International Trade: Monopolistic Competition Model

Plan for Today...

- Trade and numerical examples.

Recap: Two Curves and Equilibrium

Setting marginal revenue equal to marginal costs gives...

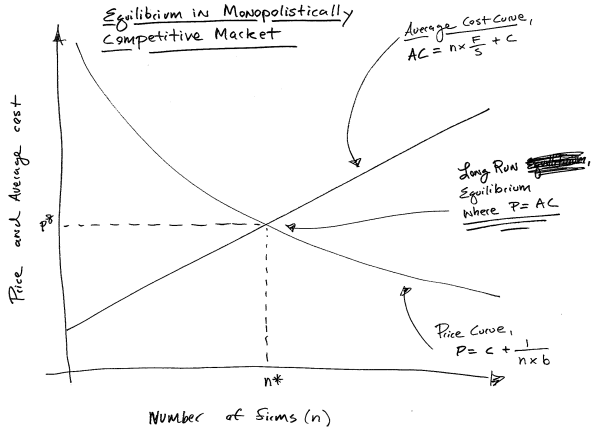
$$P = c + \underbrace{\frac{1}{n \times b}}_{\text{Markup}}.$$

Average costs are

$$AC = n \times \frac{F}{S} + c$$

Set $P = AC$. This determines the equilibrium number of firms, n^* and the price.

Long-Run Equilibrium Without Trade



How to Solve for an Equilibrium

Set $P = AC$ and solve for n^*.

$$\underbrace{c + \frac{1}{n^* \times b}}_{P} = \underbrace{c + n^* \times \frac{F}{S}}_{AC}$$

$$\Rightarrow \frac{1}{n^* \times b} = n^* \times \frac{F}{S}$$

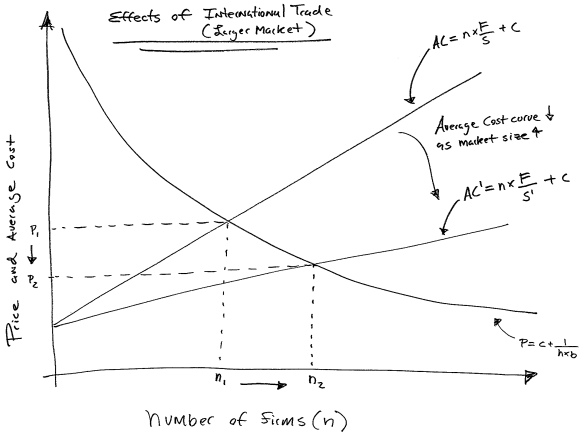
$$\Rightarrow n^* = \left(\frac{1}{b} \times \frac{S}{F}\right)^{\frac{1}{2}}.$$

Then use n^* in pricing equation to get the price.

Trade Happens, Now What?

- Two identical countries (Home and Foreign) integrate their markets.
- This implies that total industry demand now equals sum of both Home and Foreign industry demand. Or $2 \times S$.
- Note in the Ricardian model, there is no scope for trade in this scenario.

Long-Run Equilibrium With Trade



Explanation

1. A larger market shifts a firms average cost curve down.
   - A larger market means more sales per firm and allowing firms to "spread" their fixed costs over lager sales.
   - This results in more firms being able to operate in equilibrium.
2. A firms price curve does not shift. It does not depend on S.
3. But the downward movement in the average cost curve induces a **movement along** the price curve.
   - More firms result in fiercer competition, this lowers markups, this lowers prices.

Gains from Trade: More Variety

- Increase in product variety.
  - A firm = product. More firms, means more products.
  - Subtle point: domestic firms may exit, even though the total number of firms (both domestic and foreign) increased.
- Distinct from the Ricardian model.
  - Consumption basket is fixed. Trade just allows me to consume more of the same goods.
  - In the M.C. model the consumption basket expands.

Gains from Trade: Competitive Effects

- More firms, more competition, leads to lower markups and prices.
- Again, distinct from the Ricardian model.
  - Ricardian model, opening to trade via comparative advantage allows countries to receive "lower prices" to buy stuff.
  - In the M.C. model lower prices arise from lower markups because of increases in competition.

Gains from Trade: Industry Productivity Rises

- Exit occurs.
  - Number of firms in trade $< 2\times$ number of firms in autarky.
- Who is likely to exit? High marginal cost/low productivity firms.
  - Trade "selects" the best performing firms.
    The worst performing firms exit.
  - This leads to a TFP gain as only the selected firms remain.