

Week 1 – Gains from trade

Basic concepts and **key ideas of microeconomics**:

- Functions of markets (Demand/supply/equilibrium/welfare analysis)
- Market structures: (Perfect competition/monopoly/monopolistic competition)
 - └ Perfect competition
 - └ Pricing with market power (Monopoly & monopolistic competition)
 - └ Strategic Interaction and Business Strategy (Oligopoly)
- Market interventions by governments (Price regulation, taxes, subsidies)
- Market failures and how governments might help (Public goods/externalities)
- Macro-economy (GDP/business cycles/employment and inflation/budgetary and monetary policy)

Opportunity costs – the next best alternative forgone when a decision is made (Focus on this definition)

They include both **explicit costs** and **implicit costs** BUT not **sunk costs**.

- Explicit costs are costs that involve direct payment (or, in other words, would be considered as costs by an accountant).
- Implicit costs (indirect costs) are opportunities that are foregone that do not involve an explicit cost.
- Sunk costs are costs that cannot be recovered.

Example:

Stephen decides to go to university, and his next best option is to work at a construction site and earn \$80K over the year.

The **explicit costs** are those that Stephen must directly pay to go to university, such as student fees, the cost of textbooks, and so on.

The **implicit costs** are the opportunities that Stephen must forgo – that is, working at the construction site and earning \$80K.

Total Opportunity Cost = explicit costs + implicit costs

Calculating OC:

OC = slope of tangent (down)

OC = inverse (1/slope) (up)

Marginal analysis – use to examine the behaviour of individuals in the market and compare MB/MC

Marginal benefit - benefit of an extra unit consumed for an individual

Marginal cost – additional cost of buying one more unit

Decision-making = thinking at the margin

Correlation and Causation

- **Correlation** – when two or more factors are observed to be moving up/down in the opposite directions or together.
- **Causation** – a change in one variable brings about, or causes, a change in another variable. Need ceteris paribus (other variables held constant) for causation.
 - └ If we are interested in the impact of the change in the price of a good on the quantity demanded, we analyse this by holding income, and any other relevant variables constant.

Production possibility Frontier – graph of max output with particular set of resources

A **country's PPF** shows all the combinations of goods and services that a country can produce given its resources and its current state of technology.

Note that if the country does not trade with others, the PPF also describes the country's consumption choices.

Shape of a PPF -- Concave because of law of diminishing returns/law of increasing OC

- The slope of the PPF is the **opportunity cost** of producing an additional unit of a good in terms of the other.
- It depends on the country's productive resources (labour, capital, land, etc.) **and** the current state of technology.

Shift in the PPF:

With a technological advancement that boosts the production of both goods, the PPF will shift outwards from origin along both axes, i.e. increasing the maximum amount of both goods that can be produced.

If there is a shock that boosts the production of X only, the PPF will shift outwards from origin along the X-axis only.

Gains from trade - a crucial idea in economics is that trade *can* make everyone better off. People only trade if both sides benefit (pareto improving).

- Gains from exchange = Improvements in income, production or satisfaction owing to the exchange of goods or services.
- The exchange is voluntary as it will be pareto improving.
- Trade also allows people to take advantage of **gains from specialization**, reducing overall costs of producing and increasing output.

Absolute and comparative advantage

Absolute adv. – Group A can produce more units than group B, given same amount of resources.

Comparative adv. – Group A can produce units at a lower OC than group B.

- Note: as OC is the inverse for the other good it is impossible for a person to have a comparative advantage in both goods.
- Each person specializes in the good in which they have a comparative advantage.
- Total output increases – can be shared – everyone better off
- This principle hold even if one party has the absolute advantage (comparative advantage more important).

Week 2 – LR/SR production and costs + supply

How firms operate - we want to describe firm behaviour with a view on understanding firm and market supply.

1. We examine the ideas of short and long run for a firm's production process;
In the short run the firm has at least one fixed input of production, whereas in the long run all inputs can be adjusted if the firm wishes to.
2. We analyse the relationship between a firm's inputs and its outputs – that is, its production function.
3. We examine how a firm's output is related to its costs in the short run and in the long run.
There is a one-to-one relation between production and costs

Economic profit vs accounting profit

- We assume that firms aim to maximise profits, where profit = Economic profit
- Economic profits are revenues minus total opportunity cost
Opportunity costs include: explicit costs (that are not sunk) = direct payments for inputs or factors of production **AND** implicit costs (value of foregone opportunities) e.g. forgone wages, interest earnings
- Accounting profits are revenues minus all explicit costs only

Total revenue – the amount a firm receives for the sale of its output

Total cost – the amount a firm pays to buy the inputs of production

Profit – total revenue minus total costs

$$\pi = TR - TC$$

Example: Helen uses \$300 000 of savings, interest rate at 5 %. Thus, Helen gives up \$15 000 per year in interest. Interest is not an explicit cost – but it is an opportunity cost while she is running the firm, so needs to be included in costs (in measures of economic profit).

Zero economic profit – revenues just cover all opportunity costs

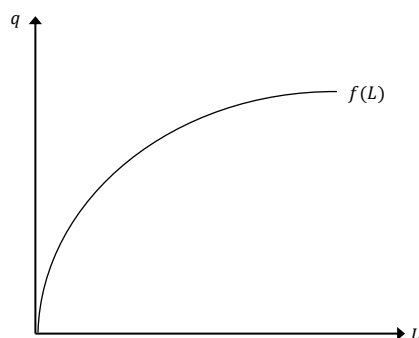
Firm - using the available technology, converts inputs – labour, capital, land, and enterprise into output that is sold in the marketplace.

Short run and long run

- The **short run** is the period of time during which at least one of the factors of production is fixed whereas in the **long run**, all factors of production are variable.
- Therefore, when the firm's lease of the factory ends, the firm is free to decide whether or not to renew the lease for that factory.
- The short run and the long run is not defined in relation to a set period of time, but rather in relation to how long it takes for all of a firm's inputs to become variable – this will differ between industries.

Production

- A firm requires inputs or factors of production (labour, capital, land, etc.) in order to produce its final g/s.
- A **production function** shows the relationship between quantity of inputs used and the (maximum) quantity of output produced, given the state of technology.
Equation looks like $q=f(L)$ where q is output and L is amount of labour. Q on y-axis and L on x-axis.



Production in the short run

Marginal product - change in output when one more input is used (slope of production function)

Diminishing MP – MP progressively smaller with increasing input

- In the short-run, at least one input is fixed which creates a capacity constraint;
- Often, each additional worker will contribute to output less and less than those hired before.
- Crucially, diminishing MP is a **short-run** concept. It relies on the idea that at least one input (like the factory size) is fixed.

Production in the long run

- Allow **all inputs** into the production process to be **variable**.
- Production function in the LR: $q = f(L, K)$

Returns to scale - the quantity of output changes when there is a proportional change in the quantity of **all inputs** (Long run).