Subject : Economics

Teacher: James Campbell

LESSON 4-5

The Theory of Supply

The Law of Supply

Exceptions

Supply Equation

Movements along Supply Curves

Shifts in Supply Curves

The Theory Of Supply



Consumers demand electric power



ESB supplies electric power

The supply of a good/service is the total quantity which is made available at any given price over a specific time period.

The Supply Equation

Sx = f (Px, Pog, C, Tn, U, Tx)

The Supply Curve slopes upwards from L to R because the higher the price the greater the quantity supplied i.e. a positive relationship between P and Q.

Individual Supply: The quantity of a good supplied by an individual firm at different prices.
Market supply: The total quantity of a good supplied by all firms in the market at different prices.

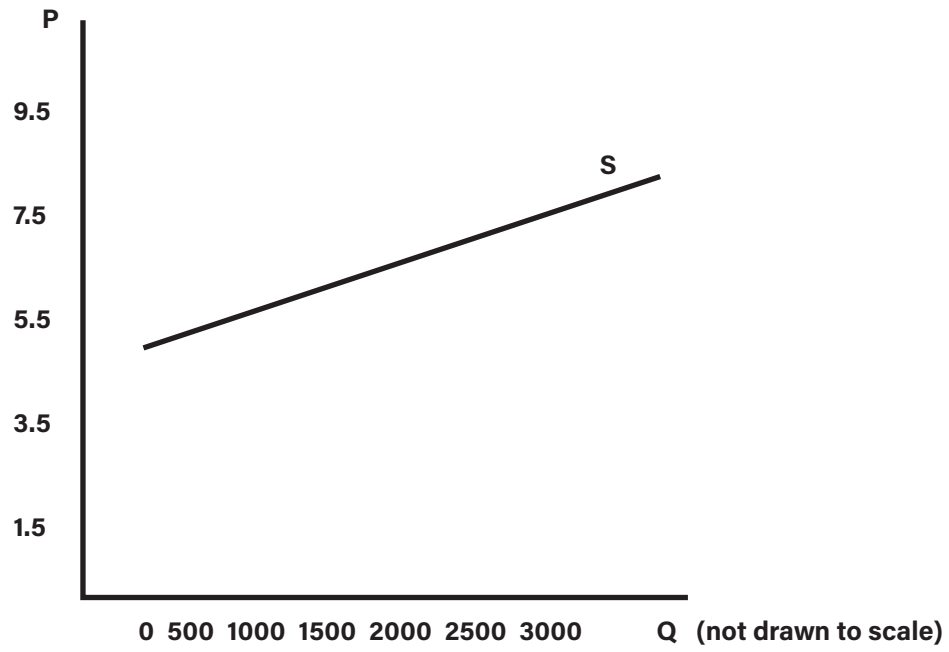
A **Supply Schedule** a table which shows the supply of a good/service at any given market price at any given time.

Price, P Euro	Quantity supplied Q, (1000s of kgs)
5.00	1,000
5.50	1,200
6.00	1,400
6.50	1,600
7.00	1,800
7.50	2,000
8.00	2,200
8.50	2,400
9.00	2,600
9.50	2,800

Individual Supply Schedule: a table showing the different quantities of a good available for sale by an individual firm at any given market price at any given time.

A Market Supply Schedule: a table showing the total quantities of a good that all firms in the market make available for sale at any given market price at any given time.

The Supply Curve of Beef



The supply curve slopes upwards from L to R indicating a positive relationship between P & Q. As P ↑, Q ↑.

Other Types of Supply Curves

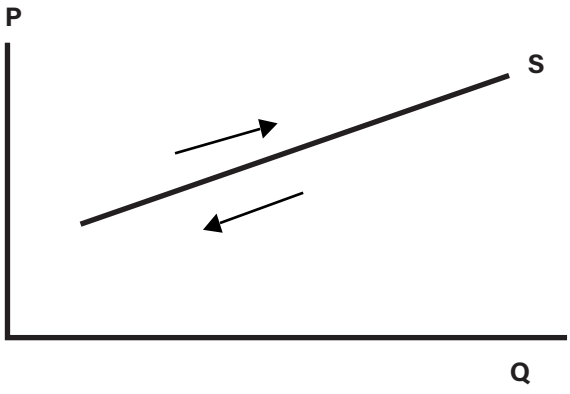
1. There is a supply available and the quantity supplied will not fall even if there is a price reduction – fish/vegetables/fruit/football match tickets = Perfectly Inelastic Supply Curve. (The supply is fixed). There are 52,000 tickets for the Avia Stadium but demand is 75,000. No matter what price is offered the supply of seats in the stadium is fixed.

2. **Minimum Price** No supply will be made available below a certain price because the firm has many production costs. The government has introduced minimum unit pricing rules on cheap alcohol sales in off-licences and shops to deter people from binge drinking and improve the health of the population.

