controlling stake in a foreign firm.
- Greenfield FDI has tended to be more stable, while cross-border mergers and acquisitions tend to occur in surges.

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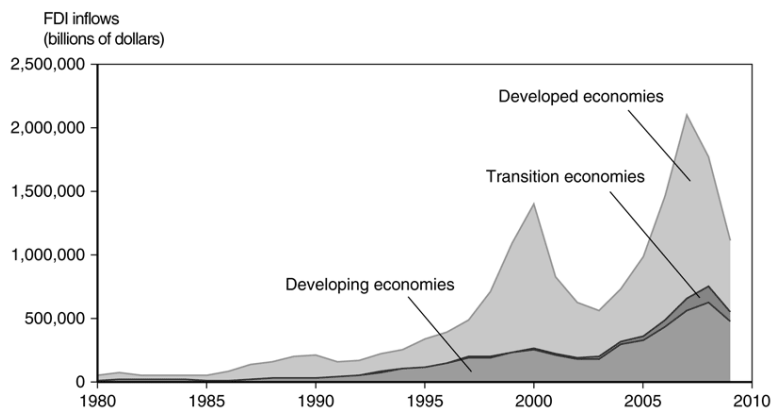
Multinationals and Outsourcing

- Developed countries have been the biggest recipients of inward FDI.
 - much more volatile than FDI going to developing and transition economies.
- Steady expansion in the share of FDI flowing to developing and transition countries.
 - Accounted for half of worldwide FDI flows in 2009.
- Sales of FDI affiliates are often used as a measure of multinational activity.

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Fig. 8-9: Inflows of Foreign Direct Investment, 1980-2009



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Multinationals and Outsourcing

- **Horizontal FDI** when the affiliate replicates the same production process elsewhere in the world.
- **Vertical FDI** when the production chain is broken up, and parts of the production processes are transferred to the affiliate location.

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Multinationals and Outsourcing

- Vertical FDI is mainly driven by production cost differences between countries (for those parts of the production process that can be performed in another location).
- Vertical FDI is growing fast and is behind the large increase in FDI inflows to developing countries.

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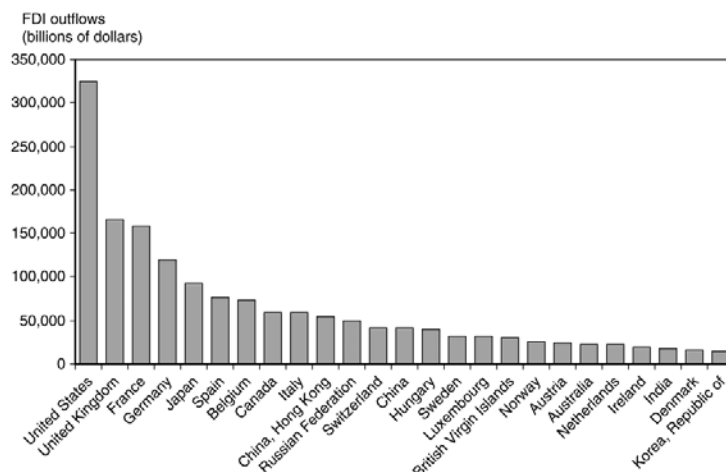
Multinationals and Outsourcing

- Horizontal FDI is dominated by flows between developed countries.
 - Both the multinational parent and the affiliates are usually located in developed countries.
- Locate production near large customer bases.
 - Hence, trade and transport costs play a much more important role than production cost differences for these FDI decisions.

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Fig. 8-10: Outward Foreign Direct Investment for Top Countries, 2007-2009



Source: UNCTAD, World Investment Report, 2010.

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The Firm's Decision Regarding Foreign Direct Investment

- *Proximity-concentration* trade-off:
 - High trade costs associated with exporting create an incentive to locate production near customers.
 - Increasing returns to scale in production create an incentive to concentrate production in fewer locations.

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The Firm's Decision Regarding Foreign Direct Investment

- FDI activity concentrated in sectors with high trade costs.
 - When increasing returns to scale are important and average plant sizes are large, we observe higher export volumes relative to FDI.
- Multinationals tend to be much larger and more productive than other firms (even exporters) in the same country.

