**Economics Notes – Basic Economic problem: choice and the allocation of resources**

**Economic Terms**

1. Scarcity

The problem of scarcity is a fundamental economic concept. Scarcity arises because of unlimited human wants and needs in a world of limited resources. Unlimited wants refer to the ever-changing demand for goods and services. Limited resources refer to the insufficient production resources, which imply a limited supply.

For example, Singapore is faced with the problem of land scarcity. Land can be used for various purposes, such as building HDBs, shopping centres or public parks. Due to the limited land space, the Government has to make choices on land allocation.

1. Opportunity cost

Opportunity cost refers to the trade-off of using resources for a certain purpose, measured in terms of the value of the next best alternative forgone. A trade-off means choosing to produce more of one good by reducing the production of another good.

For example, Country X can produce 10 units of apples and 50 units of pears. Also, Country X can produce 20 units of apples and 25 units of pears. The opportunity cost of increasing production of apples from 10 units to 20 units is 25 units of pears.

1. Production Possibility Curve (PPC)

The PPC shows all combinations of two goods that an economy can produce, with given technology and resources. Producing on the PPC means resources are fully employed. Producing inside the PPC means resources are under-employed.

If the PPC is concave to the origin, the opportunity cost is increasing. This means that the increase in production of one good will lead to a more than proportionate reduction in another good.

If the PPC is convex to the origin, the opportunity cost is decreasing. This means that the increase in production of one good will lead to a less than proportionate reduction in another good.

If the PPC is downward-sloping and linear curve, the opportunity cost is constant. This means that the increase in production of one good will lead to a proportionate reduction in another good.

What is Economics?

* Economics is a social science
* How society allocates scarce resources to maximize human wants (i.e. demand)
* Resource allocation through the production of goods and services
* Economics is divided into two areas
1. Microeconomics
2. Macroeconomics

Concept of Scarcity & Resource Allocation

**limited resource**

**unlimited wants**

**Scarcity**

**problem of choice**

**Resource allocation**

VS

Diagram 1 – Problem of Scarcity and Choice

**What is scarcity?**

* Resources are limited
* Natural resources
* E.g. Oil, Coal
* Human wants are unlimited
* Growing population
* More people, more wants
* E.g. Demand for food, water, housing
* When there is limited resource and unlimited wants, the problem of scarcity will arise
* The ‘problem of choice’
* To address this problem, resources must be utilized properly
* Also known as ‘resource allocation’

**Main Economic Functions**

* Allocation of resources
* What to produce?
* Clothes, Houses, food, water
* How much to produce?
* Quantities
* Organization of Production
* How to produce?
* Using machinery
* Hand-made (manual labour)
* Distribution of commodities
* For whom to produce?
* Everyone
* Young people

What is Opportunity Cost?

* The cost/trade-off of using resources for a certain purpose
* Measured in terms of the next best alternative
* Opportunity cost can be illustrated using the Production Possibility Curve (PPC)

The Production Possibility Curve (PPC)

* The PPC shows all combinations of 2 goods that an economy can produce, with a certain level of technology and resources which are utilized efficiently

**Characteristics of the PPC**

* Shows where production is attainable or not – reveals the problem of scarcity
* Shows the alternative combinations of production
* Shows the existence and degree of opportunity cost

**Assumption of the PPC**

* The economy is at a specific stage of technology
* The economy can fully utilize all of its available resources
* Only 2 goods are analyzed
* Resources are fixed

**Graphical Illustration of the PPC**

100

80

70

50

30

40

A

B

**Wheat (units)**

**Cloth (units)**

Diagram 2 – Production Possibility Curve for Wheat and Cloth

With reference to Diagram 2:

* Shows the various combinations of wheat and cloth on the PPC
* At Point A – 30 units of cloth and 80 units of wheat
* At Point B – 40 units of cloth and 70 units of wheat
* Shift from Point A to Point B
* Increase production of cloth by 10 units
* Need to forgo 10 units of wheat
* Represents the opportunity cost

**Relationship between the slope of PPC and Opportunity Cost**

a) Constant Opportunity Cost

100

50

**Cloth (units)**

**Wheat (units)**

When the PPC is a straight line, there is constant opportunity cost. This implies that the increase in production of cloth will lead to a proportional reduction in wheat.

b) Increasing Opportunity Cost

100

50

**Cloth (units)**

**Wheat (units)**

When the PPC is concave to the origin, the opportunity cost is increasing. Therefore, the increase in production of cloth will lead to a more than proportional reduction in wheat. (resource are more suited to the production of the other good than the existing one)

c) Decreasing Opportunity Cost

100

50

**Cloth (units)**

**Wheat (units)**

When the PPC is convex to the origin, the opportunity cost is decreasing which means that an increase in production of cloth will lead to a less than proportional decrease in wheat (resource are less suited to the production of the other good than the existing one)

**Combinations on the PPC**

X

X

X

X

100

50

**Cloth (units)**

**Wheat (units)**

* A point on the PPC is feasible and efficient
* A point inside the PPC is feasible but not efficient
* A point outside the PPC is not feasible

**Shifts in the PPC**

**Wheat (units)**

160

200

180

**Cloth (units)**

100

80

60

a) Outward shift of the PPC

* Represents an increase in the production of both goods
* Due to the following factors
* Increase in labour supply
* Hire more workers
* Improvement in technology
* Automated crop harvesters
* Increase in capital stock
* Buy more tractors or other machinery

b) Inward shift of the PPC

* Represents a decrease in the production of both goods
* Due to the following factors
* Decrease in labour supply
* Natural disasters
* Decrease in capital employment