ECON 4311 − Economy of Latin America
Lecture 7A: Latin America Trade Policy (pt. 1)

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Outline

Last Lecture

▶ Talked about ISI, how it came about, and which type of economic policies were used to implement it.

- **ISI**. Mix of trade, fiscal, and industrial policies aimed at developing domestic industries to reduce dependence on imports from abroad.

- **How it came about**.
  - ▶ Global circumstances (wars, post-wars, depressions) caused commodity prices to fall much faster than price of manufacture. (supply elasticity).
  - ▶ Fall in relative commodity prices seen as a long-run trend.
  - ▶ This raised concerns about the desirability of maintaining an economic structure that favored the production of primary commodities.
  - ▶ Push for government intervention to develop domestic industries.

Last Lecture

▶ **ISI implemented with mix of economic policies**:

- **Trade policy**.
  - ▶ Tariffs and quotas on imports of industrialized goods.
  - ▶ Artificially-low exchange rates.
  - ▶ Our focus today!

- **Fiscal and industrial policies**.
  - ▶ Favorable treatment to MNCs (tax breaks, lump-sum transfers,. . .).
  - ▶ Direct subsidies to firms in certain domestic industries.
  - ▶ Favorable lending to firms operating in certain industries.
  - ▶ Establishment of SOEs.

Trade Theory

▶ Standard theories of international trade developed over past 250 years

- You should already be familiar with some of these theories.

▶ **Adam Smith**, first to challenge *mercantilism* policies.

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▶ **Adam Smith**, first to challenge *mercantilism* policies.

- Mercantilism: idea that countries could increase welfare by adding to their stocks of gold and silver.

  ▶ Accomplish this with policies that suppress imports & promote exports.

  ▶ Conventional wisdom in international trade for hundreds of years.

- Adam Smith challenged the conventional wisdom using the concept of **absolute advantage**.

Absolute Advantage

▶ **Absolute advantage**: Country A has absolute advantage in the production of good X over country B if country A can produce that good with fewer resources.

Table: Production per day/worker

Region	Computers	Coffee
Latin America	1	15
Rest of the world	5	10

▶ Nations can become wealthy by trading with one another (*The Wealth of Nations*, 1776).

- Latin America can specialize in coffee, ROW in computers.

- Both regions could be better off by trading.

Absolute Advantage

▶ Smith's theory of absolute advantage not accepted by proponents of mercantilism (partly because the theory was flawed).

▶ Possible for a country to be more productive in everything than another country.

Table: Production per day/worker

Region	Computers	Chocolate
Latin America	1	8
Rest of the world	5	10

▶ In the 18th century, in fact, the UK could produced most goods under conditions of absolute advantage.

Comparative Advantage

▶ **David Ricardo** showed in 1817 that even if a country has absolute advantage in the production of *all* goods, such a country can still benefit from trading with another country.

▶ What really matters is comparative (rather than absolute) advantage.

▶ **Comparative advantage**. Country A has comparative advantage in the production of good X over country B if the opportunity cost of producing X is lower in country A than in country B.

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Comparative Advantage

Table: Production per day/worker

Region	Computers	Chocolate	Relative prices
Latin America	1	8	1/8 computers = 1kg chocolate
Rest of the world	5	10	1/2 computes = 1kg chocolate

▶ Chocolate is cheaper in Latin America than in ROW.

- Opportunity costs of producing chocolate are lower in Latin America.

▶ Machines are cheaper in ROW than in Latin America.

- Opportunity costs of producing computers are lower in ROW.
  (1 computer = 2 kg of chocolate vs. 1 computer = 8 kg of chocolate)

▶ **LatAm has comparative advantage in producing chocolate, ROW has comparative advantage in producing computers**.

Comparative Advantage

Region	Computers	Chocolate	Relative prices
Latin America	1	8	1/8
Rest of the world	5	10	1/2

▶ LatAm has comparative advantage in chocolate; ROW in computers.

▶ **Trade in Latin America**.
  - **Autarky**. Producing 1 computer requires sacrificing 8 kg of chocolate.

  - **Trade**. Specialize in chocolate, trade 1 computer for 2 kg of chocolate (relative price of computers in ROW).

▶ **ISI–Trade connection**.
  - Latin America substituted imports with domestic production.

  - Resources diverted from industries with comparative advantage to *disadvantaged* industries.

Comparative Advantage

Region	Computers	Chocolate	Relative prices
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Rest of the world	5	10	1/2

▶ **Price boundaries**.

- If relative prices are above 0.5 (= 1/2), both regions prefer to export chocolate: 0.5 machines for 1 kg of chocolate.

- If relative prices are below 0.125 (= 1/8), both regions prefer to import chocolate: 0.125 machines for 1 kg of chocolate.