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The Firm's Decision Regarding Foreign Direct Investment

- The horizontal FDI decision involves a trade-off between the per-unit export cost t and the fixed cost F of setting up an additional production facility.
- If $t(Q) > F$, costs more to pay trade costs t on Q units sold abroad than to pay fixed cost F to build a plant abroad.
 - When foreign sales large $Q > F/t$, exporting is more expensive and FDI is the profit-maximizing choice.
 - Low costs make more apt to choose FDI due to larger sales.

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The Firm's Decision Regarding Foreign Direct Investment

- The vertical FDI decision also involves a trade-off between cost savings and the fixed cost F of setting up an additional production facility.
 - Cost savings related to comparative advantage make some stages of production cheaper in other countries.

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The Firm's Decision Regarding Foreign Direct Investment

- Foreign **outsourcing** or **offshoring** occurs when a firm contracts with an independent firm to produce in the foreign location.
- In addition to deciding the **location** of where to produce, firms also face an **internalization** decision: whether to keep production done by one firm or by separate firms.

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The Firm's Decision Regarding Foreign Direct Investment

- Internalization occurs when it is more profitable to conduct transactions and production within a single organization. Reasons for this include:
 1. **Technology transfers:** transfer of knowledge or another form of technology may be easier within a single organization than through a market transaction between separate organizations.
 - Patent or property rights may be weak or nonexistent.
 - Knowledge may not be easily packaged and sold.

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The Firm's Decision Regarding Foreign Direct Investment

2. **Vertical integration** involves consolidation of different stages of a production process.

- Consolidating an input within the firm using it can avoid holdup problems and hassles in writing complete contracts.
- But an independent supplier could benefit from economies of scale if it performs the process for many parent firms.

Effects of Foreign Direct Investment

- Foreign direct investment should benefit the countries involved for reasons similar to why international trade generates gains.
 - Multinationals and firms that outsource take advantage of cost differentials that favor moving production (or parts thereof) to particular locations.
 - Relocating production to take advantage of cost differences leads to overall gains from trade.

Mexican Maquiladoras

- The typical plant is foreign owned and engaged in labor-intensive assembly of intermediate or final goods.
 - Employs 1.2 million workers, about a third of Mexico's manufacturing jobs.
- The vast majority of inputs are brought from the U.S. or another country, and the output is usually sold in the U.S.
- Economic benefits spill into neighboring U.S. cities, creating jobs in manufacturing, warehousing, transportation, logistics, real estate services and major border protection programs.

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Mexican Maquiladoras

- Allows production machinery and parts into Mexico tariff free as long as the assembled product returns to the United States for final sale.
 - Most plants located in border states of Northern Mexico.
 - Low-wage labor intensive operations in Mexico with capital intensive stages located in the United States.
 - Sensitive to what is going on in the United States since most of the output is sold here.

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Mexican Maquiladoras

- Well-known factors drive growth of the maquiladora industry: U.S. industrial sector's performance, exchange rates, access to U.S. markets and competition from low-wage nations.
- Expanded following NAFTA and peso devaluation
 - from 120,000 in 1980 to 1.3 million employed in 2000.

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Mexican Maquiladoras

- Long period of virtually uninterrupted industry expansion and then a period of much slower job growth or even decline.
 - Slowdown started with U.S. recession in 2001.
- Contracted 2000-2003 due to recession, competition from low-wage countries like China, and inability to deal with problems in its competitive environment.
- The slump converged with potent foreign competition from China, the Caribbean and elsewhere to cut maquiladora employment by 298,000 jobs, or 22.1%, in 17 months.

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Mexican Maquiladoras

- Job losses were concentrated in the lowest-skill, lowest-wage sectors.
- Maquiladora industry shifting to higher-wage, higher-productivity operations.
- Mexico's competitive advantages are proximity to the U.S., an experienced and skilled workforce and a stable political system.

