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# 1.1.2 Opportunity Cost

All about what was **not** chosen. Economic concept to help make a rational choice. What was sacrificed. What is given up once a decision has been made.

# **Chapter 1**

# **Lecture Notes**

# 1.1 Thinking Like an Economist

# 1.1.1 What is Economics?

**Life** is about making choices. Economics is the **science of** choice. That means economics is the **science of life**.

by Mr. Alan Duhs (Senior Lecturer, UQ School of Economics

#### What is Microeconomics?

- How to use what you have (your resources) to get as much as possible of what you want
- It's mostly about how individuals make the most efficient (effective) choices
- The systematic effects these choices have on other individuals

### **Note 1: Scarcity Principle**

Our resources are limited, so getting more of one thing means getting less of another.

- Wants exceeds available resources
- Choices between alternatives needed

#### Something is **scarce** if you:

- have to sacrifice something else to get it (e.g. money, time, effort)
- need to pay a price for it (i.e. not free)

Consumers will be forced to decide what to consume

**Producers** will be forced to decide what to produce

**Governments** will be forced to decide how to allocate resources to achieve specified objectives

# 1.1.3 Cost Benefit Principle

Chose to do something only if the **extra benefit** (incremental benefit) from doing it is greater than (or equal to) the **extra cost** (incremental cost), assuming the individual is **rational**.

# 1.1.4 Economic Surplus

Incremental benefits of an action minus the incremental explicit and implicit costs of that action

**Explicit cost** a cost that involves spending money (i.e. a transaction physically occurs)

Implicit cost a non-monetary "opportunity cost"
(no transaction occurs but an alternative is not chosen)

Econmic decision strive to maximize economic surplus by:

- 1. maximizing the benefits
- 2. minimizing the costs

Economic surplus can be maximized by making choices that minimize the opportunity cost. Opportunity cost is economics is about assessing if an efficient choice of resources has been made.

# 1.1.5 Rules for Making Rational Economic Choices

In economics, a rational choice should:

- 1. **include** opportunity cost
- 2. exclude sunk cost
- 3. measure cost in **absolute dollar amount**, not percentages
- 4. be based on Marginal Analysis

#### Note 2: Sunk Cost

- expenses that have occurred in the past before a decision has been taken
- costs that would have had to occur in order for a choice to be made
- costs that are typically not able to be directly recovered
  - 1. exploration costs (oil well, mining)
  - 2. market research costs (focus groups, surveys)
  - 3. feasibility study costs (before a decision is made)

# 1.1.6 Marginal Benefit

The change in total benefit from doing **one extra unit of** an activity

 $= \frac{\text{change in total benefit}}{\text{one extra unit sold}}$ 

# 1.1.7 Marginal Cost

The change in total cost from doing **one extra unit of** an activity

 $= \frac{\text{change in total cost}}{\text{one extra unit produced}}$ 

#### **Note 3: Economic Efficiency**

# 1.1.8 Absolute and Comparative Advantage

#### **Absolute Advantage**

- ability of an individual, firm, or country to produce more of a product or service than competitors using the same amount of resources.
- alternatively, produce the same amount of product or services as competitors with less resources.

#### **Comparative Advantage**

ability of an individual, firm, or country to produce a product or service at a *lower opportunity cost* than other competitors (relates to who is more efficient at producing something).

Opportunity cost is about assessing if an **efficient choice** of resources has been made. Outcomes are efficient if opportunity cost is minimised. **Comparative advantage** exists with the producer (or service provider) producing the product at the **lowest opportunity cost**. Contrast **absolute advantage** which is *irrelevant* in deciding who is more efficient at producing something.

# 1.1.9 Gains and Specialization

### Note 4: Principle of Comparative Advantage

- Everyone does best (individuals or countries) when they concentrate on activities for which their opportunity cost is lowest.
- By exchanging goods with others, individuals can more efficiently obtained their preferred mix of goods and services.

# 1.1.10 Production Possibility Curve (PPC)

 The production possibilities curve (PPC) = a graphical representation describing the maximum amount of one good that can be produced for every possible level of production of another good.

#### • Assumptions:

- only two goods are able to be produced (for simplification), bananas and blueberries
- 2. consider the PPC for a single worker only

Attainable Point: Any combination of goods that can be produced using currently available resources. All points on the PPC, as well as below and to the left of the PPC, are attainable.

**Unattainable Point:** Any combination of goods that cannot be produced using currently available resources. All points lying above and to the right of the PPC are unattainable.

