

ECC1000 Notes

Topic 1 – Introduction to Microeconomics (Chapters 1, 2 & 3)

Economics is the study of how society manages and allocates its scarce resources

- What goods and services will be produced (**positive analysis**) – described the world as it is
- What goods and services should be produced (**normative analysis**) – prescribes how the world should be **eg. policy making**
- How individual households and firms make decisions about resource allocation (microeconomics)
- How a national economy allocates resources (macroeconomics)

All economic decisions **involve choice**

Thinking like an Economist – Three Key Factors in Decision Making:

1. Every economic decision entails a **tradeoff**:

- If a resource is allocated to one activity, it cannot be allocated to another (there is no free lunch)
- Examples of a tradeoff:
 - Work vs Leisure
 - Guns vs Butter
 - Equity vs Efficiency
 - Efficiency means that society is getting the most it can from its scarce resources
 - Equity means that the benefits of those resources are distributed fairly among society's members
 - **For example:** individual income tax, asks the financially successful to contribute more than others to support the government
 - Although these policies have the benefit of achieving greater equity, they have a cost in terms of reduced efficiency – people may work less and produce fewer goods and services
 - As the government tries to cut the economic pie into more equitable slices, the pie may get smaller

2. **Opportunity cost** (of an activity) is the value of the best alternative you must give up for that activity

- In order to work out the opportunity cost, you need to know the second best alternative!

3. Rational people think at the **margin**

- **Marginal analysis** – an individual, firm or society should take an action if, and only if, the extra benefits from taking the action are at least as great as the extra costs
- **Example:**
 - It costs \$20,000 to hire, fuel and crew a plane with 100 seats to Bali and back.
 - The extra cost of each additional passenger (fuel, food, airport fees, etc.) is \$50 per passenger.
 - You set the price of a ticket at \$400 and sell 80 tickets (total revenue is \$32,000 and total cost is $\$20,000 + \$50 \times 80 = \$24,000$).
 - Just before take-off a new potential passenger offers you \$100 to join the flight.
 - Should you accept the offer?
- Yes, you should accept the offer because you make an extra \$50 of profit – the extra revenue of \$100 is greater than the extra cost of \$50 of the last minute passenger

How do economists proceed?

Through the scientific method:

- 1) Observation of real world phenomena
- 2) Construction of a model (verbal, graphical, mathematical)
 - Identification of relevant relationships
 - Specification about assumptions
- 3) Logical deductions from the model
- 4) Conclusions with testable predictions
- 5) Comparison with actual economic behaviour

The importance of assumptions:

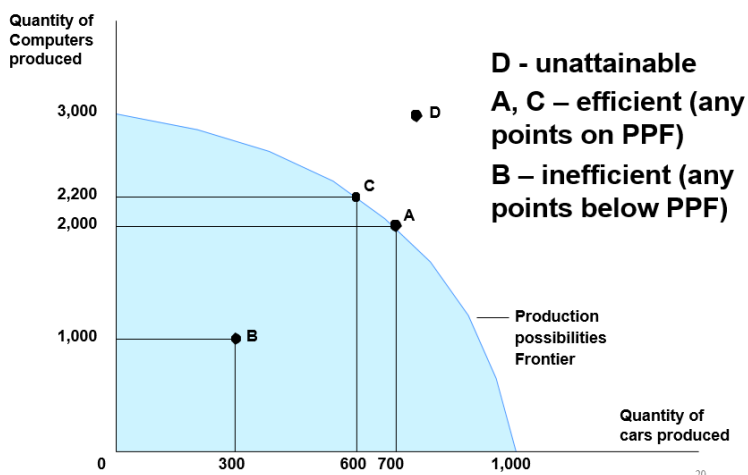
- Assumptions simplify reality to a tractable model that can be analysed scientifically
 - For example, when studying the effects of international trade, we assume that the world consists of only two countries and two goods
 - **2 x 2 model of international trade**
- The art of assumption making leads economists to answer questions with "it depends"

Production Possibilities Frontier

This economic model (PPF) is a graph showing the various combinations of output that the economy can possibly produce given the available factors of production and technology

- It is a useful model to understand the concepts of **opportunity cost** and **efficiency**

Example:



- If the economy is currently producing at B this could be because of unemployment, outdated technology (not all resources are being used)
- To allow the economy to produce at D resources need to be increased (ie. advances in technology, increase in migration)
- If the economy chooses C instead of A, the opportunity cost of 200 more computers = 100 cars

Why is the PPF bowed out in shape?

- The answer has something to do with opportunity costs and the workers of the economy
- Taking the example of the "guns and butter diagram"
- When most of the economy's resources are being used to produce guns the frontier is very flat
- When the economy is producing a lot of guns, workers and machines best suited to making butter are being used to make guns, so each unit of guns given up yields a large increase in the production of butter

- When the economy is producing a lot of butter, workers and machines best suited to making guns are now being used to make butter as well, so each unit of guns given up yields a small increase in the production of butter, thus the frontier is steep

Opportunity Cost and the Gains from Trade

- Trade allows people to specialise in what they do best, leading to a mutually beneficial outcome
- The concept of opportunity cost can be applied to explain the *pattern of specialisation* and the *terms of trade*

The Principle of Comparative Advantage

Example:

