

14.54 International Trade
— Lecture 19: Increasing Returns (III) —
Dumping and External Economies of Scale

Today's Plan

- 1 Dumping
- 2 External Economies of Scale

Graphs on slides 7, 15, 17, 19, and 21 are courtesy of Marc Melitz. Used with permission.

1. Dumping

Explaining “Dumping”

- Definition of dumping:
 - When an exporting firm sets an export price below its domestic market price plus all per-unit trade costs
- It is an example of price discrimination: charging different customers different prices
- Dumping requires two conditions:
 - ① Imperfect competition
 - ② Market segmentation

What is the Rationale for Dumping?

- Suppose a firm perceives a different demand function when selling domestically and internationally
 - transportation costs and “home bias” imply that domestic firms usually have a larger share of domestic than foreign markets
- Suppose that a larger market share is associated with a demand function that is less responsive to price changes
- Then firms will have lower markups and so lower prices in foreign market

Market Shares in the Car Industry

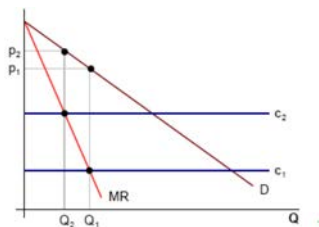
Table 2: Market shares by brand nationality

	Market share of brands from						
	DEU	ESP	FRA	GBR	ITA	USA	Other
BEL	0.34	0.02	0.26	0.02	0.04	0.09	0.23
BRA	0.23	-	0.11	0.00	0.23	0.31	0.12
CAN	0.07	-	-	0.01	-	0.34	0.58
DEU	0.55	0.02	0.09	0.01	0.03	0.08	0.21
ESP	0.26	0.09	0.26	0.01	0.03	0.11	0.22
FRA	0.19	0.02	0.52	0.01	0.04	0.07	0.16
GBR	0.23	0.02	0.13	0.18	0.02	0.16	0.25
ITA	0.24	0.01	0.15	0.02	0.30	0.12	0.17
USA	0.08	-	-	0.01	0.00	0.40	0.52

Notes: Each row presents the revenue-based market share of brands originating from countries listed in the columns, adding up to one subject to rounding error. - means that brands from the origin country are not sold in the market, and 0.00 implies a market share of less than one percent. Other includes Japan, Korea, China, India, Sweden, Malaysia, Czech Republic, Romania and Russia. The bottom panel excludes these "other" countries and presents market shares within the brand-owning producers in our dataset.

Courtesy of Kerem Coşar, Paul L. E. Grieco, Shengyu Li and Felix Tintelnot. Used with permission.

What is the Rationale for Dumping? (Cont.)



- All firms will practice dumping, even though there are no strategic interactions!
- Also, recall that when all firms have the same technology, then the markup $p - c$ is given by $1/(bN)$
 - So increases in the number of firms selling in a market will lower all markups in that market (this remains true when there are technology differences across firms)
 - Thus, all firms will have a further incentive to lower markups when selling in large export markets (with many more competing firms)

U.S. Anti-Dumping Laws

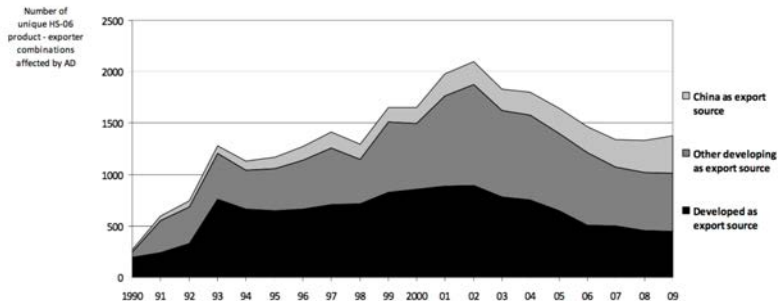
- Dumping is widely regarded as unfair (same as price discrimination in domestic markets)
- US firms may appeal to the Commerce Department to investigate if dumping by foreigners has injured the US firm
 - If evidence of dumping is found, then an “anti-dumping duty”, or tax is imposed on the price of the imported good (93% of cases)
 - Tax equals the difference between the actual and “fair” (or domestic) price of imports. The average duty imposed is 57%
- Next the International Trade Commission (ITC) determines if injury to the US firm has actually occurred (or is likely to occur)
 - If the ITC determines that injury has occurred (or is likely to occur), the anti-dumping duty remains in place (50% of cases)

History of Anti-Dumping

- Anti-Dumping originated in the U.S. and Canada around 1900
- Included in GATT 1947 at insistence of the U.S.
- Few cases filed before 1980
- Tokyo Round IN 1979 weakened substantially the criteria
- More than 1600 cases filed in 1980s
- 99% by US, EU, Australia and Canada
 - Recently a lot of them against China

Anti-Dumping Duties Imposed by Developed Countries

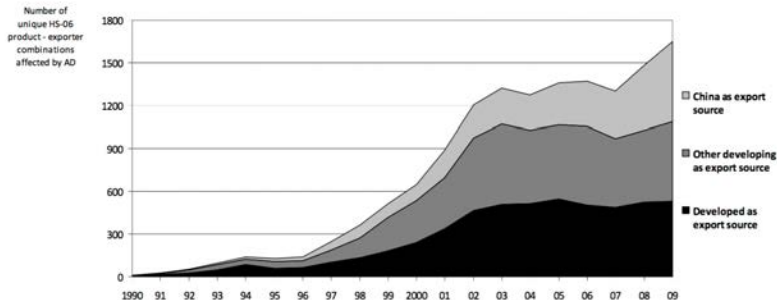
a. Antidumping stock imposed by developed* (G20) economies, 1990-2009



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Anti-Dumping Duties Imposed by Developing Countries

b. Antidumping stock imposed by developing* (G20) economies, 1997-2009



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Reciprocal Dumping

- Consider an industry where there is a monopolist in each of two countries
- The two monopolists produce the same homogenous good
- Is trade integration good?
- The situation shifts from a monopoly to a duopoly, so social welfare generally goes up
 - Pro-competitive effect of trade
- Notice also that if markets are segmented, the two monopolists will sell in both markets
 - Intra-industry trade in identical goods!