Efficient Point: Any combination of goods for which currently available resources do not allow an increase in the production of one good unless there is a reduction in the production of the other.

**Inefficient Point:** Any combination of goods for which currently available resources **enable** an

increase in the production of one good without a reduction in the production of the other.

# 1.2 Demand and Supply

#### 1.2.1 Demand

**Demand:** Not stuff, stuff at a price

# 1.2.2 Market System

Individual preferences and purchasing power + costs of production  $\rightarrow$  generate prices  $\rightarrow$  act as signals that coordinate decision making  $\rightarrow$  guide resource allocation in the economy

Decentralized market economies often outperform centrally planned economies in terms of efficiently allocating resources  $\to$  But, not always  $\to$  sometimes they fail

#### **Note 5: Demand Definition**

Demand is a mathematical relationship between cost and quantity demand (stuff)

- Demand is a relationship between prices and the quantities demanded at those prices, sometimes referred to as a "willingness to pay curve"
- **Demand** is a downward sloping relationship
- As price increases, the quantity demanded by consumers decreases
- The area under the demand curve is the amount of money a consumer spends
- The "Ceteris paribus" assumption in Latin meaning "all else being equal"
  - needed to develop the demand model
  - when analyzing two variables (such as price and quantity), it is assumed all other variables are held constant (not able to be changed).

# **1.2.3** Supply

As the price a product (or service) **increases**, and assuming *ceteris parabis*, producers will supply **more**. **Note:** there is an upward sloping (positive) relationship between price and quantity supplied. A change in price results in a movement **along** the supply curve.

### **Note 6: Supply Definition**

Supply in economics is represented as a relationship between **price** and **quantity supplied**.

### **Market Supply**

All individual producers' quantities supplied add to create a market supply for a product (or service).

# 1.2.4 Interaction of Supply and Demand

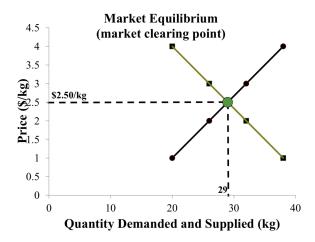


Figure 1.1: Market Equilibrium

- The intersection of the supply and demand curves so → quantity supplied = quantity demanded AND selling price = purchase price
- A point where suppliers are happy to sell a given quantity at a certain price, and this exactly matches the price consumers are willing to pay for this quantity supplied

# 1.2.5 Market Clearing Point

#### **Competitive Market**

- has many buyers and many sellers
- Prices and quantities continue to adjust until a market clearning point is reached, eliminating shortages and surpluses
- note the market clearing point and the model suggests equilibrium is a static point. In reality, it can continually move. i.e. the point is dynamic

**Price Floor:** Price can be set higher than market clearing

**Price Ceiling:** Price can be set lower than market clearing

#### **Price Floor**

- used by governments to set a legally determined price to protect suppliers
- the price is set above the market clearing price, and becomes a minimum price for suppliers
- this minimum price is then guaranteed by the government

### **Price Ceiling**

- used by governments to set a legally determined price to protect consumers (e.g. tenants who rent, petrol "price caps" when oil prices rising fast)
- the price is set **below** the market clearning price, to help protect consumers from higher prices
- the legal price is a maximum that can be charged by suppliers
- What about illegally paying higher prices for the quantity that is available? Black Markets?

Market Failure: an inefficient allocation of goods and services in a market

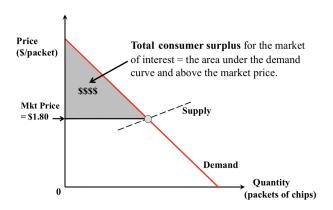


Figure 1.2: Total Consumer Surplus

# **Note 7: Consumer Surplus**

The maximum price an individual consumer is prepared to pay less the clearing price set by the market = an individual's consumer surplus. See Figure 1.2

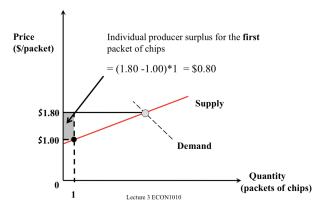


Figure 1.3: Individual Producer Surplus

### **Note 8: Producer Surplus**

The market clearing price less the minimum price a supplier would have been willing to accept in a sale

See Figure 1.3

### **Note 9: Economic Surplus**

Total Economic Surplus = total consumer surplus + total producer surplus (maximised in competitive markets)

#### **Dead Weight Loss**

Economic inefficiency from government intervention. It's the area between the lines that is loss by introducing a Price Floor