International and Entrepot Trade

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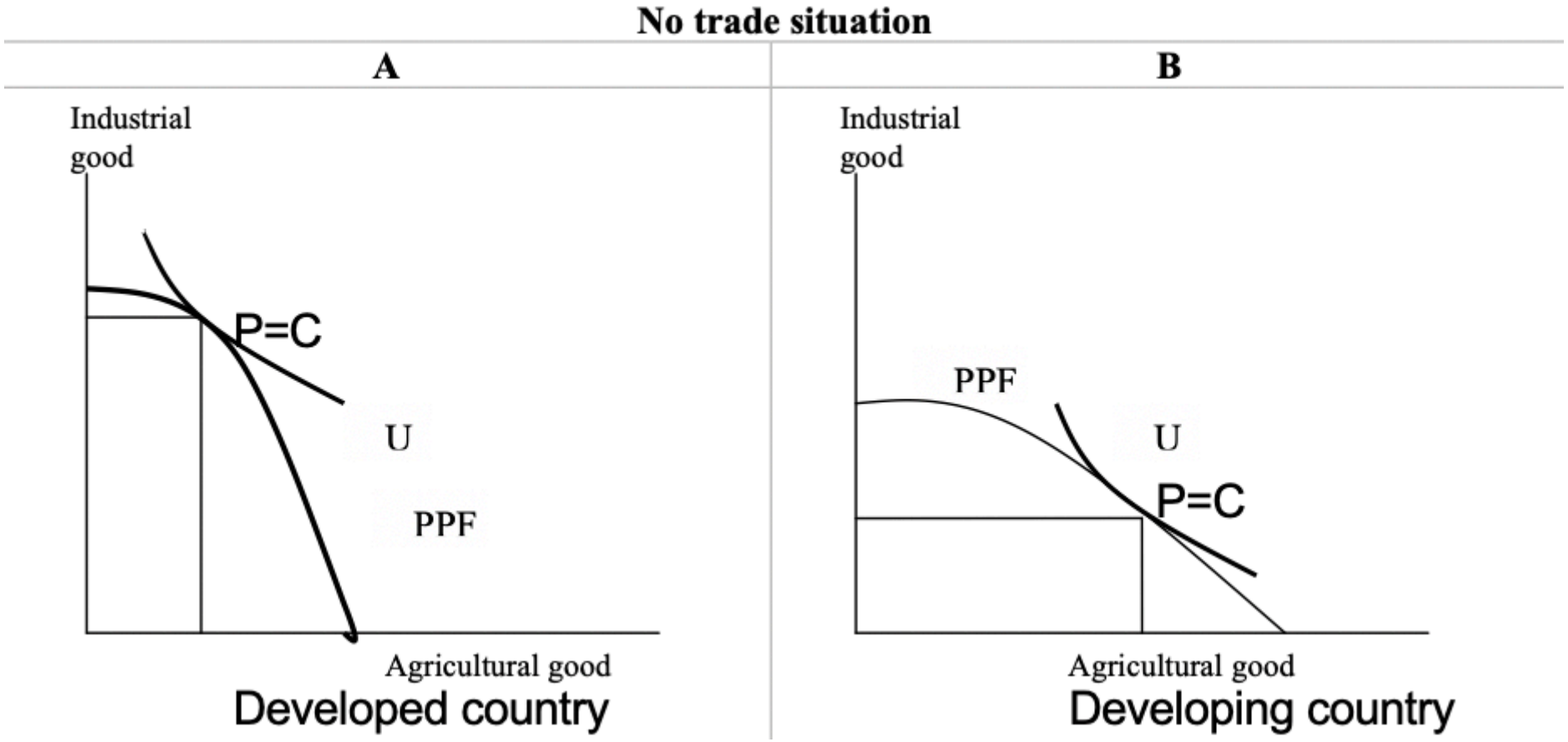
Why do people trade

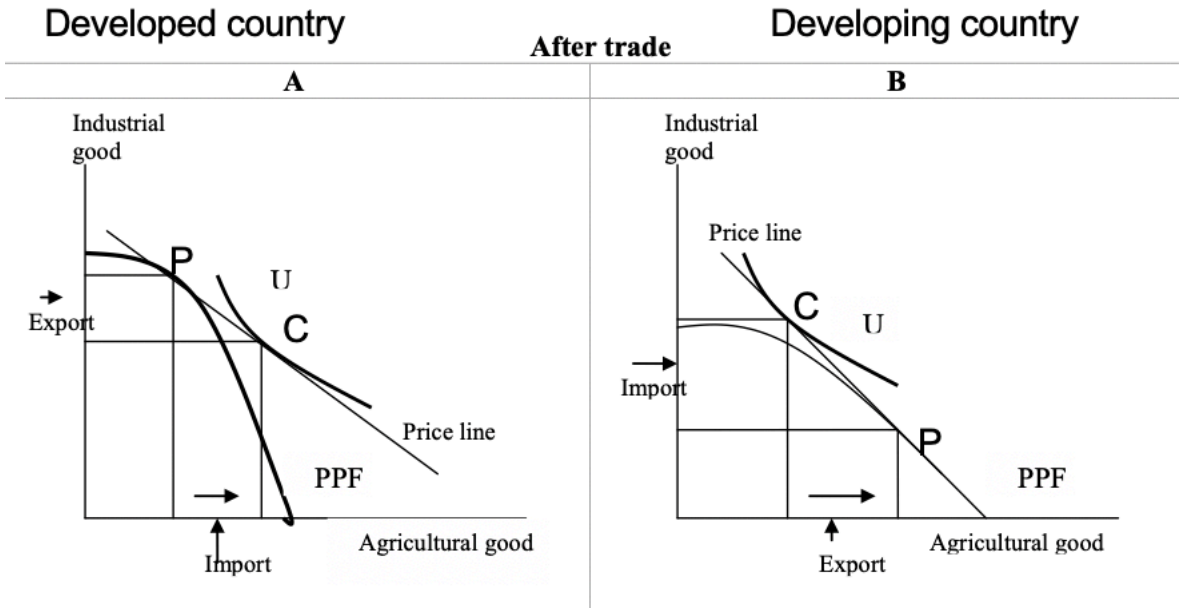
- Comparative advantage (Ricardo's Theory)
- Different factor endowments (Hekscher-Olin Theory)
- Specialization - Concentration of resources in the production of relatively few commodities.