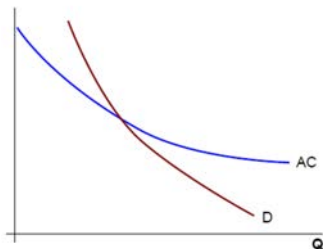
Reciprocal Dumping (Cont.)

- Consider now the case in which trade entails transport costs
- It can still be the case that the two monopolists may find it optimal to sell in both markets
- But now the cross-hauling in identical goods entails a waste
- It is no longer clear that trade is welfare-improving
- Also, each monopolist will have a larger market share in their domestic market
- Hence, as long as demand is more elastic (higher b) when market shares are lower, we will have reciprocal dumping
- Brander-Krugman (1983): reciprocal dumping can be welfare-reducing

2. External Economies of Scale

External Economies of Scale

- External Economies of Scale
- Up to now, we have discussed internal economies of scale
 - Average costs are decreasing in firm's output
- External economies of scale are different (c.f. Marshall)
 - Average costs are decreasing in the output of other firms in the industry or in the economy



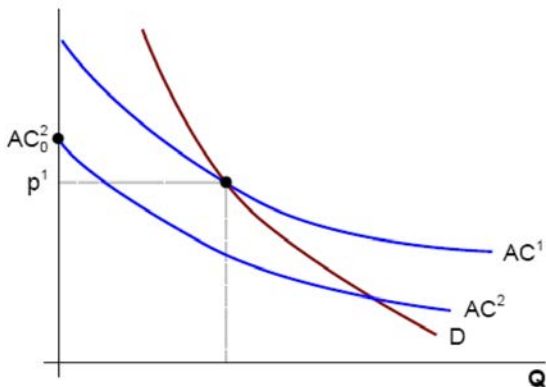
- If external economies exist, a country that has a large industry will have low costs of producing that industry's good or service

External Economies of Scale

- External economies may exist for several reasons:
 - 1 **Specialized equipment** or **services** may be needed for the industry, but are only supplied by other firms if the industry is large and concentrated (e.g., Silicon Valley)
 - 2 **Labor pooling**: a large and concentrated industry may attract a pool of workers, reducing labor search and hiring costs for all firms in the industry
 - 3 **Knowledge spillovers**: a large and concentrated industry may facilitate the sharing of productive ideas between workers in different firms

Possibility of Inefficient Specialization

- If external economies exist, pattern of trade may be due to historical accidents

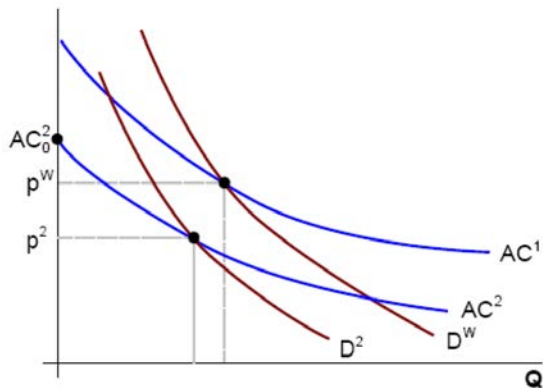


- Average cost in country 2 is lower **for a common quantity produced**
- Why is this not a problem for internal economies of scale?

Welfare Effects of Trade

- Trade based on external economies has an ambiguous effect on national welfare
 - There may be gains to the world economy by concentrating production of industries with external economies
- But where does production concentrate? It may seem optimal to concentrate it in the larger countries
 - But as the example above illustrated, there is no guarantee this will happen
- As a result, it can be shown that some countries might be worse off with international trade than without it (Graham, 1928)
 - Example: a large country that ends up specialized in an industry with no external economies of scale

Possibility of Losses from Trade

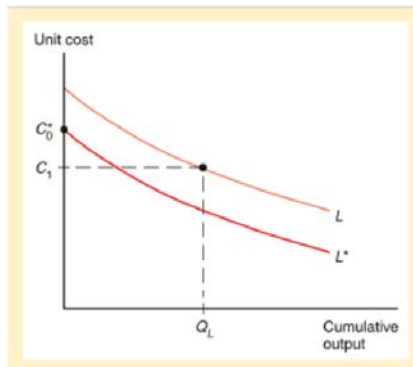


- Without trade, country 2 would consume good at a lower price

Dynamic External Economies of Scale

- We have considered cases where external economies depend on the amount of current output at a point in time
- Dynamic external economies of scale (dynamic IRS) exist if average costs fall as cumulative output increases over time
- Think about a process of accumulation of knowledge or experience
- A graphical representation of dynamic increasing returns to scale is called a learning curve
 - Specially important in some high-tech industries, such as aeronautics

Dynamic External Economies of Scale (Cont.)



- Dynamic external IRS have same implications as static external IRS
 - History may matter
 - Protectionism may be justified
- Related to “infant-industry” argument for protection
- Key issues: which industries should be protected and for how long?

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