

EE451

Chapter 2: Explanations for Trade

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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
 - an increase in the money supply
 - then, an increase in prices and wages
 - reduce country's competitiveness
 - It is not possible at all 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

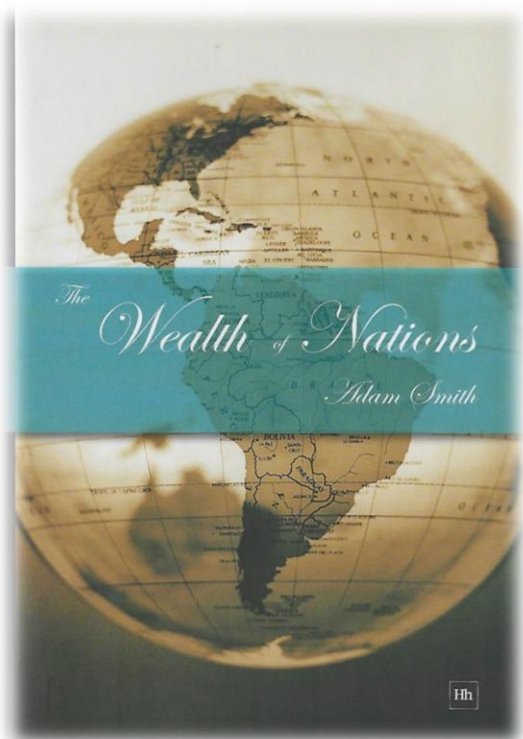
You do not make your own clothes or shoes but buy them from your tailor or shoemaker to enjoy the benefits of increased specialisation.

You concentrate on producing what you do best.

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

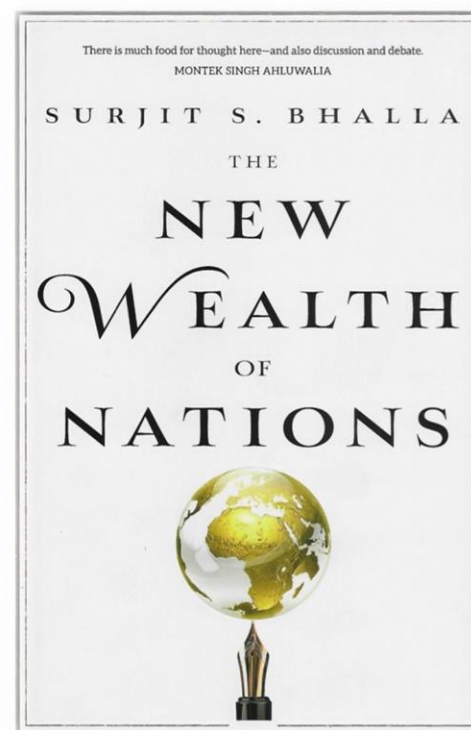
The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgement with which it is any where directed, or applied, seem to have been the effects of the division of labour

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 (AA)

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 (AA)

- 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.

Assignment 1

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)-5,00C(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

Gains from Trade

- What if domestic consumption of cheese in Portugal exceeds 9,000?
- England will continue producing both wine & cheese and trade can occur at autarky price (1W:2C).
- Now all benefits from trade will accrue to Portugal.
- A country whose production of comparative advantage good is incapable of meeting total world demand will experience substantial gains from trade (as others will have to produce to serve their own domestic demand anyway !!).

Mathematical and Graphical Illustrations of Comparative Advantage for a One-Factor Economy

- The **unit labour requirement** is the number of hours of labour required to produce one unit of output.
 - a_{LW} = the unit labour requirement for wine
 - e.g. if $a_{LW} = 2$, then one needs 2 hours of labour to produce one gallon of wine.
 - a_{LC} = the unit labour requirement for cheese
 - e.g. if $a_{LC} = 1$, then one needs 1 hour of labour to produce a pound of cheese.
- The economy's total resources are defined as L which is also the so-called total labour supply or country's endowment
 - e.g. if $L = 120$, then this economy is endowed with 120 hours of labour or 120 workers.