Neo-classical Comparative advantage theory due to Ricardo



No trade: production and consumption points are same

Neo-classical comparative advantage trade theory



After trade: Both countries are able to consume at a point outside their PPF.
The developed country imports what the developing country exports.
Both will face the same international price ratio.

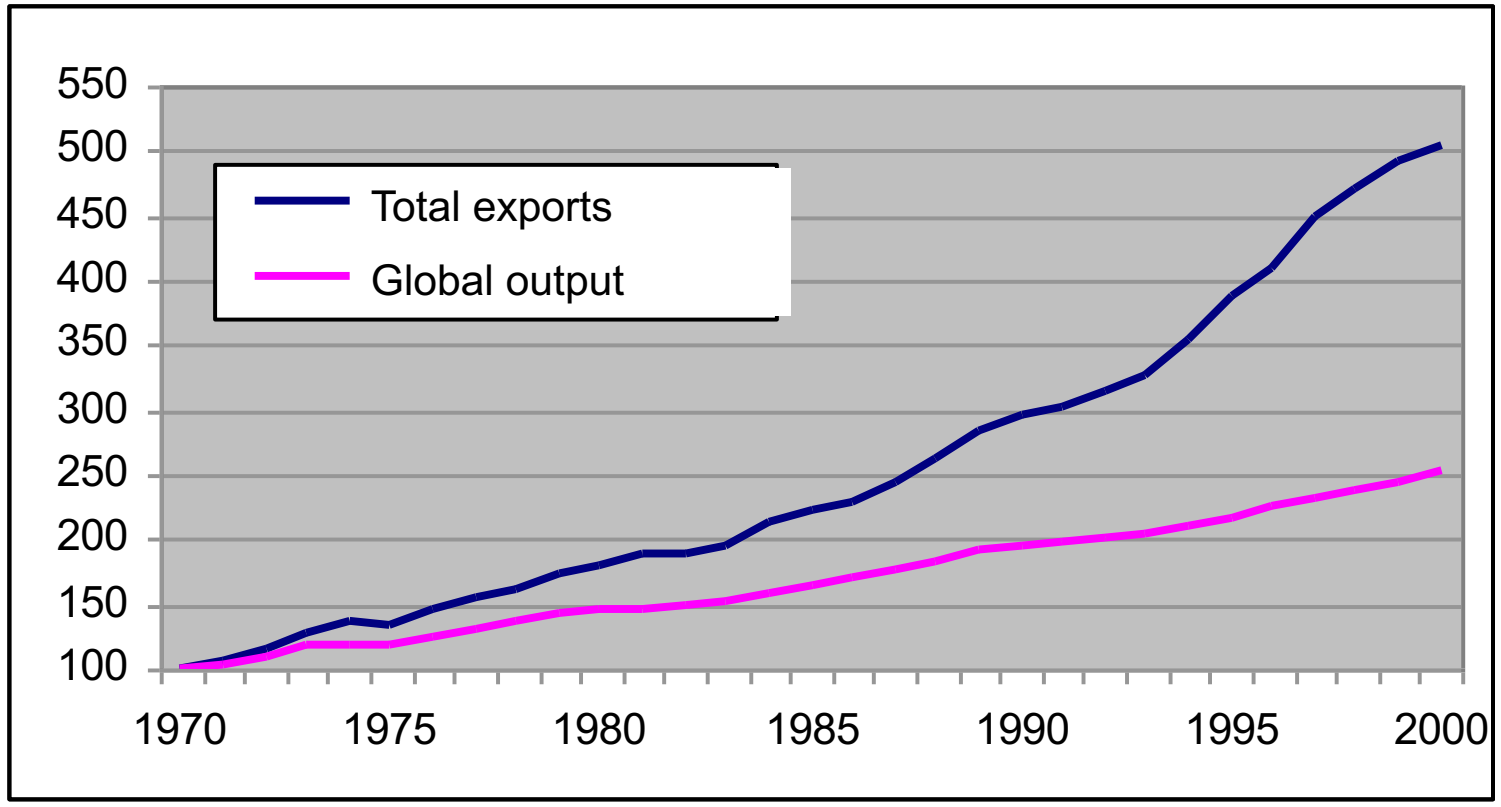
Heckscher-Ohlin model

- The H-O model explains the source of comparative advantages in terms of factor endowments.

