Theory of Economic Integration

Dynamic effects
Economies of scale in customs union
Gravity models

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Major dynamic effects:

1. Reaping benefits of economies of scale and learning effects
2. Reducing the monopoly power
3. Reducing levels of x-inefficiency
The concept of economies of scale

- Internal economies, associated with the size of plant
- External economies, associated with the expansion of an industry
- Assumptions:
  - Firm has only one plant and is the sole domestic producer of the product
  - Economies of both plant and firm are being considered
  - The formation of customs union
    - May lead to the greater exploitation of economies of scale
Monopolistic competition, SR equilibrium
Monopolistic competition, LR equilibrium

Monopolistic competition refers to a market structure where many sellers are present, each offering a slightly differentiated product. The LR (long-run) equilibrium occurs where the marginal cost (MC) equals the marginal revenue (MR) and the average total cost (ATC) is minimized. In the diagram, the MR’ curve intersects with the MC curve at point Q_2, indicating the LR equilibrium. The price (P_2) at this point is equal to the average total cost (C_2). This equilibrium ensures that firms are operating at the minimum point of their average total cost curve, maximizing their profits in the long run.
Traditional analysis, assumptions

• The product of the home industry is taken as indistinguishable from that of the foreign partner firms or the ROW

• The home producer
  – Sole seller in the domestic market
  – Might find difficult to reach a profit-maximizing position
  – In order to avoid this – government often regulates the price
If the economy is open

- The firm is faced with 2 exogenous prices
  - The world price at which it can export the product (border price)
  - The tariff-distorted price at which products can enter the market from P or ROW

- If H’s cost curve is relatively low
  - H will expand production and export
  - H don’t need a PTA to exploit economies of scale

- If H’s cost curve is high
  - A firm will maximize its profits by charging the maximum price
  - If covers costs at this price H produces
Considering customs union

- Important features:
  - The pricing policies
  - Whether the country produce before or after the union

- For the sake of simplicity
  - The level of protection – the same before and after
No production prior to entry in either country

• Imports provide for all consumption
• H market price $P_{w+t}$
• Tariff revenue in H and P

2 possibilities:
  – Prices are equated with average cost;
    • No producer surplus will be earned
    • Price fall to $P_{uc}$
    • Gain in consumer surplus and a loss in tariff revenue
  – Prices remain at $P_{w+t}$
    • A loss of tariff revenue
    • No benefits to consumer
    • Producer surplus
No production prior to entry
Prior to entry production in home country (H) but not in partner country (P)

- P country will import from ROW at $P_{w+t}$
- Tariff revenue $P$
- 2 possibilities:
  - Prices are equated with average cost;
    - H will expand its output
    - Price fall to $P_{uc}$
    - Gain in consumer surplus in H & P and a loss in tariff revenue in P
  - Prices remain at $P_{w+t}$
    - A loss of tariff revenue; $P$
    - No benefits to consumer
    - Producer surplus – H will expand production
Prior to entry production in home country (H) but not in partner country (P)
Prior to entry production in both countries

- No imports
- 2 possibilities:
  - Prices are equated with average cost;
    - Price fall to $P_{uc}$
    - Gain in consumer surplus
    - No loss in tariff revenue
    - The industry in P disappears
  - Prices remain at $P_{w+t}$
    - Producer surplus
Prior to entry production in both countries

![Graph showing production and demand curves with labels $D_p$, $D_h$, and $D_{h+p}$, along with price points $P_{w+t}$, $P_{uc}$, and $P_w$, and quantity points $Q_1$, $Q_2$, $Q_3$, $Q_4$, and $Q_5$.](image-url)
Conclusions

- Consumers only benefit of prices equated with average costs
- If country is initially importing from ROW – always loss due to the trade diversion
- Direction of trade is indeterminate (because LAC the same in P & H)
- The country that can produce in the larger market will appear to have lower costs of production
- Countries would be better off if the imported from ROW
Reducing in monopoly power

- Removal of barriers to trade – increases the possible source of supply from other countries
- Lower prices; the monopolist constrained to this lower prices
- The monopolist ➔ adjusts output
- Gap, lower output, higher consumption ➔ imports
- The disciplinary effect (also works in oligopolistic markets)
Reducing in monopoly power
X-inefficiency and integration

• If the increase in competition is accompanied by R&D and innovation to improve the non-price characteristics of the good, the demand curve shifts
• Consumers surplus increase
• The increased demand is met by the increased imports
• Firms can respond by reducing X-inefficiency, shift of marginal cost allow to firm increase its share of the market
X-inefficiency and integration
Other dynamic effects

- The polarization effect
  - Benefits of trade creation becoming concentrated in one region
  - An area may develop a tendency to attract factors of production
- The influence on the location and volume of real investment
Remarks

- Dynamic effects include various and completely different phenomena
- Apart from economies of scale, the possible gains are extremely long term
How significant is value of trade between RTA members?

- What is the value of world trade between RTA members?
  - we estimate
  - total world trade between RTA members in 1995 and 2009
  - the share of trade within RTAs (intra-PTA trade) in trade of RTAs members
  - the share of trade within RTAs (intra-PTA trade) in world trade
Preferential trade

- Intra-RTA trade flows are calculated as the sum of bilateral merchandise trade between RTA members for all available reporters in the UN Comtrade database,
  - while total world trade is approximated by the sum of all reporters in Comtrade
Handel preferencyjny

- $\sum X_{RTA}^t / X_{world}^t$
- $\sum M_{RTA}^t / M_{world}^t$
- share
- $\left( \frac{X_{RTA-RTA}^t}{X_{world-world}^t} \right) * 100\%$
  - $X$ export,
- changes $\left( \frac{X_{RTA-RTA}^{2009}}{X_{world-world}^{2009}} - \frac{X_{ugr-ugr}^{1995}}{X_{swiat-swiat}^{1995}} \right) * 100$
Share of intra-RTA exports in world trade, by regions, 1995-2009, in bln USD
Value of intra-RTA exports, by regions, 1995-2009, in bln USD
Share of intra-RTA exports in world trade, by regions, 2009, percentage & changes
Share of intra-RTA imports in world trade, by regions, 2009, percentage & changes
Share of intra-RTA trade in trade of RTA memebers

\[ \left( \frac{X_{RTA-RTA}^t}{X_{RTA-world}^t} \right) \times 100 \]
Share of intra-RTA exports in trade of RTA members, by regions, 2009, percentage & changes
Share by RTA type in intra-RTA trade, 1995-2009, percentage and changes