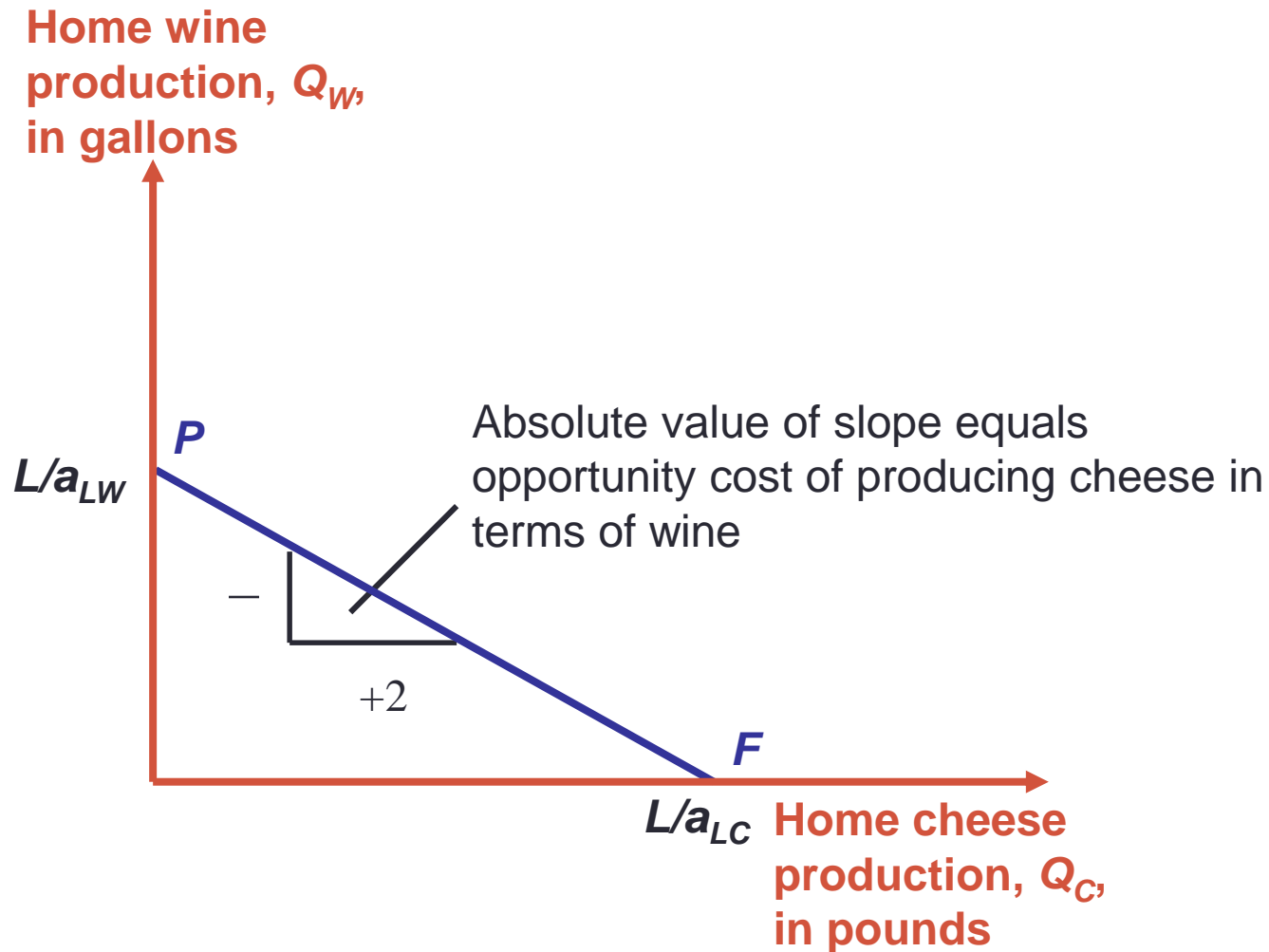
Production Possibilities

- The PPC (or PPF) of 'Home' economy is therefore given by the following equation:

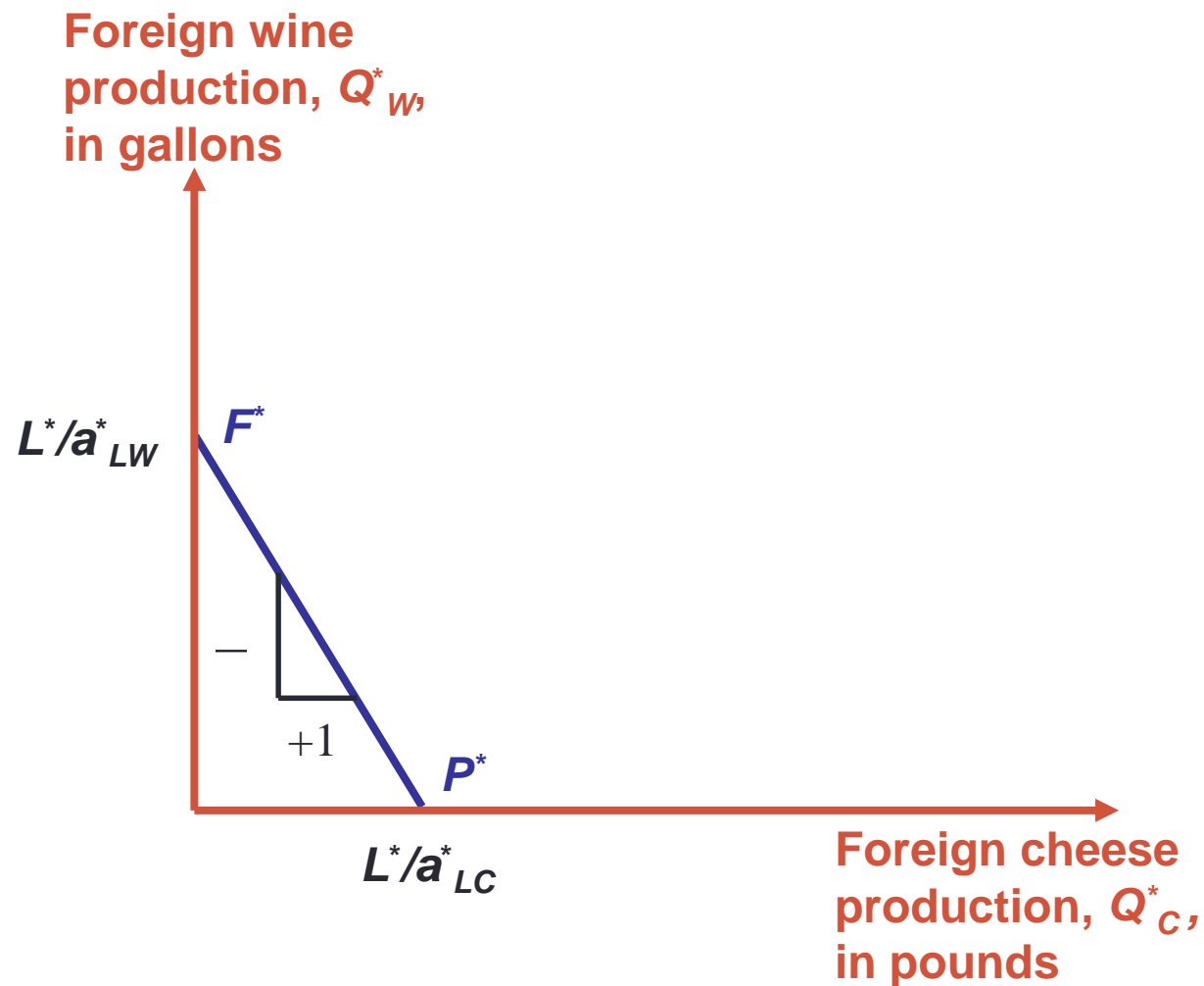
$$a_{LC}Q_C + a_{LW}Q_W = L$$

- Here, we get: $Q_C + 2Q_W = 120$

Home's Production Possibility Frontier



Foreign's Production Possibility Frontier



Relative Prices and Supply

- The particular amounts of each good produced are determined by prices.
- The relative price of good X (cheese) in terms of good Y (wine) is the amount of good Y (wine) that can be exchanged for one unit of good X (cheese).

Relative Prices and Supply

- Given
 - P_C the dollar price of cheese
 - P_W the dollar price of wine.
 - w_C the dollar wage in the cheese industry.
 - w_W the dollar wage in the wine industry.
- Recall $MC = MR$ condition of profit maximisation
- Then under perfect competition, the non-negative profit condition implies:
 - Production of Q_W shall take place only if $P_W / a_{LW} \geq w_W$
 - Production of Q_C shall take place only if $P_C / a_{LC} \geq w_C$

Relative Prices and Supply

- In the absence of trade, both goods are produced, and perfect competition will ensure $P = MC$. That is $P_C / P_W = a_{LC} / a_{LW}$.
- If $(P_C / P_W) >$ its opportunity cost (a_{LC} / a_{LW}) , then the economy will specialise in the production of cheese.

Trade in a One-Factor World

- Assume that $a_{LC}/a_{LW} < a^*_{LC}/a^*_{LW}$
 - This assumption implies that the opportunity cost of cheese in terms of wine is *lower in Home* than it is in Foreign.
 - In other words, in the absence of trade, the relative price of cheese at Home is lower than the relative price of cheese at Foreign.
- Home has a comparative advantage in cheese and will export it to Foreign in exchange for wine.