- A country (developing country, say) that is relatively abundant in one factor (say labour) will export labour-intensive goods.

- Similarly, a developed country which is abundant in capital/skill will export capital intensive or high technology goods.

Evidence of correlation between trade and global growth



Trade as engine of growth: Reasons

- Supports competition and therefore resource optimization (Neo-classical trade models)
- Helps to raise productivity, with further reductions of costs
- Increased access to foreign capital either as FDI or borrowing from abroad

Some successful cases

- East Asian miracle
- All four newly industrialised countries (Singapore, South Korea, Hong Kong, Taiwan) pursued a trade-oriented development strategy
- Thailand, Vietnam, Malaysia, China, India also benefited from trade oriented strategies

Trade and development

- Given the theoretical argument and supporting evidence, one may favour a free trade-based development strategy
- This is also an important feature of the Washington Consensus (old and new)

- But there are some objections

Empirical critiques of free trade

- 1. The Prebisch-Singer hypothesis (adverse terms of trade argument)
- 2. The successes of the East Asian countries are not easily replicable elsewhere
- 3. Trade protectionism is essential for industrialisation.

Empirical critiques of free trade

- 4. Free trade increases the risk of chronic deficits of the balance of payments encountered by middle and low income countries

- 5. Is the world trade really free and fair?

Critique 1: The Prebisch-Singer Thesis

- Total export earnings depend on:
  - Total volume of exports sold AND price paid for exports
- Prebisch and Singer argue that export prices have been falling over time, so LDCs lose revenue unless they can continually increase export volumes
- But export volume is unlikely to increase, because agricultural goods are low price elasticity goods, and they may also suffer low income elasticity or even inferior good effects.

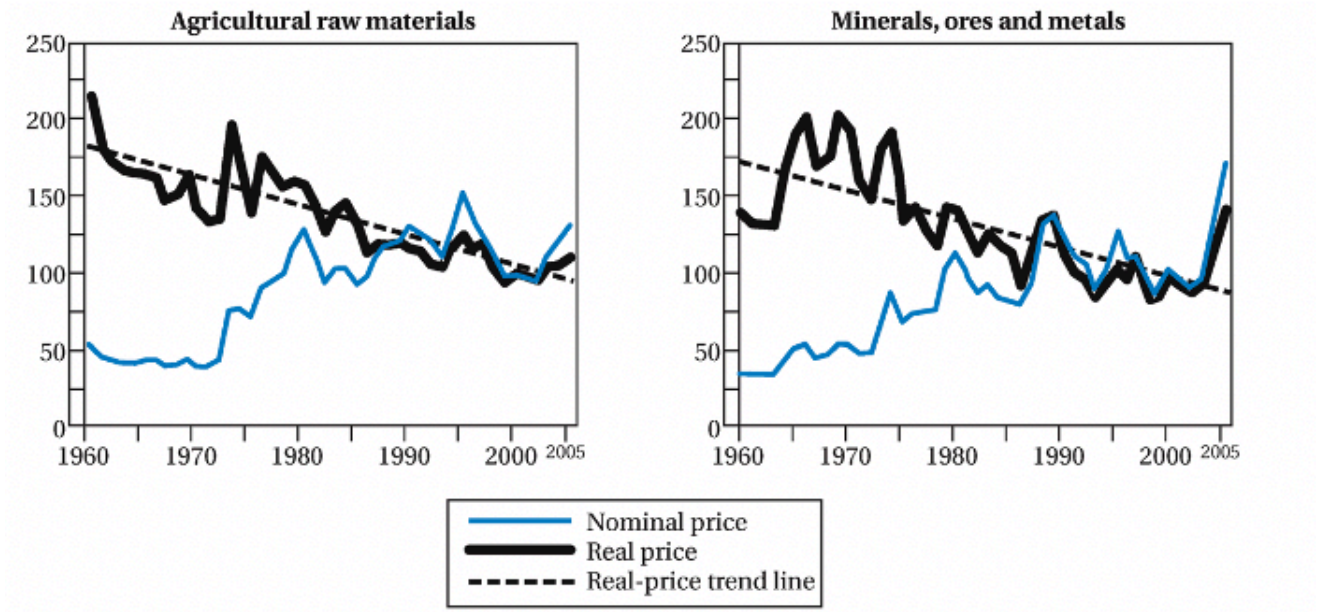
The Terms of Trade and the Prebisch-Singer Thesis

- **Low price elasticity** (inelastic demand)→ if price falls by 10%, quantity demanded will increase by less than 10%.

- **Low income elasticity**→ Income increases by 10%, demand increases by less than 10%. Developed countries are the main importers of agricultural goods.
- Income increase in developed countries does not proportionately benefit the developing countries.

