

Chapter 6 – Krugman and Obstfeld

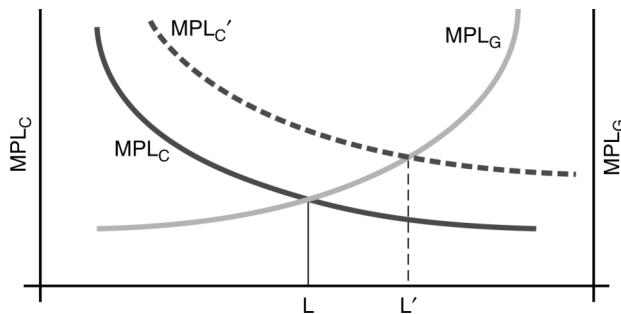
1. Cases *a* and *d* reflect external economies of scale since concentration of the production of an industry in a few locations reduces the industry's costs even when the scale of operation of individual firms remains small. External economies need not lead to imperfect competition. The benefits of geographical concentration may include a greater variety of specialized services to support industry operations and larger labor markets or thicker input markets. Cases *b* and *c* reflect internal economies of scale and occur at the level of the individual firm. The larger the output of a product by a particular firm, the lower its average costs. This leads to imperfect competition as in petrochemicals, aircraft, and autos.
2. The profit maximizing output level of a monopolist occurs where marginal revenue equals marginal cost. Unlike the case of perfectly competitive markets, under monopoly marginal revenue is not equal to price. Marginal revenue is always less than price under imperfectly competitive markets because to sell an extra unit of output the firm must lower the price of all units, not just the marginal one.
5. There is a typo in some editions of the textbook. The corrected problem should read: (Change to:)...enter an automobile market, or specifically $P = 17000 + (150/n)$, where n represents....
 - (a) $17,000 + 150/n = 5,000,000,000/n + 17,000$. With $S_{US} = 300$ million, the number of automakers equals three. With $S_E = 533$ million, the number of automakers equals four.
 - (b) $P_{US} = 17,000 + 150/3$, $P_{US} = \$17,050$. $P_E = 17,000 + 150/4$, $P_E = \$17,037.50$.
 - (c) $17,000 + 150/n = 5,000,000,000/n + 17,000$. With $S_{US+E} = 833$ million, the number of total automakers now equals five. This helps to explain some of the consolidation that has happened in the industry since trade has become more free in recent decades, e.g. Ford acquiring Jaguar, Daimler-Benz acquiring Chrysler, etc.
 - (d) Prices fall in the United States as well as Europe to \$17,030. Also, variety increases in both markets: in the United States consumers were able to choose between three brands before free trade, now they can choose between five. In Europe consumers were able to choose between four brands before free trade, now they can also choose between five brands.
7.
 - (a) The relatively few locations for production suggest external economies of scale in production. If these operations are large, there may also be large internal economies of scale in production.
 - (b) Since economies of scale are significant in airplane production, it tends to be done by a small number of (imperfectly competitive) firms at a limited number of locations. One such location is Seattle, where Boeing produces.
 - (c) Since external economies of scale are significant in semiconductor production, semiconductor industries tend to be concentrated in certain geographic locations. If, for some historical reason, a semiconductor is established in a specific location, the export of semiconductors by that country is due to economies of scale and not comparative advantage.
 - (d) "True" scotch whiskey can only come from Scotland. The production of scotch whiskey requires a technique known to skilled distillers who are concentrated in the region. Also, soil and climactic conditions are favorable for grains used in local scotch production. This reflects comparative advantage.
 - (e) France has a particular blend of climactic conditions and land that is difficult to reproduce elsewhere. This generates a comparative advantage in wine production.

9. (a) Suppose two countries that can produce a good are subject to forward-falling supply curves and are identical countries with identical curves. If one country starts out as a producer of a good, i.e. it has a head start even as a matter of historical accident, then all production will occur in that particular country and it will export to the rest of the world.
- (b) Consumers in both countries will pay a lower price for this good when external economies are maximized through trade and all production is located in a single market. In the present example, no single country has a natural cost advantage or is worse off than it would be under autarky.

Chapter 7 – Krugman and Obstfeld

1. The marginal product of labor in Home is 10 and in Foreign is 18. Wages are higher in Foreign, so workers migrate there to the point where the marginal product in both Home and Foreign is equated. This occurs when there are 7 workers in each country, and the marginal product of labor in each country is 14.

4.



- (a) From the diagram we see that the number of workers in Guatarica declines and the number of workers in Costamala increases.
 - (b) Wages in Guatarica and Costamala both increase.
 - (c) GDP increases in Costamala but decreases in Guatarica.
 - (d) Capital rents decline in Guatarica, but the change is ambiguous in Costamala.
6. Foregoing current consumption allows one to obtain future consumption. There will be a bias towards future consumption if the amount of future consumption which can be obtained by foregoing current consumption is high. In terms of the analysis presented in this chapter, there is a bias towards future consumption if the real interest rate in the economy is higher in the absence of international borrowing or lending than the world real interest rate.
 - (a) The large inflows of immigrants means that the marginal product of capital will rise as more workers enter the country. The real interest rate will be high, and there will be a bias towards future consumption.
 - (b) The marginal product of capital is low and thus there is a bias towards current consumption.
 - (c) The direction of the bias depends upon the comparison of the increase in the price of oil and the world real interest rate. Leaving the oil in the ground provides a return of the increase in the price of oil whereas the world real interest rate may be higher or lower than this increase.
 - (d) Foregoing current consumption allows exploitation of resources, and higher future consumption. Thus, there is a bias towards future consumption.

- (e) The return to capital is higher than in the rest of the world (since the country's rate of growth exceeds that of the rest of the world), and there is a bias toward future consumption.
- 7.
- (a) \$10 million is not a controlling interest in IBM, so this does not qualify as direct foreign investment. It is international portfolio diversification.
 - (b) This is direct foreign investment if one considers the apartment building a business which pays returns in terms of rents.
 - (c) Unless particular U.S. shareholders will not have control over the new French company, this will not be direct foreign investment.
 - (d) This is not direct foreign investment since the Italian company is an "employee," but not the ones which ultimately control, the company.
8. A company might prefer to set up its own plant as opposed to license it for a number of reasons, many of which relate to the discussion of location and internalization discussed in the chapter. In many cases it might be less expensive to carry out transactions within a firm than between two independent firms. Often, if proprietary technology is involved or if the quality reputation of a firm is particularly crucial, a firm may prefer to keep control over production rather than outsource.