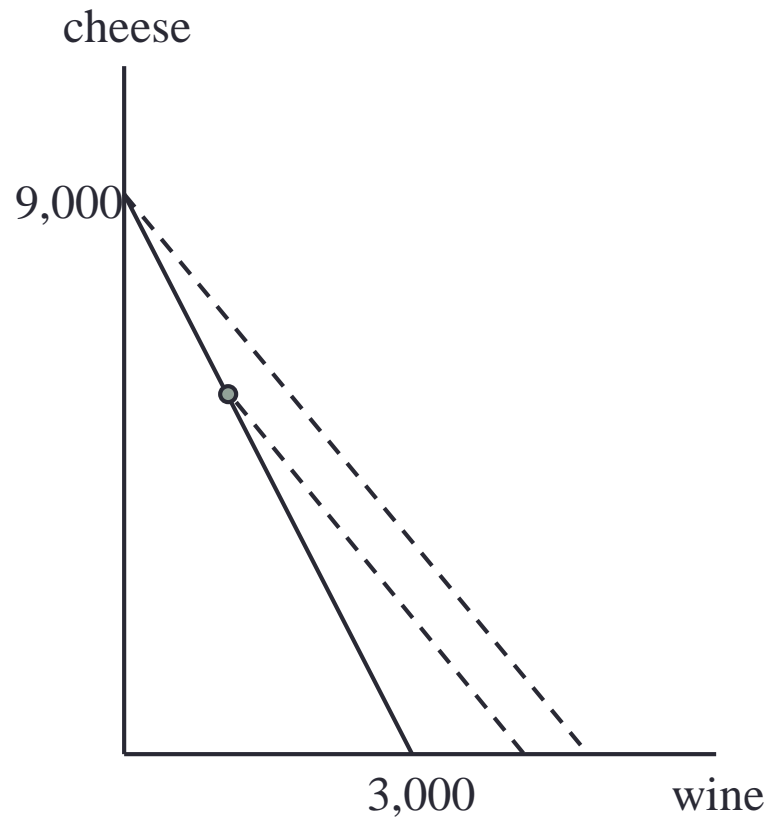
Gains from Trade

- If countries specialise according to their comparative advantage, they all gain from this specialisation and trade.
- We will demonstrate these gains from trade in two ways.
 - First, we can think of a new way of producing goods and services (that is, a new technology).
 - Another way to see the gains from trade is to consider how trade affects consumption in each of the two countries.

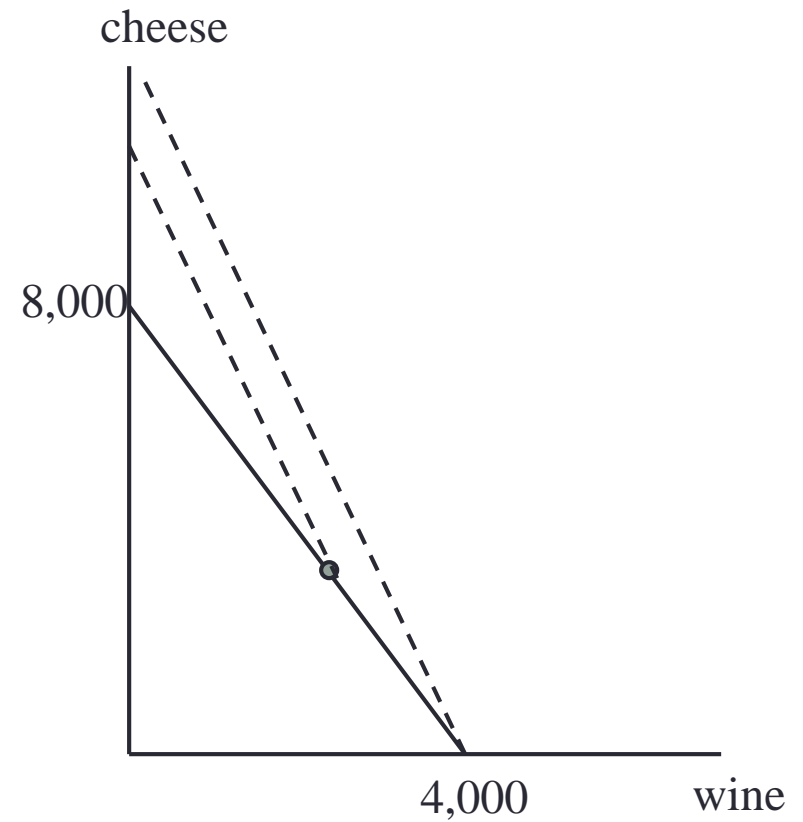
Gains from Trade: Expansion of Consumption

- The consumption possibility frontier states the maximum amount of consumption of a good a country can obtain for any given amount of the other commodity.
- In the absence of trade, the consumption possibility curve is the same as the production possibility curve.
- Trade **enlarges the consumption possibility** for each of the two countries.

After trade



Portugal



England

A Numerical Example

The following table describes production conditions in the two counties:

Unit Labour Requirements

	Cheese	Wine
Home	$a_{LC} = 1$ hour per pound	$a_{LW} = 2$ hours per gallon
Foreign	$a_{LC}^* = 6$ hours per pound	$a_{LW}^* = 3$ hours per gallon

- Home has lower unit labour requirements (higher labour productivity) in both industries.
- The numerical example implies that:

$$a_{LC} / a_{LW} = 1/2 < a_{LC}^* / a_{LW}^* = 2$$

- That is, relative world price that allows trade is

$$1/2 < P_C / P_W < 2$$

Trade in a One-Factor World

- In world equilibrium, the relative price of cheese must lie between these values. Assume that $P_C/P_W = 1$ gallon of wine per pound of cheese.
- Both countries will specialise and gain from this specialisation.
 - Consider Home, which can transform wine to cheese by either producing it internally or by producing cheese and then trading the cheese for wine.
 - Home can use one hour of labor to produce $1/a_{LW} = 1/2$ gallon of wine if it does not trade.
 - Alternatively, it can use one hour of labour to produce $1/a_{LC} = 1$ pound of cheese, sell this amount to Foreign, and obtain 1 gallon of wine. In this case, it saves !