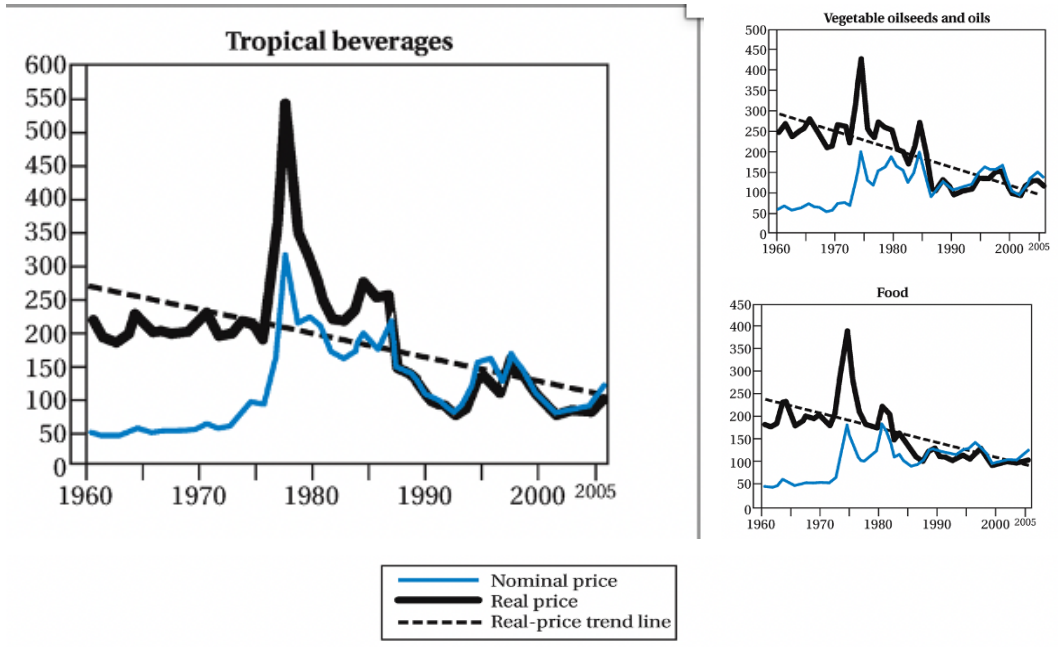
- **Prebisch and Singer** think LDCs need to avoid a dependence on primary exports

Evidence of falling price of (nonfuel) Primary Commodity Prices, Nominal and Real , 1960-2005 (2000 index = 100)



urce: UNCTAD, *Trade and Development Report, 2006* (New York: United Nations, 2006), p. 20. Used by permission.
te: Real prices are deflated by the export unit value of manufactured goods of developing countries

Primary Commodity Prices, Nominal and Real, by Commodity Group, 1960-2005 (2000 index = 100)



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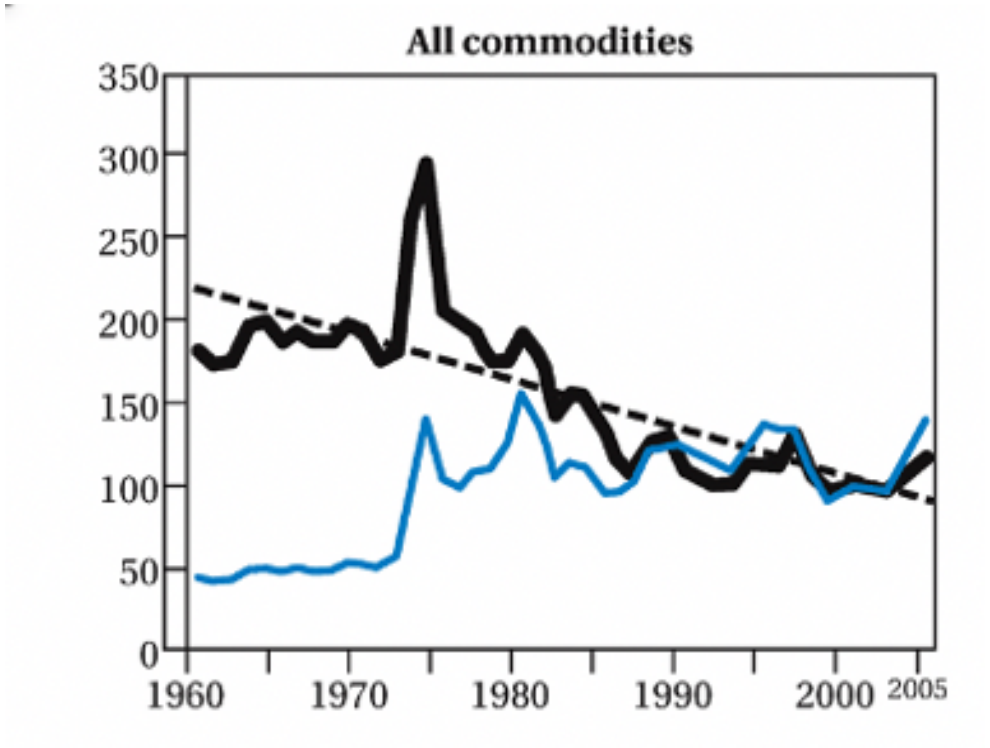
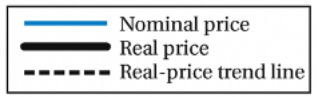


Critique 2: East Asian success

- The success of trade-oriented growth strategy of East Asia did not rely on free trade.
- Singapore and Hong Kong relied on free trade (for their special h[illegible]s). But others d[illegible]
- In fact, g[illegible]e protection and pursued (strategic) import substitution policies.
- South Korea built **dynamic comparative advantage** in steel making despite having no appropriate resource base for it.



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Critique 2: East Asian success

- Japanese model inspired others.
- As the Japanese government (famous MITI) targeted automobiles and electronics, others followed the same model of state activism and targeting specific industries (computers and electronics in Taiwan for instance)
- As wage rose in Japan, Japanese companies started investing in low cost countries in the region.
- This may not be easily emulated elsewhere.

