International Trade and Policy

WEEK 1 - **Introduction: The Foundations of International Trade**

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Our Roadmap for Today

1. Mercantilism: The flawed idea that started it all.

2. Absolute Advantage: Adam Smith's simple case for trade.

3. Comparative Advantage: David Ricardo's powerful insight (even if you're the best at everything).

4. The Ricardian Model: A formal look at production, prices, and the pattern of trade.

5. Production Possibilities in an Open Economy: How trade expands what a country can consume.

Why Do Nations Trade?

- To acquire goods and services that they cannot produce themselves (e.g., tropical fruits in cold climates).
- To obtain goods more cheaply than they can produce them at home.
- To benefit from economies of scale and larger markets.
- To increase the variety of goods available for their citizens.

The Global Economy in One Picture

Text Box 1: "World Merchandise Trade: Over $20 Trillion Annually"

Text Box 2: "Commercial Services Trade: Over $5 Trillion Annually"

Text Box 3: "Trade accounts for ~60% of global GDP"

The Concept of "Autarky"

To measure the benefits of trade, economists use a concept called **'autarky'** .

This is a hypothetical situation where a country does not trade at all. It's like a single family on a remote island trying to grow all its own food, build its own shelter, and make its own clothes. It's possible, but it's incredibly limiting.

By comparing this self-sufficient state to an open economy, we can clearly identify the advantages that trade provides

What Are the "Gains from Trade"?

- **Definition:** The improvement in a country's welfare (the well-being of its citizens) that becomes possible when it moves from autarky to free trade.
- **Two Main Sources of Gains:**
  - **Differences (Inter-industry trade):** Countries have different resource s, climates, and worker skills. Trade lets them focus on what they're naturally good at.
  - **Economies of Scale (Intra-industry trade):** Trade creates larger markets, allowing firms to produce more, which lowers the average cost per unit.

Foundational Concepts

- **Core Belief:** A nation's wealth was measured by its stock of gold and silver (specie).
- **Goal:** Maximize exports and minimize imports to generate a trade surplus, paid for in gold.
- **Policy:** High tariffs, quotas, and government regulation to restrict imports

The Problem with Mercantilism

- **Zero-Sum Game:** It viewed trade as a winner and a loser. If one country has a surplus, its trading partner must have a deficit.
- **Hume's Price-Specie Flow Doctrine:** A sustained trade surplus would bring in so much gold that it would increase the money supply, causing inflation. This would make the country's goods more expensive and its trading partners' goods cheaper, automatically reversing the surplus .
- **Limited Consumption:** By restricting imports, it limited the choices and purchasing power of its own people.

Adam Smith and Absolute Advantage

- **The Wealth of Nations (1776):** Advocated for free trade and specialization.
- **Concept:** A country has an **absolute advantage** in producing a good if it can produce it using **fewer resources** (e.g., labor hours) than another country .
- **Implication:** Countries should specialize in what they do more efficiently a nd trade for the rest. This makes both countries better off.

A Numerical Example of Absolute Advantage

Good	Country A (Hours/ unit)	Country B (Hours/ unit)
Cars	**10**	20
Bikes	15	**10**

Analysis:

- Country A is more efficient at making **Cars** (10 < 20) → **Absolute Advantage in Cars**.
- Country B is more efficient at making **Bikes** (10 < 15) → **Absolute Advantage in Bikes**.
- **Conclusion:** Specialization and trade are clearly beneficial.

Introducing David Ricardo and Comparative Advantage

- **The Problem:** What if one country is better at producing *everything*? Does trade still make sense?
- **David Ricardo (1817):** Yes! Trade can still be beneficial based on **comparative advantage**.
- **Key Concept:** A country has a comparative advantage in producing a good if it can produce it at a **lower opportunity cost** than another country

The Magic of Opportunity Cost

Every path you choose transforms the roads not taken into phantom possibilities the career you didn't pursue becomes a silent mentor, the love you didn't chase becomes a standard for present joy, and the sleep you sacrificed for ambition becomes a wistful reminder of rest's true value revealing how opportunity cost magically defines our lives not by what we gather, but by the beautiful possibilities we willingly surrender to inhabit the reality we choose.