Trade in a One-Factor World

- In the absence of trade, **Foreign** can use one unit of labour to produce $1/a_{LC}^* = 1/6$ pound of cheese using the domestic technology.
- Can it do better by specialising in wine and trading wine with Home for cheese?
 - In the presence of trade, Foreign can use one unit of labour to produce $1/a_{LW}^* = 1/3$ gallon of wine.
 - Since the world price of wine is $P_W / P_C = 1$ pound of cheese per gallon, Foreign can obtain $1/3$ lb of cheese which is more than $1/6$ lb.
 - So it's better off !

Terms of Trade

- TOT = the relative price of the exported commodity.
- The precise TOT reflects relative demand.
- Important for distribution of the gains between the countries.
- The closer the TOT are to a country's internal autarky price ratio, the smaller the gains for that country from int'l trade.
- Equilibrium TOT should bring about balanced trade.
 - Unfortunately, Ricardo didn't suggest how to establish equi TOT.
 - Determination of equi. TOT must be made by the comparative strength and Ed of each country for other's product (reciprocal demand) → offer curve.

Incorporating Wage Rates and An Exchange Rate

- Now we shall assign monetary value to product: $V_i = a_i * w$
- Once price and exchange rate are specified, a unique TOT can be specified.
- If $a_{Ai} w_A e < a_{Bi} w_B$, then country A can export i if and only if

$$\frac{a_{Ai}}{a_{Bi}} < \frac{w_B}{w_A * e}$$

Incorporating Wage Rates and An Exchange Rate

$$\frac{a_{Ai}}{a_{Bi}} < \frac{w_B}{w_A * e}$$

- This implies potential trade flows depend on
 - Relative labour efficiency
 - Relative wage rates
 - The exchange rate
- Changes in the wage rate can alter the degree of cost advantage to a country.

Given exchange rate:
1USD = Y100

Country	Wage/h r	Wine		Cheese	
		Labour (hrs/unit)	Price	Labour (hrs/unit)	Price
USA	\$1	1	\$1	3	\$3
Japan	Y50	3	Y150	4	Y200

- For wine: $\frac{a_{Ui}}{a_{Ji}} = \frac{1}{3}$
- For cheese: $\frac{a_{Ui}}{a_{Ji}} = \frac{3}{4}$

$$\left. \begin{array}{l} \frac{a_{Ui}}{a_{Ji}} = \frac{1}{3} \\ \frac{a_{Ui}}{a_{Ji}} = \frac{3}{4} \end{array} \right\} \frac{w_J}{w_U * e} = \frac{50}{1 * 100} = \frac{1}{2}$$

So USA exports wine and Japan exports cheese.

What if e changes to 1USD = Y50?

Comparative Advantage with Many Goods

- **Setting Up the Model**

- Both countries consume and are able to produce a large number, N , of different goods.

- **Relative Wages and Specialisation**

- Goods will always be produced where it is cheapest to make them.
 - For example, it will be cheaper to produce good i in Home if $wa_{Li} < w^*a_{Li}^*$, or by rearranging if $a_{Li}^*/a_{Li} > w/w^*$.

With an exchange rate: USD0.8 = 1 euro

	France (euros)	USA (\$)	a_{Fi}/a_{Ui}
Wage/hr	2	3.2	
Production (labour requirement: hrs)			
Wine	4	3	1.3
Cloth	6	5	1.2
Hardware	24	10	2.4
Wheat	5	5	1.0
Cheese	7	3	2.3
Poultry	12	4	3.0

$$\begin{aligned} \frac{w_U}{w_F * e} &= \frac{3.2}{2 * 0.8} \\ &= \frac{3.2}{1.6} \\ &= 2 \end{aligned}$$

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With an exchange rate: USD0.8 = 1 euro

Labour requirements in France

$$\frac{w_U}{w_F * e} = 2$$



Wheat
(1.0)

Cloth
(1.2)

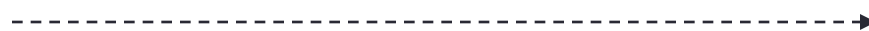
Wine
(1.3)

Cheese
(2.3)

Hardware
(2.4)

Poultry
(3.0)

The most CA



The least CA

Suppose now an increased preferences for leisure causes the wage rate in USA to rise to \$4/hour.

With an exchange rate: USD0.8 = 1 euro

Labour requirements in France

$$\frac{w_U}{w_F * e} = \frac{4.0}{2(0.8)} = 2.5$$

Wheat (1.0)	Cloth (1.2)	Wine (1.3)		Cheese (2.3)	Hardware (2.4)	Poultry (3.0)
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The most CA



The least CA

USA's cost advantage in cheese and hardware has been eroded.