Critique 3. Trade protection is essential for industrialisation

- Import substitution: looking inward but still paying outward
  - Tariffs, infant industries, and the theory of protection
  - Dynamic comparative advantage theory (building comparative advantage in future by importing goods in which the country does not have comparative advantage at present: Example: South Korea, Japan

Going too far on tariff protection can give rise to serious problems

- Foreign-exchange rates, exchange controls, and the devaluation decision
  - Currencies of developing countries are overvalued (excess of local demand over available exchange)
    - Can run down reserves
    - BOP deficit problem can worsen
    - **Must be applied selectively and wisely**

Problems associated with trade protection

- Prolonged import substitution strategy or trade protection (tariff and non-tariff) results in the following:
  - Protected industries get inefficient and costly
  - Foreign investment suffers
  - Subsidization of imports of capital goods tilts pattern of industrialization and contributes to BOP problems
  - Overvalued exchange rates hurt exports
  - Does not stimulate self-reliant integrated industrialization

Critique 4: Free trade and balance of payments risk

- Most developing countries follow a type of fixed exchange rate and for that they also need to have certain controls on import to have a check on their BOP deficit
- All developing countries import capital goods and export generally agricultural goods → earn less and spend more
- So they are vulnerable to foreign exchange crisis.

Critique 5: Is the world trade free?

- If trade was truly free with no barriers to trade, then the world economy as a whole would have realised efficiency gains through trade and the developing countries would have also benefited.
- WTO aims to foster free trade by removing ‘non-tariff’ trade barriers and reducing tariffs across the board.

Free trade?

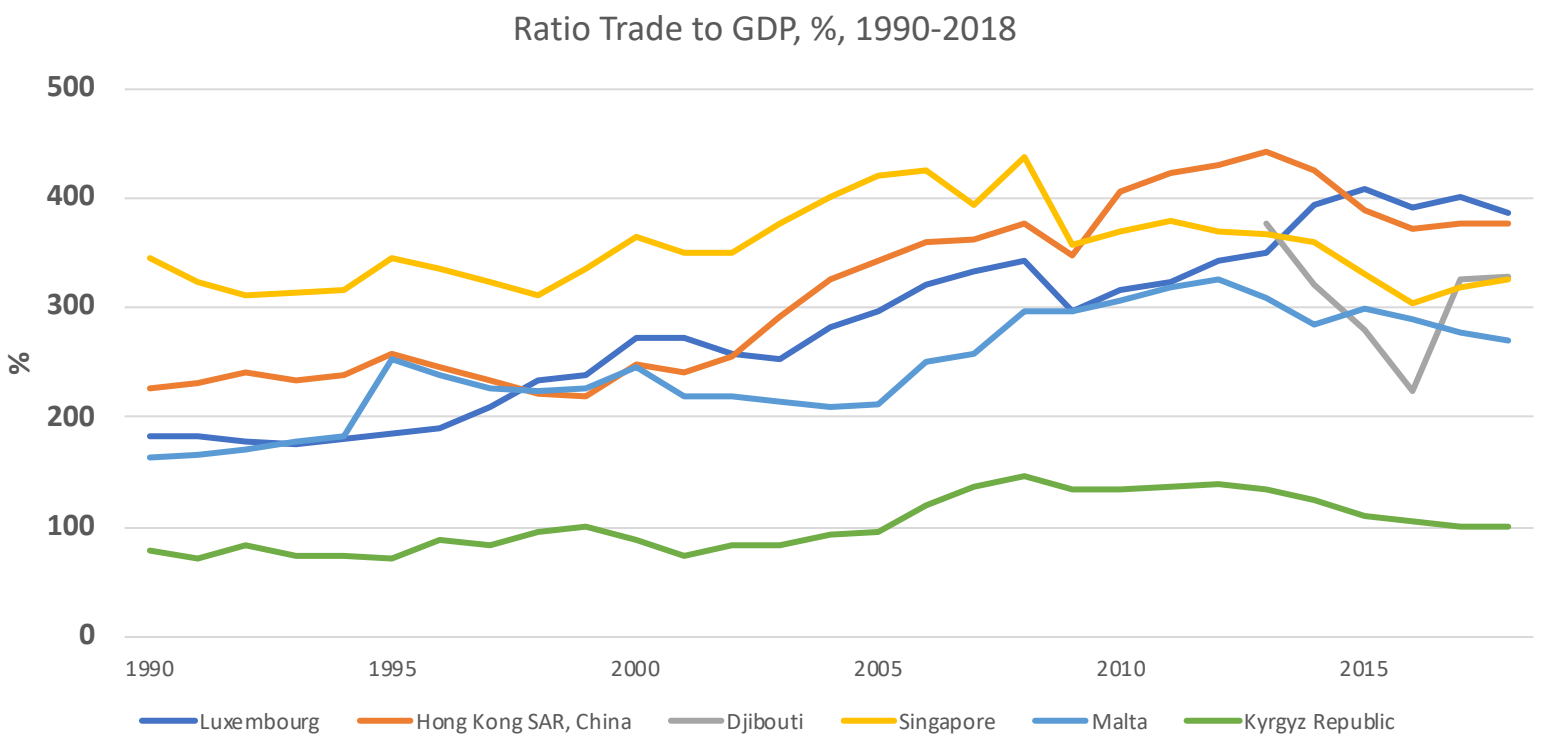
- But USA provides agricultural subsidy, the Common Agricultural Policy of EU provides protection to EU farmers, without violating the WTO rules.
- So trade in agricultural goods is not free, and it hurts the developing countries.
- Then there are trade blocs.