3. **Limited Capacity** At a certain point due to a shortage of skilled labour or a lack of raw materials or fixed factory size there will be no further increase in quantity supplied because the firm has now reached maximum productive capacity even though prices may continue to increase.

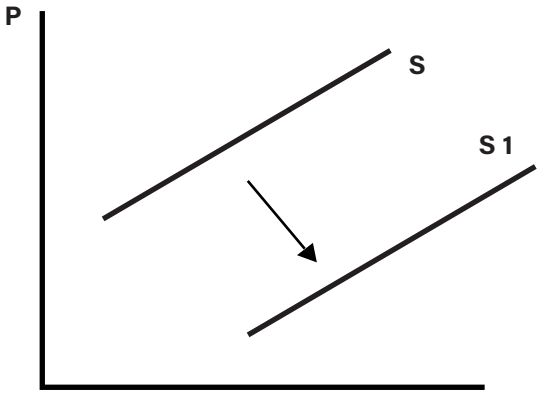
Shifts in and Movements Along a Supply Curve

A change in price leads to a movement along the Supply curve.

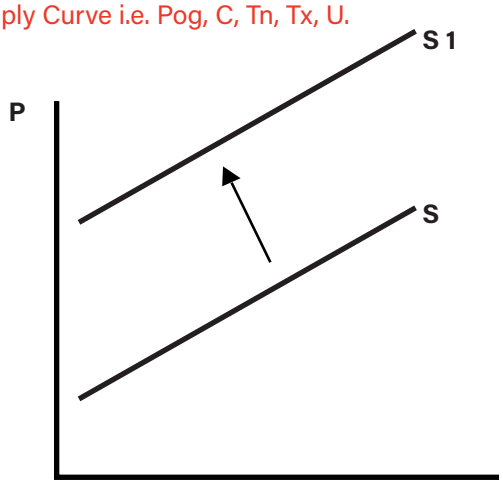


A movement along the supply curve

A change in any of the other factors leads to a shift in the Supply Curve i.e. Pog, C, Tn, Tx, U.



A rightward shift in a Supply curve



A leftward shift in a supply curve

(1) Prices of other goods

A rise in the prices of other goods means less supplied at the same price, a shift to the left.

A fall in the prices of other goods means more supplied at the same price, a shift to the right.

(2) The Costs of Production

If Production Costs rise,
Less will be supplied at each price.
Shift to the left

If Production costs fall,
more will be supplied at each price
Shift to the right

(3) The State of Technology

Technology e.g. assembly line production or creating medical vaccines allows firms to produce a good or service at lower production costs.

A greater quantity is supplied at each price due to technology = shift to the right

(4) Taxation/Subsidies

If taxes are reduced production costs fall and quantity supplied increases. As taxes are increased production costs increase and quantity supplied falls.

If subsidies to a firm are increased production costs fall and quantity supplied increases. If subsidies to a firm are reduced production costs will increase and quantity supplied falls.

(5) Unplanned Changes in the Quantity Supplied

A bad harvest or a late spring frost could wipe out an entire crop, reducing the supply of the crop on the market. (strikes, shortage of raw materials)

Normal Goods: Goods which obey the Law of Demand
Goods with a positive income effect

Inferior Goods: Goods which obey the Law of Demand
Goods with a negative income effect

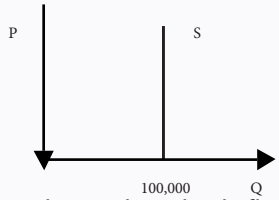
These are a small minority of goods which are not necessarily of inferior quality e.g. black and white TVs and Giffen goods.

Giffen Goods: disobey law of demand
when price rises, demand rises
when price falls, demand falls
bread, rice and potatoes
low quality goods
low Y families
negative Y effect

Producer Surplus:

the difference between what producers are willing and able to supply a good for and the price they actually receive.

Russia will host the Winter Olympics in 2014. 100,000 tickets are available for the event. Draw the supply curve for the tickets and explain the reason for its shape.



The supply of tickets available for the winter Olympics is fixed at 100,000. Regardless of price, capacity will not change.

The Theory of Supply

Key Words 🔑

- Supply of a good/service
- The Supply equation
- Supply schedule
- Supply curve
- Movements along
- Shifts in/out
- Normal goods
- Inferior goods
- Giffen goods
- Producer Surplus

Supply and Demand Combined



Supply and Demand Combined

Market price for a commodity is determined by the intersection of Supply and Demand curves.

At price P1, quantity supplied Q1 equals quantity demanded Q1 – **a State of Equilibrium** exists. Producers and consumers are both happy. Market forces, known as Excess Demand and **Excess Supply** ensure that price is tending towards equilibrium price P1.