The Magic of Opportunity Cost

- **Country A's Opportunity Cost of 1 Car:** It could have used those 10 hours to make 0.66 bikes (10 hours / 15 hours per bike). *To make 1 car, A gives up 0.66 bikes.*
- **Country B's Opportunity Cost of 1 Car:** It could have used those 20 hours to make 2 bikes (20 hours / 10 hours per bike). *To make 1 car, B gives up 2 bikes.*

Determining the Pattern of Trade

- **Compare Opportunity Costs:**
  - **Cars:** Country A's opportunity cost (0.66 bikes) is **lower** than Country B's (2 bikes).
  - **Bikes:** Country B's opportunity cost of making a bike is 0.5 cars (10 hours / 20 hours per car). Country A's opportunity cost of making a bike is 1.5 cars (15 hours / 10 hours per car). Country B's cost (0.5 cars) is **lower**.
- **The Pattern of Trade:**
  - **Country A has a comparative advantage in CARS** (lower opportunity cost).
  - **Country B has a comparative advantage in BIKES** (lower opportunity cost).

The Ricardian Model: Assumptions

- To explore this idea, we need a simple model with clear assumptions :
    1. **Two countries:** Home and Foreign.
    2. **Two goods:** (e.g., Wine and Cheese).
    3. **One factor of production:** Labor.
    4. **Labor is perfectly mobile** between industries *within* a country, but immobile *between* countries.
    5. **Constant returns to scale:** The labor needed to produce one unit is fix ed (e.g., always 1 hour for cheese, 2 for wine).
    6. **Perfect competition.**
    7. **No transportation costs.**

Production Possibilities in a Closed Economy (Autarky)

- **Definition:** The PPF shows the maximum amount of two goods an economy can produce given its resources and technology .
- **In the Ricardian Model:** Because labor is the only input and productivity is constant, the PPF is a **straight line** .
- **Visual:** A simple graph with "Wine" on the Y-axis and "Cheese" on the X-axis. A straight, downward-sloping line labeled "PPF."
- **Slope of PPF = Opportunity Cost of Cheese (in terms of wine).**

Life Without Trade: The Autarky Equilibrium

- In autarky, a country's consumption is limited by its production. It can only consume what it makes.
- The production/consumption point is somewhere on the PPF.
- In a competitive market, the economy will produce where the relative price of the two goods equals the opportunity cost (the slope of the PPF)

Opening the Borders: The Basis for Trade

Assume Home's autarky relative price of cheese (Pc/Pw) is lower than Foreign's.

Interpretation: Cheese is relatively cheaper in **Home** than in **Foreign**. Wine is relatively cheaper in Foreign.

This difference in relative prices (driven by differences in labor productivity/opportunity cost) is the basis for trade

Conclusion: Home has a comparative advantage in Cheese. Foreign has a comparative advantage in Wine.

The Response to Trade: Specialization

- Home producers see they can get a higher price for cheese by exporting. They shift resources from wine to cheese.
- Foreign producers shift resources from cheese to wine.
- This continues until each country is **completely specialized** in the good w here it has a comparative advantage .
- A new, single **world relative price** emerges, somewhere between the two autarky prices

The Gains from Trade: Expanding Consumption

- **The Trading Possibilities Line:** Unlike in autarky, a country's consumption is no longer limited by its own PPF. It can trade its specialized production for the other good at the world price.
- The "budget constraint" for consumers is now different from the PPF.
- This allows a country to consume **outside** its own PPF.

Visualizing the Gains from Trade

Consumption Possibilities Expand" means that an individual, household, or economy can afford to purchase a greater quantity and variety of goods and services than before, typically due to an increase in income, a decrease in pr ices, or access to new products.