Conclusion

- Trade is an important source of growth and development
- But making trade work for the home country is a challenge
- Neither free trade nor protectionism is ideal
- A long-term development strategy needs to be integrated with trade policy.

Entrepot trade

- Entrepot Trade refers to people importing goods from a country and export it to other country
- Transport costs and multimodal transport corridors require many intermediate stages between seller and buyer
- While domestic domestic contribution to re-export is not significant, transit margin can be



Openness of the Economies

Some data issues

Reasons for entrepot trade

- Information costs
- Transport hubs
- Taxes, tariffs and Quotas

Informations costs

- Create incentives for agents to trade
- Imperfect information about quality of suppliers, tastes' of buyers etc.
- Matchnig and solving language issues

Transport hub

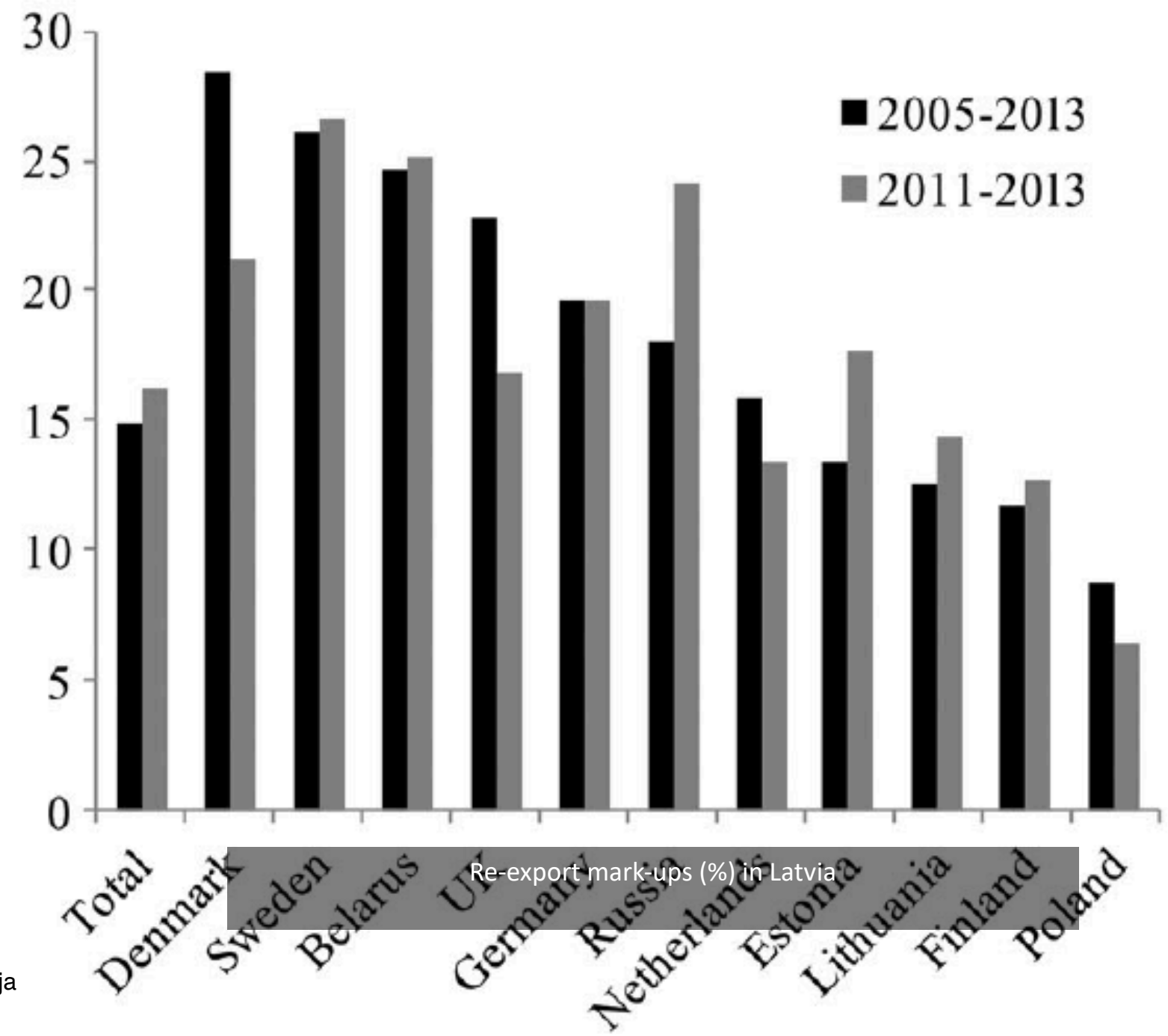
- Accumulation of different types of goods delivered in bulk
- Forming matching sets of goods going to the same direction or country
- Transit good does not require customs clearance – no costly delays on shipment

Taxes, Tariffs, and Quotas

- Different tax regimes encoureges traders to optimize transport routes
- Trade regime of transit country can be used for easier access to the destination market
- Export or import quotas within trade or economic unions also may be in favor of processed goods.