Incorporation of Transportation Cost

- Assume:
 - All transport costs paid by importers
 - Transport costs are measured in terms of their labour content → so perceived as increasing amount of relative labour required per unit of output in the exporting country.
- Now export conditions become:
$$\frac{a_{Ai} + tr_i}{a_{Bi}} < \frac{w_B}{w_A * e}$$
- This allows for the possibility that certain commodities might not be imported by either country.

Recall this example:
 given $e = \text{US\$}0.8 = 1 \text{ euro}$ and
 transport cost = 3 labour hours.

	France (euros)	USA (\$)	a_{Fi}/a_{Ui}
Wage/hr	2	3.2	
Production (labour requirement: hrs)			
Wine	4	3	1.3
Cloth	6	5	1.2
Hardware	24	10	2.4
Wheat	5	5	1.0
Cheese	7	3	2.3
Poultry	12	4	3.0

$$\begin{aligned} \frac{w_U}{w_F * e} &= \frac{3.2}{2 * 0.8} \\ &= \frac{3.2}{1.6} \\ &= 2 \end{aligned}$$

Recall this example:
 given $e = \text{US\$}0.8 = 1 \text{ euro}$ and
 transport cost = 3 labour hours.

	France (euros)	USA (\$)	$a_{Fi} + tr/a_{Ui}$
Wage/hr	2	3.2	
Production (labour requirement: hrs)			
Wine	4+3	3	2.3
Cloth	6+3	5	1.8
Hardware	24+3	10	2.7
Wheat	5+3	5	1.6
Cheese	7+3	3	3.3
Poultry	12+3	4	3.75

$$\begin{aligned} \frac{w_U}{w_F * e} &= \frac{3.2}{2 * 0.8} \\ &= \frac{3.2}{1.6} \\ &= 2 \end{aligned}$$

With a transport cost = 3 labour hours

Labour requirements in France

$$\frac{w_U}{w_F * e} = 2$$



Wheat (1.6)	Cloth (1.8)	Wine (2.3)	Hardware (2.7)	Cheese (3.3)	Poultry (3.75)
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The most CA -----> The least CA

Now the comparative advantage in producing wine is overcome by the cost of transportation. So wine becomes a non-traded good even though it is a tradable good !

Adding Transport Costs

- The result of introducing transport costs makes some goods **nontradable**, esp bulky and heavy products.
- In some cases transportation is virtually impossible.
 - Example: Services such as haircuts and auto repair cannot be traded internationally.
- There are three main reasons why specialisation in the real international economy is not extreme:
 - The existence of more than one factor of production.
 - Countries sometimes protect industries from foreign competition.
 - It is costly to transport goods and services.

Trade between multiple countries

- Two-good, three-country Ricardian framework

	Labour requirement (hrs)		Autarky price ratio
	Fish	Poultry	
Sweden	4	10	1P:2.5F
Germany	5	15	1P:3F
France	5	20	1P:4F

Equilibrium TOT should be somewhere between 1P:2.5F and 1P:4F. → ambiguity in the pattern of trade exists until the ultimate equilibrium TOT are specified.

Exercise

Let's find a partner and work on the following problems together

China and the United States are producing a variety of products using only labour as a factor of production and are trading between each other. Please analyse changes in trade pattern in response to the following circumstances.

- a) Rapid increase in wage in China.
- b) Given Chinese Yuan, US dollar has depreciated.
- c) Improvement of nationwide labour productivity in the United States allows all industries to enjoy lower labour requirement by the same proportion.

Comments on the classical theory of trade

- Based on the labour theory of value
 - Goods exchange for one another according to the relative amounts of labour they embody.
- Oversimplification
 - Labour is not homogeneous.
 - Labour is not the sole factor of production.
 - The cost of commodity includes not only the cost of factors, but also the length of time that labour is invested in production.
- Seriously incomplete
 - While the model bases trade on differences in productivity levels between countries, nowhere does it explain why these differences exist.
- Upon complete specialisation
 - In reality, countries still produce import-competing goods.

Decomposition of Gains from Trade

- Total gains from trade
- Equals consumption gains (from exchange)
 - Even if production remains unchanged, the new relative prices enhance welfare of the country
- Plus production gains (from specialisation)
 - Provided that factor movement is possible between industries, further gain occurs.

