



Topic 2: Competition and its place in international trade

Typical models of international imperfect competition

1. Models of international **monopolistic competition**

- intra-industry competition (economy of scale) **Krugman, Dixit-Stiglitz, Cournot**
- inter-industry competition (product differentiation)
- spacial competition (difference in transportation costs)

2. Models of international **oligopolistic competition** (for duopoly)

- international leadership on the amount of goods
- international leadership on prices
- international cartel (negative consequences)

3. Models of pure international **monopoly**

- monopoly of national company on national market
- monopoly of national company on national market and in export
- monopoly of national company on internal market but competition in export
- foreign company has monopoly positions on internal market

International trade models and imperfect competition

- HO model, Leontiev paradox (competition in result of difference between production factors)
- Neotechnological models: comparative advantage from product differentiation (rises from production factors)
- “technological lag” of Pozner: comparative advantage of countries which have innovations. During time country loses such advantage.
- “model of product life cycle” of Pozner: same comparative advantage which appears only on stages of technology introduction and fast growth of company

The working horse of analysis of competition's influence on trade between countries is a **Dixit-Stiglitz model** that assumes that effective trade is a result of **specialization differentiation** (basing Ricardian and HO trade theory). However economists have elaborated many ways of **denial of such theory**.

- “model of intra-industry trade” (Grubel, Lloyd): competitiveness due to similarity of structure of consumption in countries.
- “model of economy of scale” (Kisting, Hafbauer): increase of competitiveness due to economy of scale (lower marginal costs)
- Krugman's theories

Intra-industry imperfect competition

- Intra-industry trade accounts for about $\frac{1}{4}$ of world trade
- Mostly in **manufacturing goods** among **advanced industrial economies**. Not between developed and developing countries as Ricardian and HO models would predict.
- And mostly within the **same industry** with no difference in their comparative advantage

Paul Krugman won 2008 Nobel prize

- Increasing Returns, Monopolistic Competition, and International Trade, P. Krugman, *Journal of International Economics* 9: 469–479, 1979
- Scale Economies, Product Differentiation, and the Pattern of Trade, P. Krugman, *American Economic Review* 70: 950–959, 1980

What's the core idea?

- It is a theory that can explain why countries (and firms) have incentives to trade with each other, even though **there is no comparative advantage involved**.
- Like Ricardian and HO theory, there have to be **gains from international trade** to motivate trading activities. So where do these gains come from?
- In Krugman's theory, the extra gains come from **economies of scale**, where each firm produces less varieties of goods, but at much larger scale, **driving down the average cost of production**.
- Thus, firms in each country can produce **similar goods but with different characteristics** (or product differentiation) at much larger scale (with lower cost). These **goods are similar but not direct substitutes**. Because consumers have taste for varieties, intra-industry trade rises.

Internal vs External Economies of scale

- **Internal** is based upon intra-company activity that leads to increase of supplied volumes of goods and decrease of marginal costs

- **External** Economies of Scale

Firms clustering together in certain location = subject of Economics of Geography

Examples: Silicon Valley as technology center

Why do firms (or individuals) behave in such way?

What are the benefits from such location choice?

External Economies of Scale

Sources of gains:

- Specialized suppliers
- Labor market pooling
- Knowledge spillovers

What are the **key differences** between internal and external economies of scale?

- ✓ Internal gains come from **larger market scale** because there is a initial fixed cost, implying that the larger the scale, the more efficient (or less costly) they can produce.
- ✓ External gains are not from within the firm; rather, they are from the **externalities generated from firms clustering together.**

Impact of External Economies of Scale

It could have similar effects as internal economies of scale:

- The clustering of firms will **bring down the cost of production**:
easy access to suppliers and labor pool
- Technology spillovers could **spur innovation**, another way of bringing down cost

In addition, firm clustering tends to **reinforce specialization choices at the beginning**, which may have some unintended consequences.

Switzerland watch industry

- Switzerland specializes in watch making due to mysterious unknown historical/cultural reasons. But in short, they are good at making watches.
- Over time, as income of Switzerland rises, their cost of watch making is also rising.
- But because of their early specialization in watch industry and the external scale of economies generated from this long-time watch making (learning curve), it makes new competitor's entry into the market very difficult.
- And the world may face a welfare loss as a result of trade