

Edexcel OL

Economics

(Code: 4EC1 01)

Unit 1

The Market System



1.0 - The Economic Problem

1.1 - The Problem of Scarcity

THE PROBLEM OF SCARCITY

SUBJECT VOCABULARY

finite having an end or a limit

GENERAL VOCABULARY

fertile soil ground that is capable of producing crops

GENERAL VOCABULARY

health care activity of looking after people's health, considered to be an industry
needs basic requirements for human survival
wants people's desires for goods and services

All countries have resources, such as water, minerals, soil, plants, animals and people. However, in any country there is a finite quantity of these resources, which means that the quantity available is limited. As there is only a limited quantity, economists say that resources are scarce. These resources are often referred to as the four factors of production: land, labour, capital and enterprise

UNLIMITED WANTS

Economists distinguish between **needs** and **wants**. Needs are the basic requirements for human survival. Some of these needs are physical and include water, food, warmth, shelter and clothing. If these needs cannot be satisfied, eventually humans would cease to exist. In some countries in the world people do die because such needs cannot be met.

SUBJECT VOCABULARY

infinite without limits

1.2 - The Economic Problem

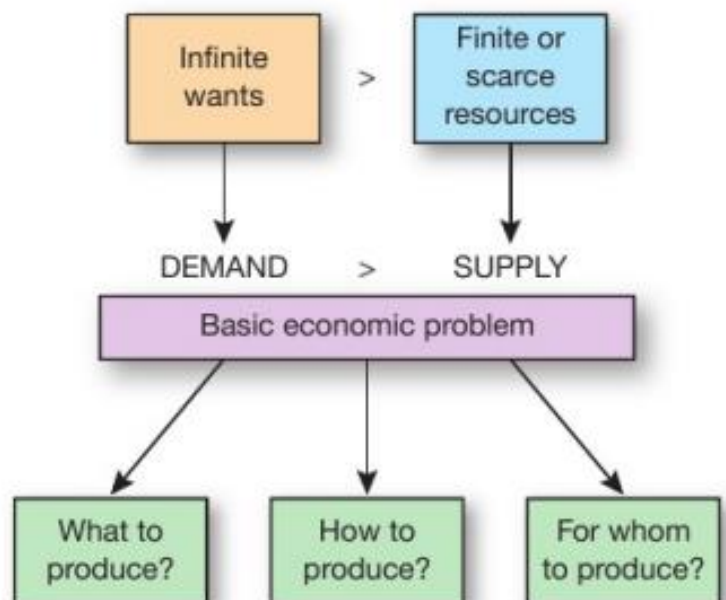
THE ECONOMIC PROBLEM

SUBJECT VOCABULARY

basic economic problem allocation of a nation's scarce resources between competing uses that represent infinite wants
scarce resources amount of resources available when supply is limited

GENERAL VOCABULARY

allocate to decide officially that a particular amount of money, time, etc. should be used for a particular purpose



What to produce? Because it is impossible to produce all the goods that people want, a country must decide which goods will be produced. For example, should resources be used to provide more libraries, build more schools, expand the armed forces, make more cars, build more houses, construct more roads, make more toys, print more books, increase state pensions or train more doctors?

KEY FACTS

In China, many clothes manufacturers use large quantities of labour in production. However, in many Western countries the same goods may be produced using high-tech machinery.

GENERAL VOCABULARY

distribution act of sharing things among a large group of people in a planned way

How to produce? Goods can be produced using a variety of different production methods. The four factors of production can be organized in different ways to produce the same goods.

For whom to produce? Once goods have been produced, there has to be a method of distribution. This means that the goods have to be shared in some way between members of the population. For example, should everyone get exactly the same quantities or should some receive more than others?

1.3 – Opportunity Cost

GENERAL VOCABULARY

choices deciding between alternative uses of scarce resources

GENERAL VOCABULARY

sacrifice something valuable that you decide not to have, in order to get something that is more important

SUBJECT VOCABULARY

opportunity cost cost of the next best alternative given up (when making a choice)

When making such choices, individuals, firms and governments will face a cost once their choice has been made. This is called the opportunity cost. This cost arises because a sacrifice has to be made when making a choice. If the government in the example above can place its spending desires in order of preference, the opportunity cost can be identified. Once the government has chosen the best alternative, the opportunity cost will be the benefit lost from the next best alternative.

