

today, even though many films are shot indoors or on location, because of the externalities described in the box on page 160.

A question you might ask is whether the forces driving interregional trade are really all that different from those driving international trade. The answer is that they are not, especially when one looks at trade between closely integrated national economies, such as those of Western Europe. Indeed, London plays a role as Europe's financial capital similar to the role played by New York as America's financial capital. In recent years, there has been a growing movement among economists to model interregional and international trade, as well as such phenomena as the rise of cities, as different aspects of the same phenomenon—economic interaction across space. Such an approach is often referred to as **economic geography**.

SUMMARY

1. Trade need not be the result of comparative advantage. Instead, it can result from increasing returns or economies of scale, that is, from a tendency of unit costs to be lower with larger output. Economies of scale give countries an incentive to specialize and trade even in the absence of differences in resources or technology between countries. Economies of scale can be internal (depending on the size of the firm) or external (depending on the size of the industry).
2. Economies of scale can lead to a breakdown of perfect competition, unless they take the form of external economies, which occur at the level of the industry instead of the firm.
3. External economies give an important role to history and accident in determining the pattern of international trade. When external economies are important, a country starting with a large advantage may retain that advantage even if another country could potentially produce the same goods more cheaply. When external economies are important, countries can conceivably lose from trade.

KEY TERMS

average cost of production (p. 151)	forward-falling supply curve (p. 151)	knowledge spillovers (p. 148)
dynamic increasing returns (p. 157)	infant industry argument (p. 158)	labor market pooling (p. 148)
economic geography (p. 161)	internal economies of scale (p. 147)	learning curve (p. 157)
economies of scale (p. 146)	interregional trade (p. 158)	specialized suppliers (p. 148)
external economies of scale (p. 147)		

PROBLEMS

MyEconLab

1. For each of the following examples, explain whether it is a case of external or internal economies of scale:
 - a. A number of firms doing contract research for the drug industry are concentrated in southeastern South Carolina.
 - b. All Hondas produced in the United States come from plants in Ohio, Indiana, or Alabama.

- c. All airframes for Airbus, Europe's only producer of large aircraft, are assembled in Toulouse, France.
- d. Cranbury, New Jersey, is the artificial flavor capital of the United States.
2. It is often argued that the existence of increasing returns is a source of conflict between countries, since each country is better off if it can increase its production in those industries characterized by economies of scale. Evaluate this view in terms of the external economy model.
3. Give two examples of products that are traded on international markets for which there are dynamic increasing returns. In each of your examples, show how innovation and learning-by-doing are important to the dynamic increasing returns in the industry.
4. Evaluate the relative importance of economies of scale and comparative advantage in causing the following:
 - a. Most of the world's aluminum is smelted in Norway or Canada.
 - b. Half of the world's large jet aircraft are assembled in Seattle.
 - c. Most semiconductors are manufactured in either the United States or Japan.
 - d. Most Scotch whiskey comes from Scotland.
 - e. Much of the world's best wine comes from France.
5. Consider a situation similar to that in Figure 7-3, in which two countries that can produce a good are subject to forward-falling supply curves. In this case, however, suppose the two countries have the same costs, so that their supply curves are identical.
 - a. What would you expect to be the pattern of international specialization and trade? What would determine who produces the good?
 - b. What are the *benefits* of international trade in this case? Do they accrue only to the country that gets the industry?
6. It is fairly common for an industrial cluster to break up and for production to move to locations with lower wages when the technology of the industry is no longer rapidly improving—when it is no longer essential to have the absolutely most modern machinery, when the need for highly skilled workers has declined, and when being at the cutting edge of innovation conveys only a small advantage. Explain this tendency of industrial clusters to break up in terms of the theory of external economies.
7. Recently, a growing labor shortage has been causing Chinese wages to rise. If this trend continues, what would you expect to see happen to external economy industries currently dominated by China? Consider, in particular, the situation illustrated in Figure 7-4. How would change take place?
8. In our discussion of labor market pooling, we stressed the advantages of having two firms in the same location: If one firm is expanding while the other is contracting, it's to the advantage of both workers and firms that they be able to draw on a single labor pool. But it might happen that both firms want to expand or contract at the same time. Does this constitute an argument against geographical concentration? (Think through the numerical example carefully.)
9. Which of the following goods or services would be most likely to be subject to (1) external economies of scale and (2) dynamic increasing returns? Explain your answers.
 - a. Software tech-support services
 - b. Production of asphalt or concrete
 - c. Motion pictures
 - d. Cancer research
 - e. Timber harvesting