

EE451

Chapter 2: Explanations for Trade

Nitinant Wisawaisuan
18 January 2019

Key Issues

- Why do countries engage in international trade?
 - Where do gains come from? How are they distributed among trade partners?
- What is the structure (or direction or pattern) of trade?
 - Laws governing international allocation of resources and trade flows
- What are the terms of trade?
 - At what prices are the exported and imported goods exchanged?

Explanations for Trade

- Mercantilism
- Classical Theory
 - Absolute Advantage: Adam Smith
 - Comparative Advantage: David Ricardo
- Neo-Classical Theory
- I-O Based Theory
- Economic Geography

Mercantilism

- The collection of economic thought that came into existence in Europe during the period from 1500 to 1750.
- Not a formal school of thought, but rather a collection of similar attitudes toward domestic economic activity and the role of international trade.
- Often referred to as *'the political economy of state building'*.

Mercantilism: Key Idea

- National wealth was reflected in a country's holding of *precious metals* (gold and silver), which became the means for increasing wealth and well-being.
- Viewed **labour** as the most critical factor of production and **merchant class** as the most critical group to the success of economic system.

Mercantilism

- Economic systems consist of three components:
 - A manufacturing sector
 - A rural sector (domestic hinterland)
 - The foreign colonies (exports are a blessing because they lead to an inflow of precious metals).
- Emphasis on the need to maintain trade surplus
- Imports are a burden because they lead to an outflow of bullion.

Mercantilism

- Implication to the role of government:
 - Pursue **low wage policy** so that the country's product would be more competitive in world markets.
 - wages were not market determined
 - distortion/ misallocation of resources
 - Advocate protectionism:
 - Encourage export via subsidy
 - Discourage import via tariffs
- With a belief that an economy was operating at less than full employment level, an increase in money supply (through wealth) would stimulate economy, resulting in growth of output and employment.

Mercantilism

- Overall, for Mercantilism, trade was considered a *'zero-sum game'*.
- A nation's wealth is accumulated at the expense of another nation.

Attacks on Mercantilism

- (I) David Hume: the price-specie-flow mechanism
 - Accumulation of gold by means of a trade surplus would lead to an increase in the money supply and therefore to an increase in prices and wages → reduce country's competitiveness
 - It is not possible for a country to maintain a positive balance of trade indefinitely.

Attacks on Mercantilism

- (II) Adam Smith: the invisible hand
 - Nation's wealth was reflected in productive capacity, not in its holdings of precious metals.
 - Attention turned from acquiring gold to enlarging the production of goods and services.
 - Self-interest → specialisation
 - Self-interest was the catalyst, and competition was the automatic regulation mechanism.
 - All nations can benefit from free trade (*laissez-faire*)
 - Concluded that countries should specialise in and export those commodities in which they had an absolute advantage and should import those commodities in which the trading partner had an absolute advantage.

Adam Smith's *Wealth of Nation* (1776)

- An analysis of economic reasons for advocating a policy of *free trade*.
- Many people 'still' need to be convinced of the benefits of international trade.
- Smith put many different arguments and elements together in a coherent and systematic framework, organised using a few general principles
 - Provide a new way of thinking about political economy

Adam Smith's argument for free trade

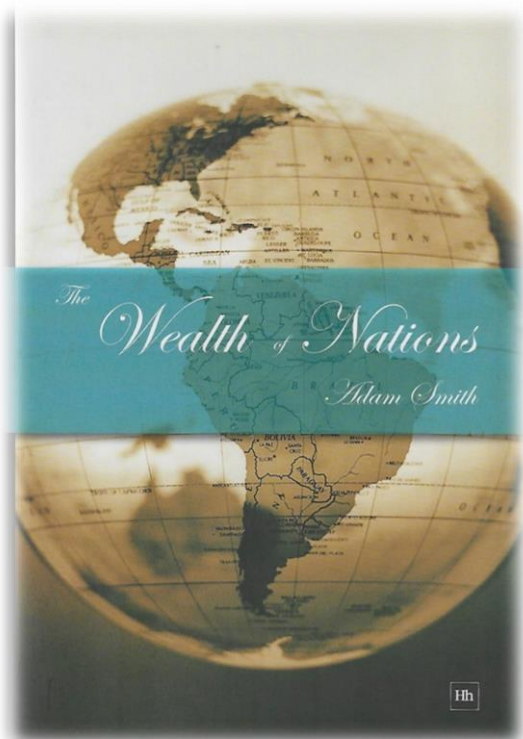
You do not make your own clothes or shoes but buy them from your tailor or shoemaker to enjoy the benefits of increased specialisation.