1.4 – Production Possibility Curve

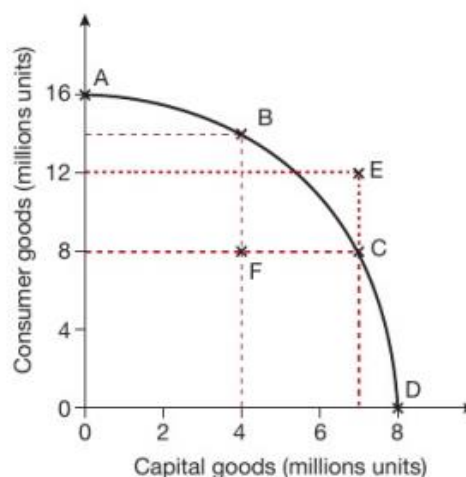
Deciding which goods to produce and the concept of opportunity cost can be illustrated using production possibility curves (PPCs). A PPC shows the different combinations of two goods that can be produced if all resources in a country are fully used. It shows the maximum quantities of goods that can be produced.

SUBJECT VOCABULARY

capital goods those purchased by firms and used to produce other goods such as factories machinery, tools and equipment

consumer goods those purchased by households such as food, confectionery, cars, tablets and furniture

production possibility curve (PPC) line that shows the different combinations of two goods an economy can produce if all resources are used up



▲ Figure 1.6 A production possibility curve for a country

WHAT HAPPENS WHEN AN ECONOMY MOVES FROM ONE POINT ON THE PPC TO ANOTHER?

For example, what happens if the economy in Figure 1.6 moves from B to C? By moving along the PPC, an opportunity cost is incurred. At point B, 14 million units of consumer goods are being produced and 4 million units of capital goods. By moving to C, the production of capital goods rises to 7 million units but production of consumer goods falls to 8 million units. To gain another 3 million units of capital goods, 6 million units of consumer goods are being sacrificed. The lost production of consumer goods (6 million units) is the opportunity cost.

Causes of negative and positive economic growth

New technology: As time passes, new technology is developed and this benefits businesses. For example, new machines such as robots, computers, telecommunications and the internet have been used by businesses to help increase productive potential. New technology is usually faster and more reliable in production and therefore more output can be produced.

Improved efficiency: Over time, resources are used more efficiently. New production methods, such as kaizen (continuous improvement) and lean production (using fewer resources in production), for example, have been developed and adopted. These more efficient methods replace the old ones and more output can be produced with fewer resources.

Education and training: An economy can boost the productive potential of a nation by educating and training the population. A country's economy becomes more productive as the proportion of educated workers increases. This is because educated workers can more efficiently carry out tasks that require reading and writing analysis, evaluation, communication and critical thinking. However, a country has to find the 'right' balance between academic and vocational education.

2.0 - The Economic Assumption

SUBJECT VOCABULARY

variables something that affects a situation in a way that means you cannot be sure what will happen

GENERAL VOCABULARY

assumptions things that you think are true although you have no definite proof

irrational not based on clear thought or reason

Economics is a social science that studies how individuals make decisions about the allocation of scarce resources. It often uses economic models to help predict the behavior of variables (such as inflation, unemployment, consumer spending and wages) and to explain the cause of certain events. In using these models, economists are required to make some about the behavior of individuals.

The Economic Assumption

When making economic decisions, economists assume that consumers will always choose a course of action that gives them the greatest satisfaction. This will help them maximize benefit. In 'Getting started' above, Anita chose to spend her Rs5000 on the most preferred item in her list, that is, the meal out with her friends. This is a rational decision; economists assume that consumers will always do this. Two other examples of consumer rationality are outlined below.

When business owners make decisions, they will always choose a course of action that has the best financial results. This is because economists assume that business owners will want to make as much profit as possible. Owners are assumed to be rational when making financial decisions about their businesses. Two examples are outlined below.

Reasons why consumers may not always maximize their benefit

It is possible that some consumers have difficulty in calculating the benefits from consuming a product. This is because measuring the satisfaction gained from consuming a product is often very difficult. It is hard to quantify (express in numbers) the satisfaction gained from consumption.