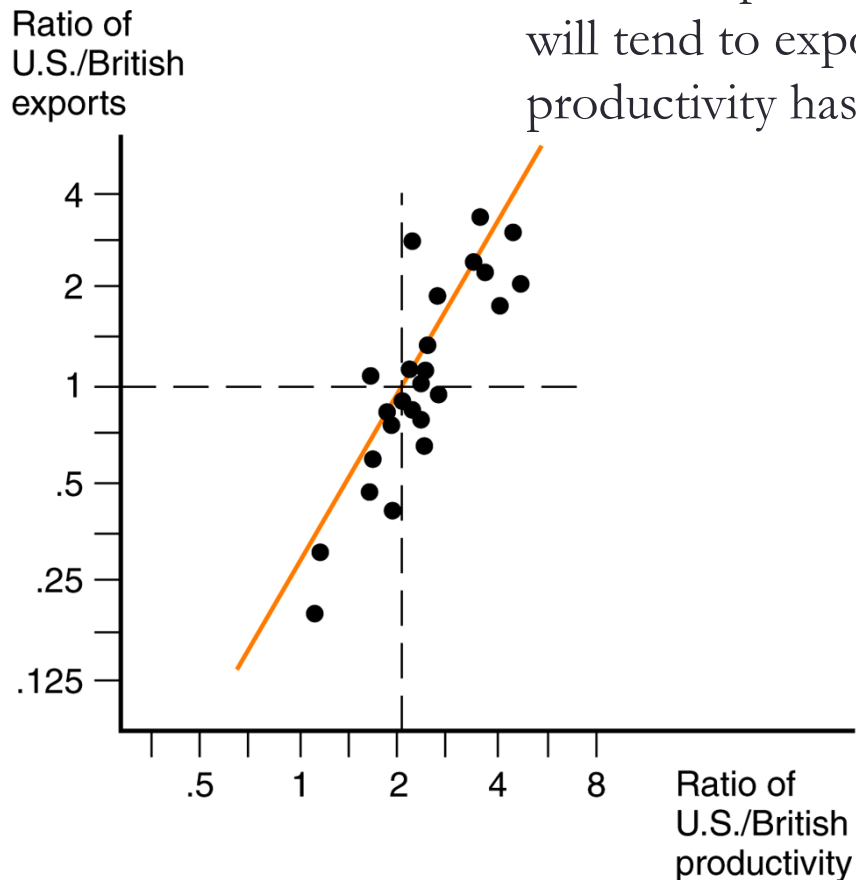
Empirical Evidence on the Ricardian Model

- The link between relative labour productivity, relative wages, and the structure of exports.
- In practice,

$$\begin{aligned} \text{unit labour cost} &= \text{labour cost per unit of output} \\ &= \frac{\text{total wage bill (incl fringe benefits)}}{\text{industry's output}} \end{aligned}$$

Empirical Evidence on the Ricardian Model

The basic prediction of the Ricardian model that countries will tend to export goods in which they have relatively high productivity has been confirmed by a number of studies.



Productivity and Exports

Revealed Comparative Advantage

- Balassa (1974)

$$RCA_i = 100 * \frac{(X_i / X_{iw})}{(X / X_w)}$$

X_i is the value of a country's exports of commodity i ;

X_{iw} is the value of total world exports of commodity i .

X is the value of a country's exports in all commodities;

X_w is the value of total world exports in all commodities.

So RCA measures ratio of the share of a country in exporting i to the country's share of trade in all goods.

Revealed Comparative Advantage

- Yilmaz (2003)

$$RCA = \ln \left[\frac{X_i}{M_i} \right] \left(\frac{\sum_{i=1}^n X_i}{\sum_{i=1}^n M_i} \right) * 100$$

M_i is the value of a country's imports of commodity i ;

Findings: RCA between Thailand and new accession countries of the EU

HS-2 digit	2	7	16	40	61	62	64	71	84	85	87
Malta	X=0	-156.48	X=0	53.37	-52.3	72.24	48.01	-142.32	-71.49	-43.68	-17.15
Estonia	-207.04	-286.28	45.03	-96.15	51.18	101.65	-26.19	22.47	-128.73	14.09	-129.31
Latvia	X=0	-414.78	7.5	-105.11	85.76	126.3	-311.26	27.7	-220.87	-185.14	-285.78
Lithuania	-168.93	-178.29	160.14	-205.78	117.77	166.56	-58.47	278.89	-213.31	-52.54	-199.44
Poland	113.83	29.57	113.87	40.87	63.09	132.79	-14.49	164.26	-46.17	-11.38	-36.31
Czech Rep.	-181.14	-339.41	-361.67	26.7	9.52	45.66	-8.63	62.84	6.27	13.56	21.42
Slovakia	-340.75	-378.62	-269.22	102.95	154.24	285.98	194.31	-128.82	-48.07	6.84	101.47
Hungary	163.38	23.8	200.44	29.86	56.34	148.71	88.47	-37.06	32.07	42.1	-66.3
Slovenia	-60.56	-482.7	57.58	80.42	-7.73	67.15	-33.4	-138.94	-38.75	10.66	1.59
Cyprus	-43.57	29.03	-117.36	-116.12	-64.82	-20.6	-118.51	-43.43	-82.88	-76.85	-18.59
Thailand	657.04	843.89	1117.98	355.28	708.7	588.55	678.49	148.68	47.09	125.94	181.69

Source: Wisaweisuan (2004)

Interpretation

- Thailand:
 - $RCA > 0$ in all product lines, indicating Thailand's comparative advantage over European countries.
- New members
 - Poland possesses comparative advantage in all but electric, electronic, (84, 85), auto (87) and footwear (64).
 - Hungary loses former EU-15 only in the lines of auto (87) and jewelry (71).
 - All new members (except Cyprus) have comparative advantage in producing textiles and garment.

