Edexcel

AS Level

Econ

(Code: WEC13 01)

Unit 01

Price determination

Chapter 11 – Price equlibrium

EQUILIBRIUM PRICE

Buyers and sellers come together in a market. A price (sometimes called the market price) is struck and goods or services are exchanged. Consider Table 1. It shows the demand and supply schedule for a good at prices between US$2 and US$10.

• If the price is US$2, demand will be 12 million units but only 2 million units will be supplied. Demand is greater than supply and there is therefore **excess demand**

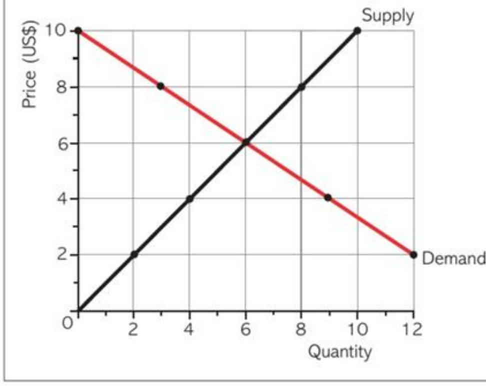
• If the price is US$10, buyers will not buy any goods. But sellers will wish to supply 10 million units. Supply is greater than demand and therefore there will be **excess supply**.

• There is only one price where demand equals supply. This is at a price of US$6 where demand and supply are both 6 million units. This price is known as the **equilibrium price**. This is the only price where the demand of buyers equals the supply of sellers in the market. It is also known as the **market-clearing price** because all the products supplied to the market are bought or cleared from the market, but no buyers are left frustrated in their wishes to buy goods.

FIGURE 1

Equilibrium

At US$6, the quantity demanded is equal to the quantity supplied. The market is said to be in equilibrium at this price.



Price (US$)	Quantity demanded (million units per month)	Quantity supplied (million units per month)
2	12	2
4	9	4
6	6	6
8	3	8
10	0	10

▲ Table 1 A demand and supply schedule

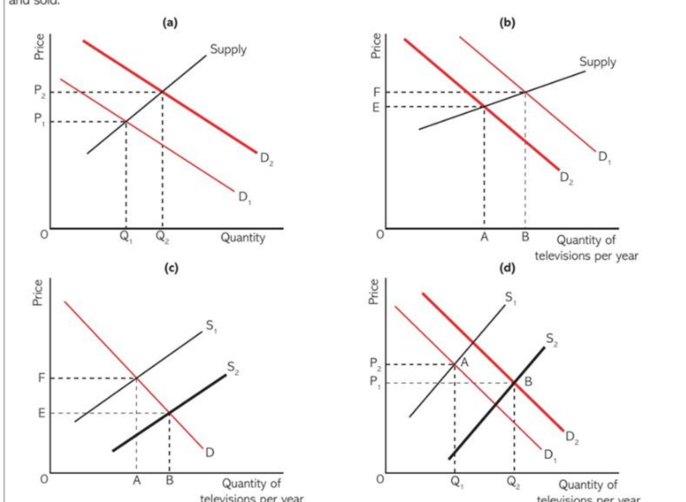
CHANGES IN DEMAND AND SUPPLY

Demand and supply diagrams are a useful tool for analyzing the effects of changes in demand and supply on equilibrium price and quantity. For example, a rise in consumer incomes leads to an increase in demand for a normal good, pushing the demand curve from D to D2. This shift in the demand curve leads to a movement along the supply curve.

FIGURE 2

Shifts in the demand and supply curves

Shifts in the demand or supply curves for a product will change the equilibrium price and the equilibrium quantity bought and sold.



DO MARKETS CLEAR?

It is very easy to assume that the equilibrium price is either the current market price or the price towards which the market moves. Neither is correct. The mark price could be at any level. There could be excess demand or excess supply at any point in time.

Nor will market prices necessarily tend to change to their equilibrium prices over time. One of the most important controversies in economics today is the extent to which markets move towards market- clearing prices.

In a free market, excess demand leads to buyers wanting more coffee than supplied. Coffee producers can increase prices and production levels to sell all their output, making more profit. Excess supply leaves unsold stocks, and producers must lower prices to maintain equilibrium output and price. This equilibrium position is typically a stable equilibrium position, where production and prices continue to fall.