- If relative prices are in between 0.125 and 0.5, Latin America imports machines and ROW exports them.

▶ **Equilibrium price determines who benefits the most from trade.**

- Even with declining terms of trade, trade beneficial for both countries.

Comparative Advantage

▶ **Terms of trade**. The ratio between a country's export prices and its import prices, expressed in percentage.

$$TOT_{\text{Mexico},t} = \frac{P_{\text{Exports},t}}{P_{Imports},t} \times 100.$$

▶ Thus, with declining terms of trade, we mean that the price of exports is falling relative to the price of imports over time.

▶ Concrete example.

$$TOT_{\text{Mexico},2020} > TOT_{\text{Mexico},2021}$$

$$\iff \quad \frac{P_{\text{Exports},2020}}{P_{Imports},2020} > \frac{P_{\text{Exports},2021}}{P_{Imports},2021}.$$

▶ **Connection with ISI**.

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▶ **Connection with ISI**. Raul Prebisch's argument doesn't make sense.

Comparative Advantage

▶ Comparative advantage results from differences across countries in the opportunity costs of producing goods.

▶ What causes such differences?

The Heckscher–Ohlin Model

▶ Developed in the early 20th century by Eli Hecksher and Bertil Ohlin at the *Stockholm School of Economics*.

▶ General equilibrium model of international trade that builds on Ricardo's theory of comparative advantage.

▶ **Question**. What causes differences across countries in opportunity costs of producing goods?

▶ **Heckscher–Ohlin answer**.

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▶ **Heckscher–Ohlin answer**. Mix of factor abundance and factor intensity explains a country's comparative advantage(s).

  • Factors that are relatively abundant are (relatively) cheaper.

  • A country has comparative advantage (and specializes) in production of goods which require intensive use of its abundant factor of production.

⟹ Latin America should export commodities, and import machinery.

The Heckscher–Ohlin Model

▶ Concrete example.

- Two countries: Mexico and the US.

- Two goods: cars and gold.

- Two factors of production: capital and labor.

- Mexico is labor-abundant, and the US is capital-abundant.

- **Model says**:

  ▶ Labor is relatively cheap in Mexico, capital is relative cheap in the US.

  ▶ Mexico should specialize in producing gold, and the US in cars.

  ▶ Mexico should export gold, and imports cars. (opposite for the US).

  ▶ Both the US and Mexico better off when trading.

The Heckscher–Ohlin Model

Data makes clear that Latin American countries relatively labor-abundant in comparison to high-income countries (even to average world country).

	1990	2017
	Capital/labor	Capital/labor
Argentina	1,477	5,882
Bolivia	218	1,634
Brazil	1,555	2,941
Chile	1,685	6,789
Colombia	675	2,649
Costa Rica	1,301	4,491
Ecuador	895	3,343
El Salvador	350	1,496
Guatemala	336	1,342
Honduras	576	1,332
Mexico	2,000	4,592
Nicaragua	139	1,381
Panama	1,511	12,989
Paraguay	609	2,348
Peru	513	2,458
Uruguay	810	4,903
Venezuela, RB	616	8,488
Latin America	1,354	3,675
Low income	117	–
Middle income	546	3,789
High income	9,783	17,900
World	2,489	6,081

Source: World Bank (2019) and computation by authors.

Note: Data for Venezuela is from 2014.

Stolper–Samuelson Theorem

▶ Using the Heckscher–Ohlin framework, Wolfgang Stolper and Paul Samuelson derived in 1941 an important theorem.

▶ **Stolper–Samuleson Theorem**.

- If there is perfect competition, constant returns-to-scale technology, and equality between the number of factors and products

- Then, a rise in the relative price of one good leads to a rise in the real return of the factor which is most intensively used in its production and, conversely, to a fall in the real return of the other factor.

▶ **Implications.** Trade can affect the income distribution.

- Trade increases the price of the abundant factor of production.

- Trade decreases the price of the scarce factor of production.

Stolper–Samuelson Theorem

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▶ **Exercise**. Start in autarky, then open the economy to trade.

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▶ **Effects in Mexican industries.**

   • Mining industry expands.

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▶ **Effects in Mexican industries.**

- Mining industry expands.
  ▶ Mexico has comparative advantage in gold, and US demands gold.

- Car industry shrinks.

▶ **Factor price effects in Mexico.**

- Wages increase.

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▶ **Effects in Mexican industries.**

- Mining industry expands.
    ▶ Mexico has comparative advantage in gold, and US demands gold.

- Car industry shrinks.

▶ **Factor price effects in Mexico.**

- Wages increase.
    ▶ Rising demand for labor.

- Returns to capital decrease.

$\implies$ Income distribution changes (in favor of laborers over capitalists).

Thank You!