The Real World: Many Goods

- The two-good model can be extended to many goods.
- Countries rank goods by their relative labor productivities (or comparative advantage) .
- **Example:** Calculate the ratio of Home's labor required to Foreign's labor r equired for each good.
- **The Cutoff:** The world relative wage determines which goods are produce d where. Home will produce goods where its productivity advantage is gre ater than its wage disadvantage.

Key Takeaways: The Ricardian Model

- **Basis for Trade:** Differences in labor productivity (technology) between countries .
- **Pattern of Trade:** A country exports the good in which it has a comparative advantage (lowest opportunity cost).
- **Gains from Trade:** Both countries gain because trade allows them to consume beyond their production possibilities.
- **Policy Implication:** Provides a powerful argument for free trade over protectionism

Production Possibilities in an Open Economy

- The **production possibilities** of an open economy are the same as for a closed one. The PPF is still defined by its resources and technology.
- However, its **consumption possibilities** are vastly different.
- International trade acts as an "indirect method of production." A country can "produce" a good by making something else and trading for it

The Trading Possibilities Line: Your New Budget Constraint

- The terms of trade (the world relative price of your export in terms of your import) determine the slope of the trading possibilities line.
- Favorable terms of trade (a higher price for your exports) allow you to consume even more.
- **Example:** If a country specializes in cheese and the world price of cheese rises, it can buy more wine with the same amount of cheese.

From Autarky to Open Economy: A Summary Example

- **Step 1: Autarky:** Country produces and consumes at point A on its PPF.
- **Step 2: Specialization:** In response to world prices, it moves production t o point S (complete specialization in its comparative advantage good).
- **Step 3: Trade:** It exports some of good X and imports good Y.
- **Step 4: New Consumption:** It consumes at point C on the trading possibil ities line, which is outside the PPF.

A Note on Realism: Increasing Opportunity Costs

- The Ricardian model assumes constant costs (straight-line PPF), leading to complete specialization.
- In reality, resources are not all equally good at producing everything (*e.g., some land is better for wheat, some for corn*). This leads to **increasing opportunity costs** (bowed-out PPF) .
- Under increasing costs:
    a. Countries tend to **partially specialize**, not completely.
    b. The PPF is bowed, and the trading line touches it at the production point.
    c. The gains from trade still exist but are slightly more complex.

Key Concepts Review

- ✓ **Autarky:** A state of no trade.
- ✓ **Gains from Trade:** The increased welfare from trading versus not trading.
- ✓ **Absolute Advantage:** Producing a good with fewer resources.
- ✓ **Comparative Advantage:** Producing a good at a lower opportunity cost.
- ✓ **Opportunity Cost:** The value of the next best alternative given up.
- ✓ **Pattern of Trade:** Who exports what (determined by comparative advantage).
- ✓ **Production Possibilities Frontier (PPF):** Shows maximum possible production.
- ✓ **Trading Possibilities Line:** Shows maximum possible consumption with trade.

Questions for Discussion / Debate

- If trade is so beneficial, why do we see so much political opposition to it (e.g., tariffs, trade wars)?
- The Ricardian model shows gains for the country as a whole. Does that mean *everyone* in the country gains? Who might lose?
- How does the concept of "opportunity cost" apply to your own decisions about studying, working, or pursuing a hobby?

The "So What?" Why This Matters

- **Why Should We Care?**
  a. **For Policymakers:** These theories provide the rationale for free trad e agreements (like NAFTA/USMCA, EU) and for opposing protection ism (tariffs, quotas).
  b. **For Business:** Understanding comparative advantage helps firms make decisions about where to locate production and which markets to enter (global supply chains) .
  c. **For Citizens:** It explains the variety and lower prices of goods in stores, and also helps us understand the impact of trade on jobs and industries

Thank You

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