Entrepot trade benefits

- Over the period of 1988-1998 53% of Chinese exports were shipped through Hong Kong giving average mark-up of 24%.*
- Latvian re-export activity research – from 8% to 30% mark-up depending on destination.**

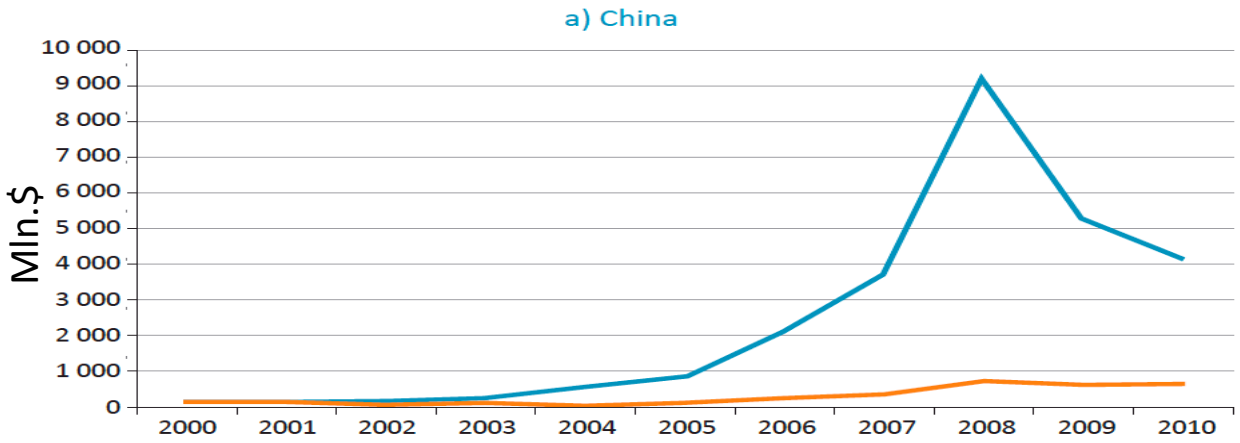


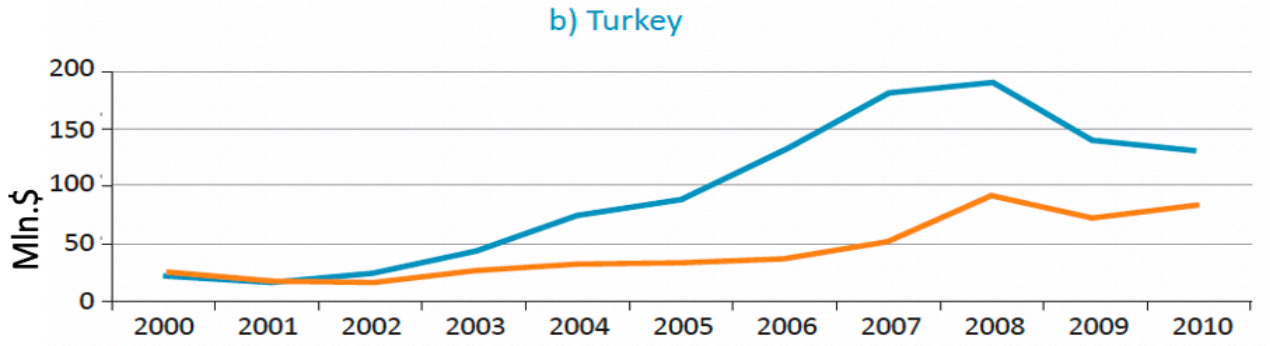
Re-export mark-ups (%) in Latvia

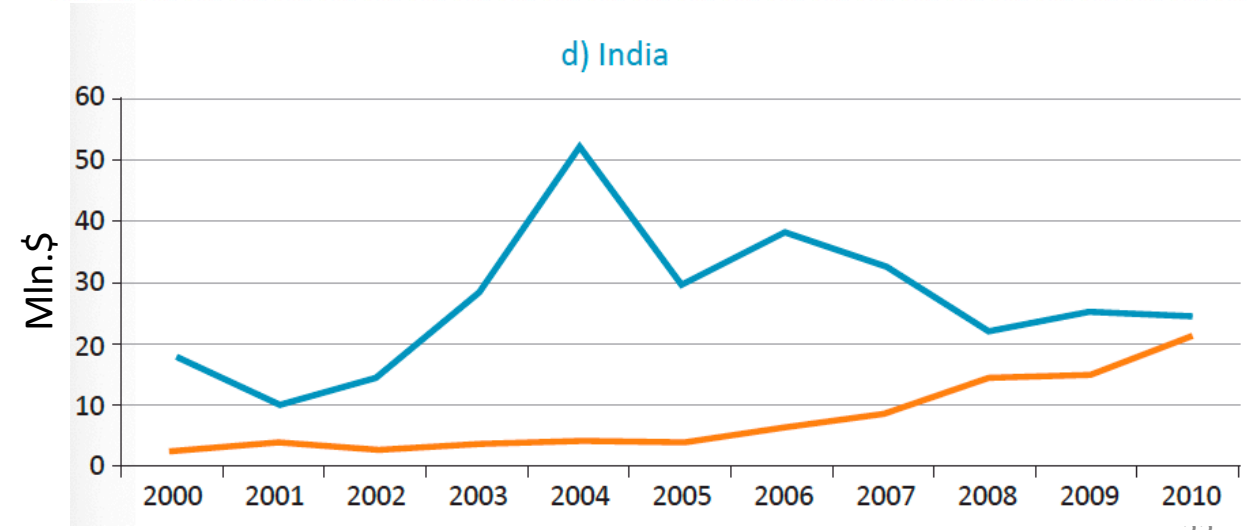
*Feenstra, R. C., & Hanson, G. H. (2004). Intermediaries in entrepôt trade: Hong Kong re-exports of Chinese goods. Journal of Economics & Management Strategy,