- Imagine
 - Only two goods (car and rice)
 - Only two countries (Australia and Japan)
- Resource endowment
 - Australia – 100 units of labour
 - Japan – 500 units of labour
- Technology
 - Australia: 5 units of labour for 1 car, 1 unit of labour for 1 ton of rice
 - Japan: 10 units of labour for 1 car, 5 units of labour for 1 ton of rice

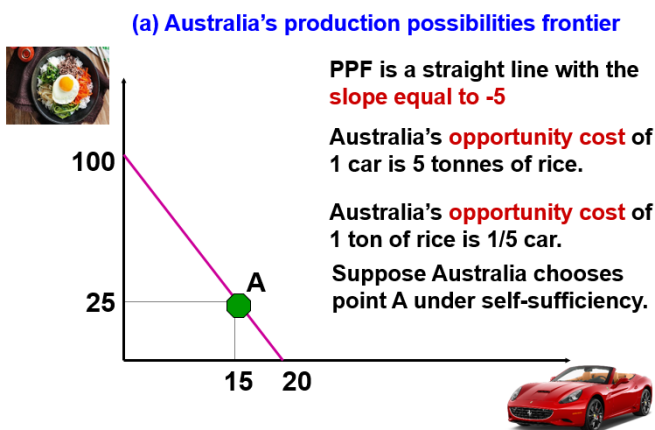
Should these two countries trade?

If so, what should each produce?

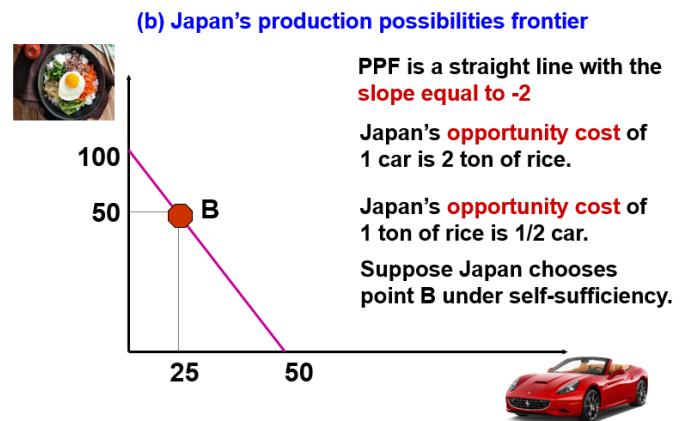
And at what terms should they trade?

- ✚ Without trade (self-sufficiency or autarky), each country chooses consumption allocation on its production possibilities frontier



Self Sufficiency Australia:



Self-sufficiency Japan:



Opportunity Costs: circle the lower opportunity cost compared to the other country

	Japan	Australia
	2 tons of rice	5 tons of rice
	$1/2$ car	$1/5$ car

Specialisation and Trade

- Australia is absolutely better at both, but relatively better at producing rice
- Australia can produce both goods at a lower absolute cost (using fewer resources): therefore Australia has an **absolute advantage** in both goods
- But the opportunity cost of producing a car is lower in Japan (2 tons of rice) than in Australia (5 tons of rice): therefore Japan has a **comparative advantage** in producing cars

Suppose the two countries specialise in what they have comparative advantage in:

- Australia uses all its resources to producing 100 tons of rice (100/1) and Japan uses all of its resources producing 50 cars (500/50)
- Under self-sufficiency the total output the two countries consume is 75 tons of rice and 40 cars
- So total output is larger for both goods than consumption under self-sufficiency

How can trade make both countries better off?

- Before trade AUS chooses (15,25) and JPN chooses (25,50)
- After specialisation AUS produces (0,100) and JPN produces (50,0)
- Suppose AUS sells rice to JPN in exchange for a car at any price between 1 car for 2 tons of rice (JPN's opportunity cost) and 1 car for 5 tons of rice (Australia's opportunity cost)
- Anywhere between 1:2 (best for JPN) and 1:5 (best for AUS)

Let's say AUS sells 60 tons of rice for 20 cars (1:3) = **terms of trade**

- Then AUS can consume (20,40) and JPN can consume (25,50)

Opportunity Cost and Trade:

- First, opportunity cost determines the pattern for specialisation by determining comparative advantages
- Second, it tells us how the terms of trade should be determined

From the example:

Should these two countries trade? Yes

If so, what should each produce? AUS should produce rice and JPN should produce cars

And at what terms should they trade? Terms between the countries opportunity costs

Application of Comparative Advantage – Should Roger Federer Mow his Lawn?

- Roger is a great athlete and can probably mow his lawn faster than anyone else
- Just because he can mow his lawn faster, does this mean he should?
- Let's say Roger can mow his lawn in two hours, but in that same two hours he could film a television commercial and earn \$1,000,000
- Becky, the girl next door can mow Roger's lawns in 4 hours, but in that same 4 hours she could work at Coles and earn \$40
- In this example, Roger's opportunity cost of mowing the lawn is \$1,000,000 and Becky's opportunity cost is \$40
- Whilst Roger has an **absolute advantage** in mowing lawns, Becky has a **comparative advantage** in mowing lawns because she has the lower opportunity cost
- The gains from trade are tremendous – rather than mowing his lawn Roger should make the commercial and hire Becky to mow the lawn (as long as he pays her more than \$40 but less than \$1,000,000 both will be better off)