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Mexican Maquiladoras

- Three sectors dominate activity on the Texas border:
 - Electronics, transportation equipment and electrical machinery.
- Most electronics maquiladoras on the California border are under Asian ownership and make products such as televisions, CD players, printers and copiers.
 - Consumer electronics firms needed access to Asian suppliers.
- Auto suppliers wanted the best access to the U.S. heartland and often chose cities on the Texas border.
- Apparel sector opted for the lower wages of central Mexico.

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Mexican Maquiladoras

- Textiles & Apparel: Before 1994, most U.S. clothing companies produced and cut fabric in the U.S., exporting it for sewing and finishing and re-importing the final product.
- Strict quotas limited each country's re-imports, keeping apparel activity spread across nations.
- Mexico's cutting and sewing sector boomed as companies shifted operations from around the world to take advantage of access to the large North American market.
 - Hours worked in textile and apparel maquiladoras expanded 22.9% a year between 1990 and 2000.

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Mexican Maquiladoras

- New trade initiatives slowly dismantled the edge NAFTA gave Mexican apparel exports. The Caribbean Basin trade initiative expanded U.S. market access to 24 low-wage countries throughout the Caribbean and Central America.
- The final blow came in January 2005 with the phase-out of the MFA, a pact that had sharply limited U.S. textile and apparel imports from India, China, Bangladesh and other low-cost Asian countries.

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Mexican Maquiladoras

- Electronics: The value of a Mexican location was low-tariff access to U.S. markets.
- China's entry into the World Trade Organization in 2001 lowered tariffs on China's U.S. shipments.
- Production for the U.S. market shifted from Mexico to China.
 - China's lower wages in many cases trumped Mexico's proximity to the U.S.
- Transportation equipment: The parts and components segment remains concentrated on the border, and its primary focus remains U.S. assembly operations.

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Mexican Maquiladoras

- Maquiladoras on the U.S.–Mexico border were quickly drawn into the collapse of U.S. manufacturing in late 2008, which heavily affected the automobile and consumer electronics sectors.
- Mexico's maquiladora industry remains closely tied to the U.S. economy.

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Mexican Maquiladoras

- Maquiladora employees draw their wages in Mexico but do a significant share of their shopping in the United States
 - Stimulating employment in local retail & service sectors.
- A 10% increase in maquiladora payroll results in a 2-4% increase in employment in El Paso, McAllen, Laredo and Brownsville.
- During the early 1980s Ciudad Juárez maquiladoras accounted for one of five jobs created in El Paso, mostly in the service sector.

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Mexican Maquiladoras

- U.S. border states, except Arizona (where job losses ranged from negligible to small), gained jobs as a result of growth in the maquiladora industry.
 - Many suppliers shifted to border cities from the Midwest.
- The manufacturing sectors that supply the maquiladoras paid about 40 percent more in hourly wages than the apparel, textile and leather industries that traditionally operated in El Paso.
- A 10% increase in maquiladora output in a Mexican border city will increase employment in its U.S. city pair by 1-2%.

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Mexican Maquiladoras

- Increases in Mexican wages plus the rise of new low-wage alternatives such as China, India and Vietnam has broadened U.S. options for manufacturing, pushing some maquiladora activity abroad.
- Mexico generally has looked at the loss of the lowest wage jobs as an inevitable price of progress.
 - Increasing domestic wage levels must be seen as a positive aspect of economic development.

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Mexican Maquiladoras

- In 2000, 90% of inputs to the maquiladoras came from the United States, and in 2004 that number was only 59%.
- Texas border cities in the 1990s developed rapidly as a critical, new part of this supply chain, with suppliers shifting from the Midwest to the U.S.–Mexico border.
- Not just the maquiladora industry is affected by foreign competition, but the U.S.-based supply chain as well.

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Summary

- Multinationals are typically larger and more productive than exporters, which in turn are larger and more efficient than firms that sell only to the domestic market.
- Multinational corporations undertake foreign direct investment when proximity to consumers is more important than concentrating production in one location.
- Firms produce where most cost-effective: they replicate entire production process abroad or locate stages in different countries.
- Firms also decide whether to keep transactions within the firm or contract with another firm.