** Konstantīns Beņkovskis, Santa Bērziņa & Līva Zorgenfreija (2016). Evaluation of Latvia's re-exports using firm-level trade data

Kyrgyz entrepot trade







- As reported by the Kyrgyz Republic
- As reported by trade partner

Source: Re-export Activities in Kyrgyzstan: Issues and Prospects, R.Mogilveskii, UPPA UCA, 2012

How Kyrgyzstan became Central Asian Transit Hub?

- Preferential treatment of importing consumer goods by individuals – customs clearance based on weight
- Free Trade Agreement within CIS countries allowed to export processed imports to Kazakhstan and Russia (mainly)
- “Bazaars’” infrastructure
- Low level of administrative pressure

Welfare contribution

	2003	2004	2005	2006
"Value added" in percent of imports for re-exports	32	19	25	20
Re-export earnings (in million of US dollars)	66	87	167	329
Re-export earnings in percent of GDP	3.2	3.0	5.8	11.5

Externalities

- Market place – chance to introduce own products to foreign customers
- Skills gain –finding and matching buyers and suppliers, etc.
- Trade network at destination countries

The Gravity Model

- Newtonian concept of gravity, i.e. bodies are attracted with a force proportional to their mass and inversely proportional to the square of the distance between them
- With regards to trade two countries' trade interaction is proportional to the size of the economies
- Trade is inversely proportional to the costs of trade
- Initially, it was not based on theoretical model, but just intuition only
- Later on, a range of rigorous theoretical foundation has been given
  - The most well-known benchmark so far is Anderson and van Wincoop (2003).

The Gravity model by Tinbergen (1962)

Gravity equation:

$$X_{ij} = \beta_0 Y_i^{\beta_1} Y_j^{\beta_2} D_{ij}^{\beta_3} \ ,$$

where X_{ij} is trade flows from ith country to ith country, Y_i and Y_i, GDP of ith and ith countries D_{ij} is distance between them. β_0 is constant, $\beta_i \in$ [1:3] are elasticities, parameters to be estimated.

Basic stochastic form:

$$X_{ij} = \beta_0 Y_i^{\beta_1} Y_j^{\beta_2} D_{ij}^{\beta_3} u_{ij},$$

where u_{ij} is a stochastic error term satisfying condition $E\left(X_{ij} \middle| Y_i Y_j D_{ij}\right) = 1.$

Econometric estimation of the Gravity Model

- Log-linearization:

$$\ln X_{ijt} = ln\beta_0 + \beta_1 lnY_i + \beta_2 lnY_j + \beta_3 \ln D_{ij} + \ln \varepsilon_{ijt}$$

Additional variables

- Distance
- Adjacency
- Common language
- Colonial links
- Common currency
- Island, landlocked
- Institutions, infrastructures, migration flows,..
- Bilateral tariff barriers

Why is it so popular?

- Intuitively appealing
- Fits with some important stylized facts
- Easily to use real data to explain trade flows with respect to policy factors.
- Estimation using OLS

Applications of the Gravity Models

- Analyse predicted trade flows and observe differences between predicted and observed flows (analysis of residuals)
- Trade potentials of economies in transition (out-of sample predictions, ref...)
- Identify the natural markets and markets with an untapped trade potential
- Predicted values are used in some cases as an input for CGE modeling (Kuiper and van Tongeren, 2006)
- Use of confidence intervals in addition to predicted values, in order to take into account the residual variance

Examples of applications

- Effects of trade facilitation on trade How much can trade facilitation boost bilateral trade?

$$\ln X_{ij} = b_0 + b_1 \ln(Y_i) + b_2 \ln(Y_j) + b_3 \ln(d_{ij}) + b_4 \ln(time_i^X) + e_{ij}$$

- Djankov Freund & Pham (2010) use a gravity model with Doing Business data on border crossing times (98 countries) to show that:
  - Slower border crossing times can significantly reduce bilateral trade: One extra day reduces exports by 1%.
  - Time-critical agricultural and manufactured goods are particularly sensitive to border crossing times:
    - Agriculture: Fresh fruits and vegetables.
    - Manufactures: Electronic goods; parts and components.

Examples of applications

- National Statistical Committee of the Kyrgyz Republic

$$\ln(exp_{ij)} = \alpha + \beta_1 \ln(GDP_i) + \beta_2 \ln(GDP_j) + \beta_3 \ln(P_j) + \beta_4 \ln(D_{ij}) + \beta_5 contig_{ij} + \beta_6 lang\_off_{ij} + \beta_7 lang\_eth_{ij} + \beta_8 col_{ij} + \beta_9 comcol_{ij} + U_{ij}$$

- Accession to the EAEU has negative impact on export:
  - Distance coefficient increased negatively from -0,444 to -0.600 indicating overall worsening of trade terms