You concentrate on producing what you do best.

International trade, similarly, allows countries to concentrate on producing what they do best.

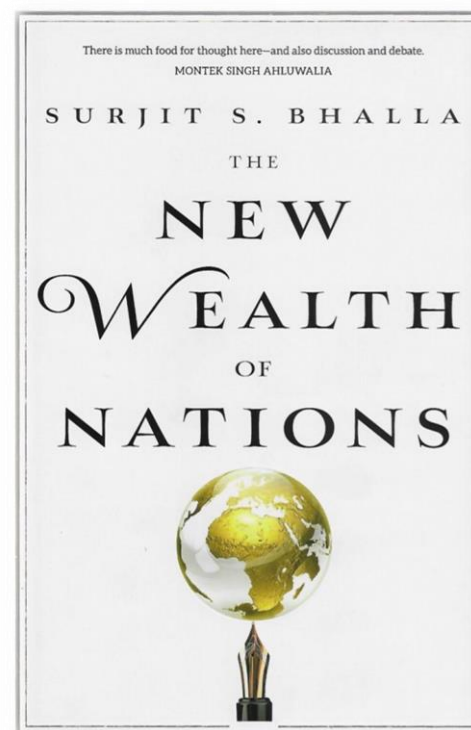
The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgement with which it is any where directed, or applied, seem to have been the effects of the division of labour

Adam Smith, *The Wealth of Nations*



Globalisation does induce greater trade, more travel, and faster dissemination of new ideas. But it is knowledge that allows technology to develop, and knowledge for innovation can only come about from education. Further, as the opening limerick showed, income at the end of education is what drives most individuals. Education is the springboard for faster and more efficient globalisation.

Surjit S. Bhalla, *The New Wealth of Nations*



Trade in a One-Factor World: Assumptions

- There are two countries in the world (Home and Foreign).
- Each of the two countries produces two goods (says, wine and cheese).
- Labour is the only factor of production.
 - The supply of labour is fixed in each country.
 - The productivity of labour in each good is fixed.
 - Labour is mobile across industries but not mobile across countries (no international factor movement)

Trade in a One-Factor World: Assumptions

- Perfect competition prevails in all markets.
- A labour theory of value is employed to determine the pattern of trade.
 - Goods are exchanged for each other at home in proportion to the labour time embodied in them.

Absolute Advantage

Country	Output per unit of labour	
	Wine	Cheese
USA	2	8
Japan	3	6

Identify which country has an absolute advantage in producing which output → how do you know?

USA: AA in cheese Japan: AA in wine

Absolute Advantage

- A country has an **absolute advantage** in a production of a good if it has a lower unit labor requirement than the foreign country in this good.
- According to Smith,
 - The source of AA was the unique set of natural resources (climate differences) and abilities that characterises the country.
 - Certain advantages could be acquired via the accumulation, transfer and adaptation of skills and technology.

Now look at this example

Country	Output per unit of labour	
	Wine	Cheese
USA	4	8
Japan	1	6

Identify which country has an *absolute* advantage in producing which output → what is ultimate pattern of trade?

Identifying pattern of trade

- In this case, US has an absolute advantage in the production of both products.
- Following previous rationale, all commodities would end up being produced in US. This could have happened if and only if labours were allowed to migrate freely.
- However, labour mobility is not possible across countries.

Now look at this example again

Country	Output per unit of labour		Opportunity cost of producing a car
	Wine	Cheese	
USA	4	8	1C:2F
Japan	1	6	1C:6F

Identify which country has a *comparative* advantage in producing which output → what is ultimate pattern of trade?

Comparative Advantage

Country	Output per unit of labour		Price ratios in autarky
	Wine	Cheese	
USA	2	8	1W:4C
Japan	3	6	1W:2C

Assuming costless exchange between countries, identify the rate of exchange such that both will gain from trade.

How about 1W:2.5C? Also identify levels of gain from trade.