These pressures which force the market towards an equilibrium point are often called **free market forces**. However, critics of the market mechanism argue that free market forces can lead away from the equilibrium point in many cases.

FIGURE 3

The operation of market forces in the coffee market
Market pressure will tend to force down coffee prices when there is excess supply, such as at price OG, but force up coffee prices when there is excess demand, such as at price OE.

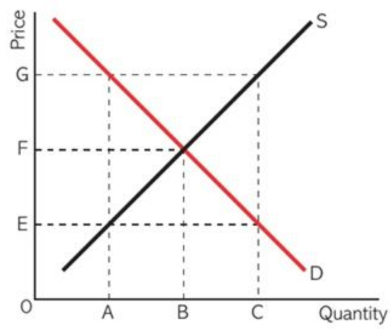
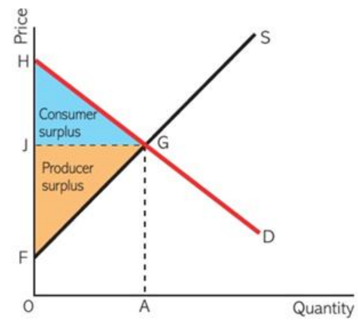


FIGURE 4

Consumer and producer surplus
Consumer surplus is the shaded area JGH, showing how much more consumers are prepared to pay for buying a total of OA goods. Producer surplus is FGJ, showing how much less they would have been prepared to accept in revenue for supplying OA than they actually received.



CONSUMER AND PRODUCER SURPLUS

A demand and supply diagram shows the difference between buyers' willingness to pay for a good and actual prices. Consumer surplus is the difference between buyers' actual price and the market price firms receive. The amounts of consumer and producer surplus change based on demand and supply changes. For example, if demand increases, suppliers experience higher output and prices, while consumers pay more for the same quantity. Conversely, if supply increases, suppliers experience higher output but lower prices, and consumers increase quantity bought. Conversely, if supply falls, both consumer and producer surplus fall.

FIGURE 5

Changing consumer and producer surplus with a rise in demand
A rise in demand from D_1 to D_2 increases producer surplus from FGJ to FKM and consumer surplus from JGH to MKL.

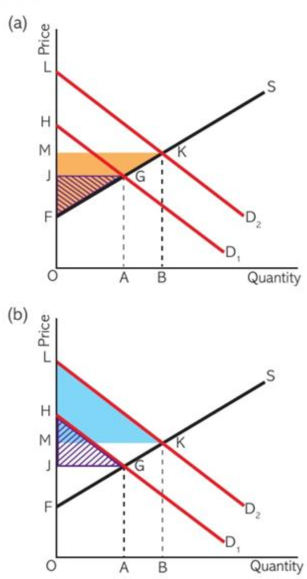
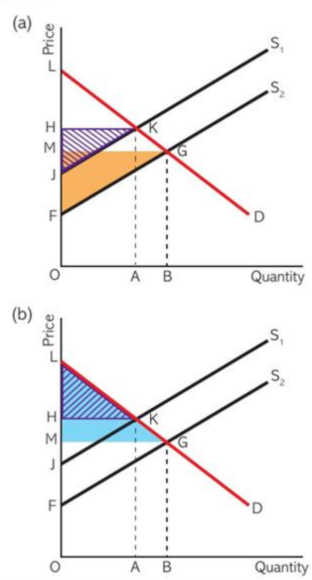


FIGURE 6

Changing consumer and producer surplus with a rise in supply
A rise in supply from S_1 to S_2 increases producer surplus from JKH to FGM and consumer surplus from HKL to MGL.



POINTS TO NOTE

Equilibrium is a crucial economic concept, but it's not the most desirable price in the market. The most desirable price depends on factors like economic efficiency, fairness, or country defense. Demand can equal supply without equilibrium, and actual demand must always equal actual supply. Equilibrium occurs at a price where there's no tendency to change, and only in equilibrium will planned demand equal planned supply.

SUBJECT VOCABULARY

equilibrium price the price at which there is no tendency to change because planned (or desired or ex ante) purchases (i.e. demand) are equal to planned sales (i.e. supply).
excess demand where demand is greater than supply.
excess supply where supply is greater than demand.
free market forces forces in free markets that act to reduce prices when there is excess supply and raise prices when there is excess demand.
market-clearing price the price at which there is neither excess demand nor excess supply, but where everything offered for sale is purchased.