SUBJECT VOCABULARY

enterprises companies, organisations or businesses

GENERAL VOCABULARY

commission amount of money paid to someone according to the value of goods, shares or bonds they have sold

delegate to give part of your power or work to someone else, usually someone in a lower position than you

humanitarian concerned with improving bad living conditions and preventing unfair treatment of people

3.0 - The Demand Curve

Demand is the amount of a good that will be bought at given prices over a period of time. However, in economics it is effective demand that is really important. Effective demand shows how much would be bought (that is, how much people can afford to buy and would actually buy) at any given price. It does not mean how much people would like to buy if they had an endless amount of money.

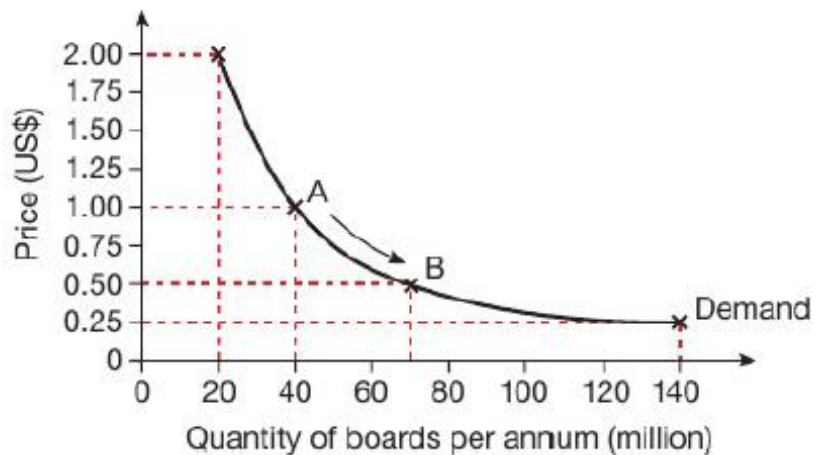
SUBJECT VOCABULARY

demand curve line drawn on a graph that shows how much of a good will be bought at different prices

demand schedule table of the quantity demanded of a good at different price levels – can be used to calculate the expected quantity demanded

effective demand amount of a good people are willing to buy at given prices over a given period of time supported by the ability to pay

inverse relationship (between price and quantity demanded) when price goes up, the quantity demanded falls and when the price goes down the quantity demanded rises



The demand curve slopes down from left to right; for most goods this is always the shape of the demand curve. This is important because it shows that price and the quantity demanded have an inverse relationship. This means:

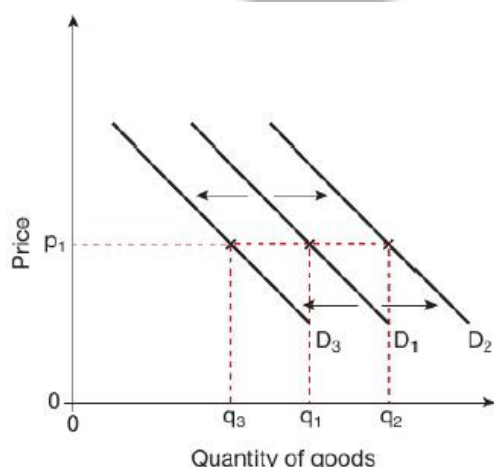
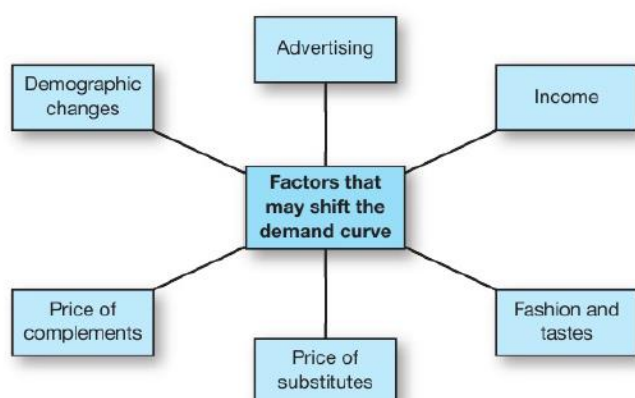
- when prices go up demand will fall
- when prices go down demand will rise.

SUBJECT VOCABULARY

shift in the demand curve movement to the left or right of the entire demand curve when there is a change in any factor affecting demand except the price

If the price of a good changes, there is a movement along the demand curve. A change in any other factor, such as income for example, will be shown by a shift in the demand curve.

