

Lecture 19

International Trade: Economics 181

Trade and Increasing Returns to Scale, Part II

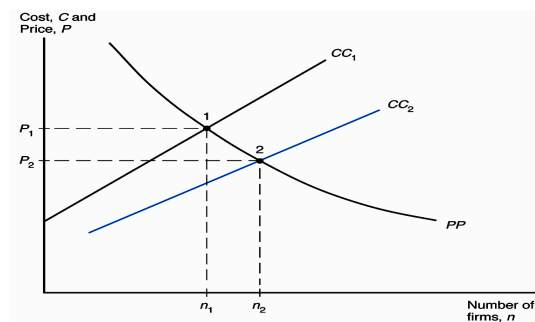
I Quick review of last Wednesday

II. Impact of Opening up to Trade

PP Curve is like a demand curve. $P = C + 1/(b + n)$
 As more varieties available, n rises and P falls. Slopes down.

CC Curve is like a supply curve. $AC = nx(F/S) + C$.
 Slopes up because increasing n raises average costs.
 Intuition: with more varieties, each producer has a smaller Market share and can't spread fixed costs over large output.

What does trade do? S rises (size of market) which lowers AC . So get rightward shift of CC curve, with equilibrium at Lower P and AC and bigger n . With trade, get lower prices and Average costs, more variety, and each firm produces more output Q .



Example:

	Home market before trade	Foreign market before trade.	Integrated Market trade.
Total Auto Sales	900,000	1,600,000	2,500,000
Number of Firms, n	6	8	10
Sales per Firm, Q	150,000	200,000	250,000
Average Cost \$	10,000	8750	8,000
Price (\$)	10,000	8750	8,000

Notes: How many firms had to exit? Where will the different varieties be produced?

Summary of new gains from trade:

- Average costs, prices fall because firm size Q rises so each firm exploits internal EOS more
- Consumers consume more varieties
- Markets become more competitive with lower prices and higher Q per firm.

Example: North American Auto Pact in 1964.

III. On IRTS and the Pattern of Trade

- With trade, all varieties could be produced at home or abroad: pattern of trade indeterminate
- But with EOS, no country would produce all varieties only for itself
- So get two-way trade=intraindustry trade in autos
- Pattern of trade a function of policy or historical accident.

Can we combine monopolistic competition with an H-O world? What would be the pattern of trade?

Example: France is labor-abundant and Germany is capital-abundant. Two sectors, cheese and autos. Autos are capital-intensive relative to cheese and have monopolistic competition. What happens?

Empirical Evidence:

K & O claim that $\frac{1}{4}$ of world trade is intra-industry trade, although hard to know what that means.

Intra-industry trade is typically defined as:

$$I \text{ for country } j \text{ in product } i = 1 - \frac{|X_{ij} - M_{ij}|}{(X_{ij} + M_{ij})}$$

If $I = 1$, means alot of intra-industry trade because exports = imports.
 If $I = 0$, means no intra-industry trade (either exports or imports = 0).

The value of IIT is close to one in the US for power-generating equipment, office machines, and electric machinery. It is close to zero for clothing and footwear.

Distributional Conflicts and Intra-industry Trade: Expect such conflicts to be less than with trade based on differences in technology or endowments. Almost (but not all!) benefit as prices fall, output per firm rises, and no clear sector is hurt. Get IIT trade between similar countries, so distributional conflicts less. Explains why

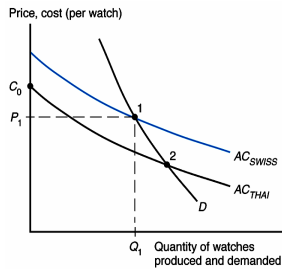
- European integration easy
- US-Canada free trade agreement uncontroversial but NAFTA (including Mexico) more politically charged.

IV. Trade and Trade Policy in Industries with External Economies of Scale.

External economies of scale occur if your costs of production fall when the rest of the industry expands. Could occur because of (1) concentration of specialized suppliers (2) labor market pooling (3) knowledge spillovers.

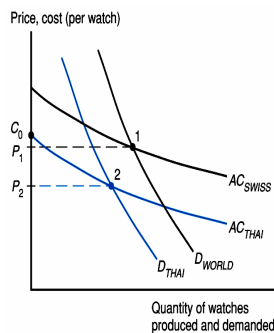
With external EOS, can get perverse (ie welfare-worsening) outcomes from trade. Theoretical basis for protection. With external EOS, downward-sloping industry supply curves. Gives an advantage to those who are FIRST.

(a)



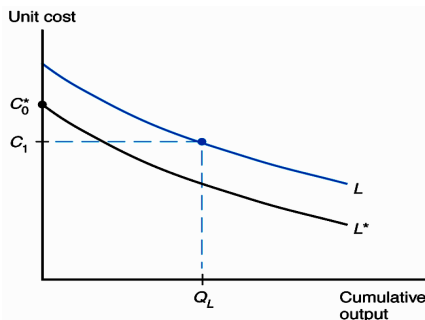
Here , Swiss produce watches at point 1. Although Thai Firms actually have lower costs, at the entry point C they Are not competitive. Couldn't jump to point 2 without alot of help (subsidies, tariffs?)

(b)



In example (b), Thai firms are actually made worse off with trade.. If Thai firms could protect themselves, they would Then face downward sloping demand Dthai and the equilibrium price would be at P2.

(c)



Finally, in (c), there are dynamic increasing returns (costs fall The more you produce. Again, because the USA is first it produces Q and prices at C1. This deters entry by the other firms because when they begin producing their costs would be at C0 which is too high. One solution would be short-run protection. Examples (a), (b), and (c) appear to provide some basis for infant industry protection.

Example: Japan's entry into semiconductors (see attached data

Finish with discussion of policy implications.