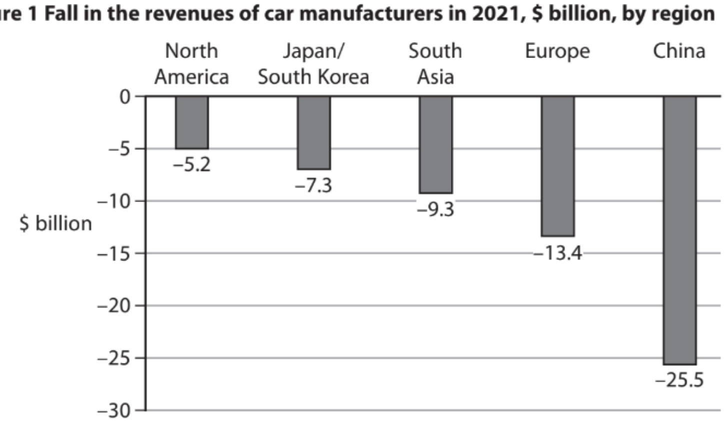
Revision questions

1) 2022 OCTOBER/NOVEMBER QUESTION NUMBER 12 (E) P1 (MARKS 14)

(e) With reference to Extract C and your own knowledge, discuss the possible microeconomic effects of the subsidies paid to semiconductor manufacturers in the USA.

Illustrate your answer with an appropriate diagram.

Figure 1 Fall in the revenues of car manufacturers in 2021, $ billion, by region



Extract C Subsidies to semiconductor manufacturers in the USA

In 1990 63% of semiconductors required by manufacturers in the USA were imported. By 2020 this had increased to 88%. Between 2000 and 2020 the US Government made no subsidy payments to semiconductor manufacturers. However, in 2021 it provided subsidies of $52 billion. The US Government wanted to reduce its reliance on importing semiconductors. The subsidies may make it more profitable to produce semiconductors in the USA rather than in Asia, where production costs are lower. It is hoped that the subsidies will result in at least seven new semiconductor factories being built in the USA. However, it typically takes three years before a semiconductor factory is fully operational.

There are concerns that increased production of semiconductors will cause a range of external costs. Production involves acids and toxic gases that may cause cancer. A large amount of water is required to manufacture semiconductors and this creates contaminated waste water.

2) 2022 MAY/JUNE QUESTION NUMBER 11 P1 (MARKS 4)

Between August 2020 and August 2021 the world price of nectarines decreased from $1.83 to $1.42 per kg. This was caused by a good harvest in Spain, the world's largest producer.

Explain the likely impact of this change in price on consumer surplus in the market for nectarines.

Illustrate your answer with an appropriate diagram.

3) 2022 MAY/JUNE QUESTION NUMBER 12 P1

(d) With reference to Extract B and Figure 1, examine two likely effects of excess demand for semiconductors on car manufacturers. (8)

(e) With reference to Extract C and your own knowledge, discuss the possible microeconomic effects of the subsidies paid to semiconductor manufacturers in the USA.

Illustrate your answer with an appropriate diagram. (14)

4) 2020 MAY/JUNE QUESTION NUMBER 07 P1 (MARKS 4)

Romania plans to impose a maximum price in the market for gas below the current equilibrium price.

Draw a diagram to illustrate the impact of the introduction of the maximum price on the market for gas in Romania.

5) 2020 MAY/JUNE QUESTION NUMBER 13 P1 (MARKS 4)

In the Netherlands 68% of the price consumers pay for a litre of petrol is indirect tax.

In neighbouring Germany indirect tax represents just 59%.

Evaluate the impact of these indirect taxes charged on petrol.

6. **2021 MAY/JUNE QUESTION NUMBER 7 P1 (MARKS 4)**

In October 2017 the United Arab Emirates (UAE) introduced an indirect tax on energy drinks. The tax is charged at 50% of the price of energy drinks.

Draw a diagram to illustrate the impact of the introduction of the indirect tax on the equilibrium price and quantity of energy drinks in the UAE.

7. **2021 MAY/JUNE QUESTION NUMBER 12(e) P1 (MARKS 14)**

(e) With reference to Extract C, discuss the likely effects of the increase in the subsidy for sugar production.

Illustrate your answer with an appropriate diagram.