4.0 – Factors that may shift the demand curve



▲ Figure 4.2 Shifts in the demand curve

SUBJECT VOCABULARY

disposable income income that is available to someone over a period of time to spend; it includes state benefits but excludes direct taxes

inferior goods goods for which demand will fall if income rises or rise if income falls

normal goods goods for which demand will increase if income increases or fall if income falls

SUBJECT VOCABULARY

substitute goods goods bought as an alternative to another but perform the same function

GENERAL VOCABULARY

demography study of human populations and the way in which they change

Advertising - Businesses try to influence demand for their products through advertising and other forms of promotion. For example, in the highly competitive soft drinks industry, Coca-Cola spent US\$3499 million on advertising in 2014. If goods are advertised more heavily, the quantity demanded is likely to increase. This helps to explain the huge amounts that some businesses, such as Coca-Cola, are prepared to spend on advertising.

Income: Generally, when disposable income rises, demand for goods will also rise. For example, if wages and salaries rise in the economy, people may decide to spend more money going out to restaurants. They may take an extra holiday or they may buy a new car. These are all normal goods. These are goods for which demand will rise when income rises. Most goods in the economy are normal goods. However, a minority of goods are inferior goods. This means that the quantity demanded will actually fall when incomes rise. Supermarket 'own label' brands or public transport may be examples of inferior goods. For example, consumers who generally buy a relatively cheap supermarket 'own label' brand of baked beans may switch to a more expensive brand when their incomes rise.

FASHION AND TASTES

Over a period of time, demand patterns change because there are changes in consumer tastes and fashion. For example, there has been a rise in demand for T20 cricket (cricket games that last for three hours) around the world in the last 10 years. This is reflected by the attendances at T20 fixtures in many different countries, such as India, Australia, Bangladesh and Sri Lanka. Stadiums are often full for international T20 fixtures.

PRICE OF COMPLEMENTS

Some goods are purchased together by consumers. This is because the two goods are used together, for example, consumers of cornflakes will also buy milk, and people who buy cars will also buy car insurance. In these examples, milk and cornflakes and cars and car insurance are complementary

5.0 – The Supply Curve

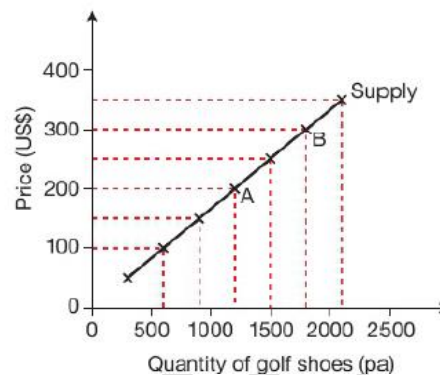
Supply is the amount of a good that sellers are prepared to offer for sale at any given price over a period of time. For example, in 'Getting started' above, if the market price for chickens was CNY30, Tom Chang would sell 50 chickens during a week. This means that the supply of chickens by Tom Chang at CNY30 during a particular week was 50.

SUBJECT VOCABULARY

supply amount that producers are willing to offer for sale at different prices in a given period of time
supply curve line drawn on a graph which shows how much of a good sellers are willing to supply at different prices

SUBJECT VOCABULARY

proportionate relationship (between price and the quantity supplied) when the price goes up, the quantity supplied also goes up and when the price goes down the quantity supplied goes down



Movement along the supply curve

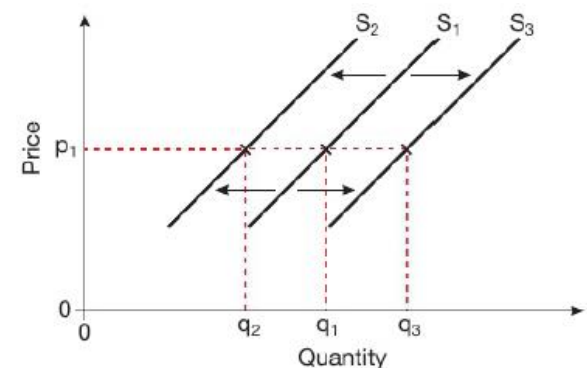
As with demand, when there is a price change, there is a movement along the supply curve. In Figure 5.1, when the price rises from US\$200 to US\$300, for example, we move along the supply curve from A to B to identify the new level of supply. The movement along the supply curve in this case shows that the quantity supplied is increased from 1200 pairs of golf shoes to 1800 pairs when the price rises. This only happens when there is a price change. If there are changes in any other factor influencing supply, the effect on the supply curve is different. This is discussed below.