Summary

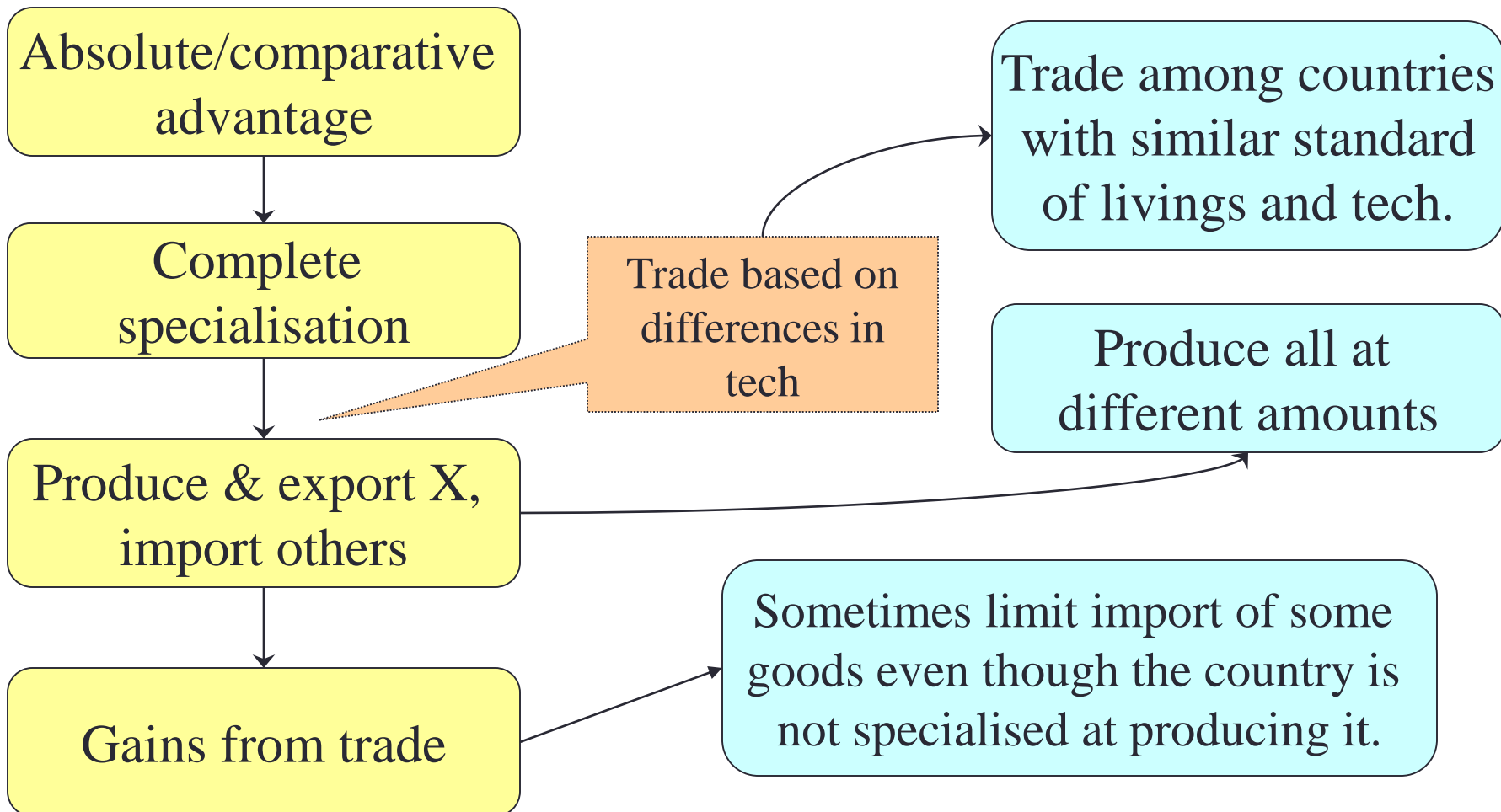
- We examined the Ricardian model, the simplest model that shows how differences between countries give rise to trade and gains from trade.
- In this model, labour is the only factor of production and countries differ only in the productivity of labor in different industries.
- In the Ricardian model, a country will export that commodity in which it has comparative (as opposed to absolute) labour productivity advantage.
- Extending the one-factor, two-good model to a world of many commodities makes it possible to illustrate that transportation costs can give rise to the existence of nontraded goods.

Summary

- The fact that trade benefits a country can be shown in either of two ways:
 - We can think of trade as an indirect method of production.
 - We can show that trade enlarges a country's consumption possibilities.
- The distribution of the gains from trade depends on the relative prices of the goods countries produce.

Theory

Practice/Facts



Politics of trade