Trade is mutually beneficial → **positive-sum game**

Comparative advantage (David Ricardo)

- Assumptions
 - perfect competition
 - a single factor of production – labour – with constant requirements of labour per unit of output that differ across countries.
- CA is represented by the ability to produce a good at lower cost, relative to other goods, compared to another country.
- In a Ricardian model, comparison is of unit labour requirements; more generally it is of relative autarky prices.

The Concept of Comparative Advantage

- CA lies upon the concept of opportunity cost
 - The opportunity cost reflects trade-offs.
- Pattern of Trade
 - A country has a comparative advantage in producing a good if the **opportunity cost** of producing that good in terms of other goods is **lower** in that country than it is in other countries.
 - With perfect competition and undistorted markets, countries tend to export goods in which they have comparative advantage.

Principle of comparative advantage

If each country exports the goods in which it has comparative advantage (lower opportunity costs), then all countries can, *in principle*, **gain from trade**.

**What Determines
Comparative Advantage?**

Answering this question would help us understand how country differences determine the pattern of trade (in other words, which goods a country exports).

So,.... why trade in classical view?

- Countries engage in international trade for two basic reasons:
 - They are different from each other in terms of climate, land, capital, labour, and technology.
 - They try to achieve scale economies in production.

Basic Conditions underlying Trade

- Production function must differ between the two countries; otherwise trade flows would not arise.
- Driving force behind trade flows is differences in technology.
 - Technical progress makes the production of commodities using fewer resources possible
- International trade enables countries to obtain commodities at lower prices.

Trade with Resource Constraints

Country	Endowment (labour hours)	Labour requirement (hour/unit)	
		Cheese	Wine
Portugal	9,000	1	3
England	16,000	2	4

Identify comparative advantage:

Portugal has CA in producing cheese & England has CA in producing wine.

Trade with Resource Constraints

In autarky:

Portugal produces $6,000C + 1,000W$

England produces $3,000C + 2,500W$

(I) Suppose that two countries exchange good at $1W:2.5C$ and **none of them change production functions**, compare pre-trade and post-trade scenarios.

(II) What if **their production functions can change?** (by complete specialisation)

Trade with Resource Constraints (I)

Country	Situation	Production		Labour requirements (hrs)		
		Cheese	Wine	Cheese	Wine	Total
Portugal	Pre-trade	6,000	1,000	6,000	3,000	9,000
	Post-trade	Export 2,500C for 1,000W				
		Cons: $6,000C(D) - 2,500C(E) + 1,000W(D) + 1,000W(M)$ $= 3,500C + 2,000W$				
		Would have required: $3,500(1) + 2,000(3) = 9,500$ hrs				
England	Pre-trade	3,000	2,500	6,000	10,000	16,000
	Post-trade	Export 1,000W for 2,500C				
		Cons: $3,000C(D) + 2,500C(M) + 2,500W(D) - 1,000W(E)$ $= 5,500C + 1,500W$				
		Would have required: $5,500(2) + 1,500(4) = 17,000$ hrs				

Trade with Resource Constraints (II)

Country	Situation	Production		Labour requirements (hrs)		
		Cheese	Wine	Cheese	Wine	Total
Portugal	Pre-trade	6,000	1,000	6,000	3,000	9,000
	Post-trade	Produces only Cheese: Prod = 9,000C + 0W				
		Cons: 9,000C(D)-5,000C(E) + 2,000W(M) = 4,000C + 2,000W				
		Would have required: 4,000(1) + 2,000(3) = 10,000 hrs				
England	Pre-trade	3,000	2,500	6,000	10,000	16,000
	Post-trade	Produces only Wine: Prod = 0C + 4,000W				
		Cons: 5,000C(M) + 4,000W(D)-2,000W(E) = 5,000C + 2,000W				
		Would have required: 5,000(2) + 2,000(4) = 18,000 hrs				

Summary of Labour Requirements

Country	In autarky	Would have required when	
		Trade & no change in production	Trade & complete specialisation
Portugal	9,000	9,500 (save 500)	10,000 (save 1,000)
England	16,000	17,000 (save 1,000)	18,000 (save (2,000))

After trade

- Both are better off.
 - More goods can be obtained for the same amount of labour time than is possible in autarky.
 - Labour time saved
- If there's a basis for trade, it automatically leads a country towards complete specialisation in the commodity in which it has the comparative advantage.
- Consumption remains diversified across goods as directed by consumer preferences