SUBJECT VOCABULARY

shift in the supply curve movement to the left or right of the entire supply curve when there is any change in the conditions of supply except the price

A shift in the supply curve

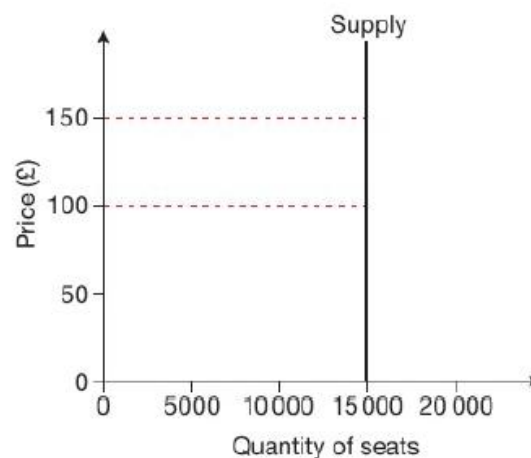
If the price of a good changes, there is a movement along the supply curve. A change in any other factor, such as production costs, will be shown by a shift in the supply curve.



▲ Figure 5.2 Shift in the supply curve for a product

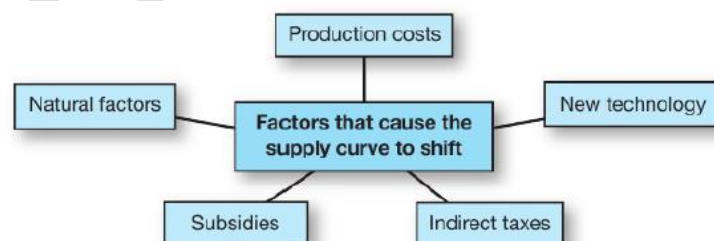
Fixed Supply

In some circumstances, the supply of a product or service may be fixed. If this is the case, then the supply curve will be vertical. Supply will be fixed if it is impossible for sellers to increase supply even when prices rise. Supply at venues where sports matches and other events are held may be fixed.



6.0 –Factors that may shift the supply curve

Price is the main factor that affects supply. However, a range of other factors may also have an impact. Unlike a change in price, which results in a movement along the supply curve, changes in these other factors can cause the supply curve to shift.



▲ Figure 6.1 Factors that can shift the supply curve

COSTS OF PRODUCTION

The quantity supplied of any product is influenced by the costs of production, such as wages, raw materials, energy, rent and machinery. Assuming the price is fixed, if production costs rise, sellers are likely to reduce supply. This is because their profits will be reduced. This is what happened in the example in 'Getting started' above. The rising cost of fish feed resulted in some fish farmers leaving the industry, causing the quantity supplied to fall.

SUBJECT VOCABULARY

indirect taxes taxes levied on spending, such as VAT
productivity rate at which goods are produced, and the amount produced in relation to the work, time, and money needed to produce them

INDIRECT TAXES

Indirect taxes are taxes on spending. VAT (valued-added tax) and duties, such as those on petrol and cigarettes, are examples of indirect taxes. Such taxes have an effect on supply. When they are imposed or increased, the supply curve will shift to the left. This is because indirect taxes represent a cost.

SUBSIDIES

Sometimes the government may give money to businesses in the form of a grant. This is called a subsidy. Subsidies may be given to firms to try to encourage them to produce a particular product. For example, in the EU, subsidies have been given to farmers to encourage them to produce certain agricultural products. If the government grants a subsidy on a good, the effect is to increase its supply. This is because subsidies help to reduce production costs.