Excess Supply

If price is set above equilibrium price at P2, supply exceeds demand. Competition among sellers trying to get rid of excess production will force the price downwards towards the equilibrium price of P1.

Therefore, Excess Supply puts a downward pressure on selling price.

Excess Demand

If price is set below the equilibrium price at P3, the quantity demanded exceeds the quantity supplied. Competition among buyers for a cheap commodity will force the price upwards towards equilibrium price of P1.

Therefore, Excess Demand put an upward pressure on selling price.

The Role of The Price Mechanism

1. **Signalling Function:** Changes in price are a signal to suppliers and consumers that market conditions can change. If there is a drop in demand for cream cakes near a bakery's closing time that may be a signal to the bakery that it should reduce the price of cream cakes to clear its shelves.

1. **A means of communication from the consumer to the supplier:** If a product is selling well and demand is increasing because it is popular, useful and well made, the increased demand is a hint that the producer/supplier that they should consider increasing the supply of the good to satisfy the increasing demand. If supply is not increased to match the increasing supply price for the good which is now scarce may rise.

Effects of Shifts On Equilibrium

(1) Demand

Increase in Demand – a rise in price and an extension of supply

Decrease in Demand – a fall in price and a contraction of supply

(2) Supply

An increase in Supply – a decrease in price and an increase in demand

A decrease in Supply – an increase in price and an decrease in demand.

Joint supply refers to a product or process that can yield two or more outputs. e.g. cows provide milk, beef, and hide. If the supply of cows increases, so will the joint supply of dairy and beef products.

Supply & Demand Combined

Key Words

- Market price
- Intersection of Supply & Demand
- State of equilibrium
- Excess demand
- Excess supply
- Shifts on equilibrium
- Joint supply

» Consumer Behaviour

» Utility

» Marginal Utility

» Consumer Surplus

» Features of Economic Goods

Consumer Behaviour

A consumer is a person who purchases goods and services for personal use.

Assumptions about Consumer Behaviour

√ Consumers act rationally– if they see the same good priced differently in two different shops, they will purchase the good at the lower price i.e. They want value for their money.

√ They try to satisfy needs first and then wants– a need is immediate e.g. Food and clothing. Wants are anything in excess of needs– they are not necessary for survival e.g. a foreign holiday.

√ They have a limited income – consumers do not have enough income to satisfy all their needs and wants so they must choose between the goods they wish to purchase.

√ They try to gain maximum utility– because consumers have limited income, they must spend their limited income to ensure maximum satisfaction (utility) from the purchases they make i.e. Goods and services.



√ Consumers are subject to the Law of Diminishing Marginal Utility– as we consume more and more of a good at some point we will derive less and less satisfaction from the good and satisfaction (utility) will decline. After a football match, the player enjoys maximum satisfaction from the first glass of water. The second glass does not yield the same satisfaction as the first and by the third or fourth glass the player derives less satisfaction and seeks to drink something else.

Utility



1. *The feeling of satisfaction/enjoyment/well-being that the consumer enjoys as a result of consuming goods/services. Utility is measured in utils.*
2. Since we cannot afford to buy all the goods/services that we would like we purchase that combination of goods/services which will give us the greatest satisfaction.
3. It is a subjective measurement.
4. Time and Utility– an apple a day is very healthy but an apple on the hour, every hour, would make you sick reducing your utility.
5. Marginal Utility is the change in satisfaction resulting from consuming a little more or a little less of that good.

The Law of Diminishing Marginal Utility

"as a person consumes more and more of a good the extra or marginal utility which he derives from each additional unit consumed diminishes"

→ Too much of a good thing is bad/variety is the spice of life

Confirmation as to the existence of the law

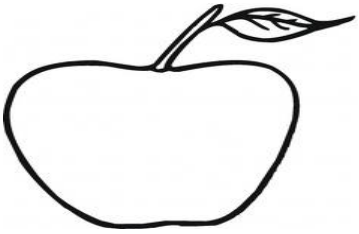
1. People do not spend all their money on the same good.
2. Sellers often offer quantity discounts to consumers – three for the price of two
3. There is a limit to the amount people can consume /wear/watch / listen to.
4. A downward sloping demand curve illustrates the law.
5. The law only operates after a certain point called the origin has been reached. The origin refers to the minimum quantity of the good that must be consumed and marginal utility only begins to diminish when this stage has been arrived at e.g. it is not the first segment of the grapefruit, it must be the whole grapefruit that is consumed for utility/satisfaction to fall.

Exceptions to The Law of Diminishing Marginal Utility

1. The Time Period
2. Addictive Goods
3. Medicine

Exceptions to The Law of Diminishing Marginal Utility

1. The Time Period



If one eats an apple everyday marginal utility will not diminish because of the time that has elapsed. However, if one eats an apple on the hour every hour marginal utility will diminish.

2. Addictive Goods- the more you consume the greater your marginal utility.





3. Medicine– the last tablet is just as important as the first



The Law of Equi-Marginal Returns

"A consumer will enjoy maximum satisfaction when the ratio of MU to price is the same for all the different types of goods which he/she buys" i.e. the last euro spent on each good/service must yield the same degree of utility to the consumer. If the last € spent on good A yields greater satisfaction than the last € spent on good B, more of good A will be purchased. Income is limited so the consumer must spend his/her limited income in a manner to maximise total utility.

$$\frac{MU1}{P1} = \frac{MU2}{P2}$$

1. Suppose a consumer has six euro that he/she wants to spend on apples and bananas in order to obtain maximum total utility. The following table shows marginal utility (MU) of spending additional euros of income on apples and bananas:

Money (Units)	MU of apples	MU of bananas
1	10	8
2	9	7
3	8	6
4	7	5
5	6	4
6	5	3

The above schedule shows that the consumer can spend his/her six euro in different ways:

1. €1 on apples and €5 on bananas. The total utility he/she can get is:
   [(10) + (8+7+6+5+4)] = 40.

2. €2 on apples and €4 on bananas. The total utility he/she can get is:
   [(10+9) + (8+7+6+5)] = 45.

3. €3 on apples and €3 on bananas. The total utility he/she can get is:
   [(10+9+8) + (8+7+6)] = 48.

4. €4 on apples and €2 on bananas. The total utility he/she can get is:
   [(10+9+8+7) + (8+7)] = 49.

5. €5 on apples and €1 on bananas. The total utility he/she can get is:
   [(10+9+8+7+6) + (8)] = 48.

Total utility for the consumer is 49 utils. This is the highest obtainable with expenditure of €4 on apples and €2 on bananas. Here. the condition MU of apple = MU of banana i.e. 7 = 7 is also satisfied.

2. A consumer is in equilibrium buying item A @€2 and item B @ €6. The marginal utility of item A is 5 utils and the marginal utility of item B is 15 utils.

$$\frac{\text{MU of Good A}}{\text{Price of Good A}} = \frac{\text{MU of Good B}}{\text{Price of Good B}} = \frac{5\text{utils}}{€2} \quad \frac{15\text{utils}}{€6}$$

3. When two items are the same price the one with the greater utility is purchased.

E.g. A consumer in equilibrium buys 6 health bars at €0.80 each and 9 cartons of juice at €1.50 each. The marginal utility of the 6th health bar is 40 utils.

Using the **Equi-Marginal Principle of Consumer Behaviour** calculate the marginal utility of the ninth carton of juice.

The marginal utility of the ninth carton of juice.

$$\frac{40}{80} = \frac{X}{150}$$

= 75 utils

Sample Question on Marginal Utility

A consumer in equilibrium buys 10 cups of coffee at €2 each and 10 phone cards @ €6 each. The marginal utility of the cups of coffee is 5 utils. What is the marginal utility of the phone cards?

$$\frac{\text{Marginal Utility of Coffee}}{\text{Price of Coffee}} = \frac{\text{Marginal Utility of Phone Cards}}{\text{Price of Phone Cards}}$$

$$= \frac{MUc}{Pc} = \frac{MUpc}{Pc}$$

$$= \frac{5}{2} = \frac{MUpc}{6}$$

MUpc = 15 utils



A Cup of Coffee



A phone card

Consumer Surplus

The difference between what a consumers actually pays for a good and the maximum price he/she would be willing to pay rather than do without the good.

If you are willing to pay €1000 for a new LED TV and you buy it for €800, your consumer surplus is €200.



LED TV

Features of Goods in Economics

For a commodity to be considered an economic good it must possess certain characteristics.

1) It must command a price.

Its supply must be scarce in relation to the demand for it. If not people will not be prepared to pay a price to obtain it.

2) It must provide you with utility.

The good must give you a feeling of satisfaction. Anything which is a nuisance does not and so is not an economic good.

3) It must be transferable.

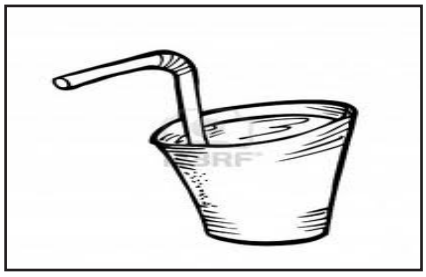
For an item to be considered an economic good it must be capable of being transferred from one person to another.

Examples of goods which are not Economic Goods

1. **Fresh air** – plentiful in supply/not scarce – commands no price.



2. **Clean water** – as above.



3. **Weeds** – do not provide you with utility – you are not prepared to pay.



4. **Beauty/Good health –** not transferable



All successful people have a goal.
No one can get anywhere unless
He knows where he wants to go
And what he wants to do.