CHANGES IN TECHNOLOGY

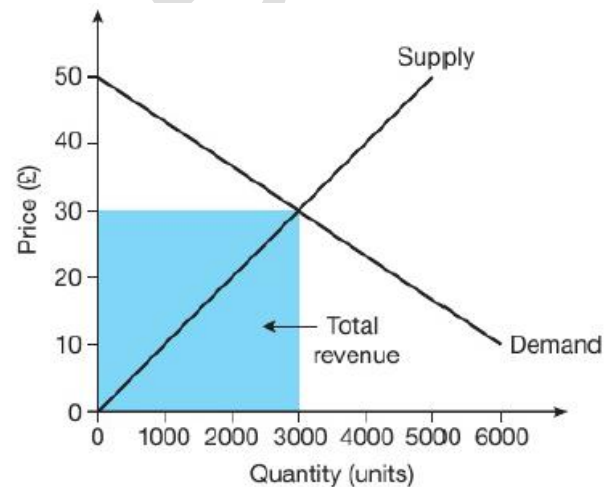
Over a period of time, new technology becomes available that many businesses use in their production processes. New technology is more efficient and can therefore reduce the costs of production. For example, when the price of oil fell sharply in 2014, many oil companies began to use new technology to lower their costs. Some companies began to use lasers and other hi-tech data analysis equipment to help measure the potential yield from new oil wells. Others used new techniques to help them produce more oil from both old and new wells. Since the introduction of new technology

NATURAL FACTORS

The production of some goods is influenced by natural factors, such as the weather, natural disasters, or the presence of pests (for example, rats or mice) or diseases. This is true of many agricultural products. For example, good growing conditions can help to improve crop yields, which will increase supply. This will shift the supply curve to the right -

7.0 –Market Equilibrium

The way in which the forces of supply and demand determine prices in a market can be shown on a graph. Figure 7.1 shows the supply and demand curves for a product. In any market, the price is set where the wishes of consumers are matched exactly with those of producers. This price, called the equilibrium price, is where supply and demand are equal. In Figure 7.1, the equilibrium price is £30. At this price, consumers want to buy 3000 units and producers want to sell 3000. The wishes of buyers and sellers are matched. There is no other price where this happens. For example, if the price were £40, sellers would want to supply 4000 units. However, at this price, buyers only demand 1500 units because the price is too high.



▲ Figure 7.1 Market equilibrium

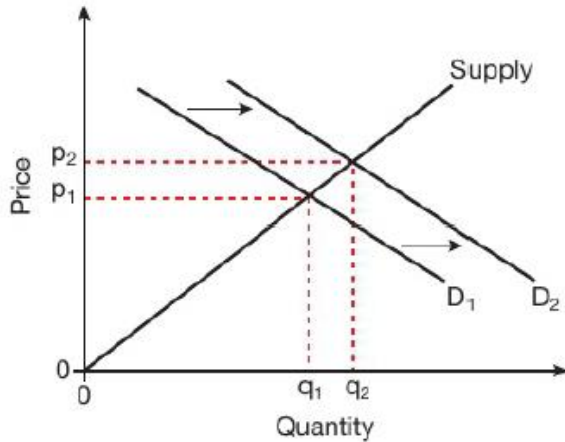
Total Revenue

Total revenue = Price × Quantity or $TR = P \times Q$

SUBJECT VOCABULARY

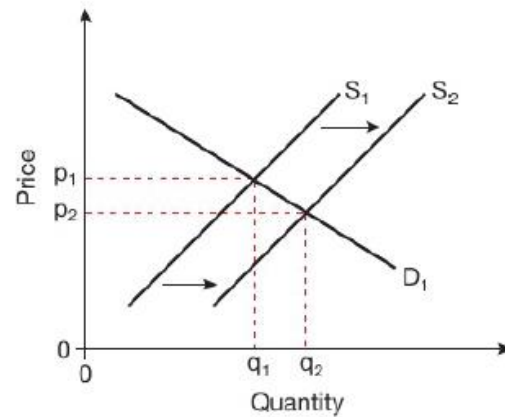
total revenue amount of money generated from the sale of goods calculated by multiplying price by quantity

Shifts in Demand



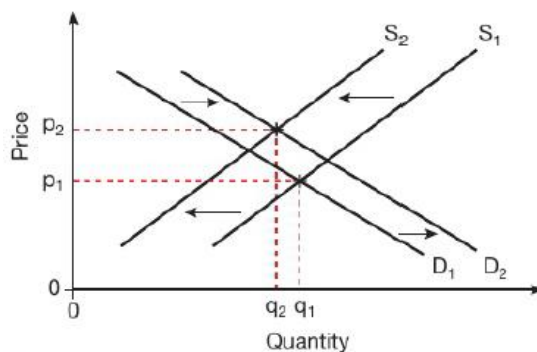
▲ Figure 7.3 Effect of a shift in demand for a product

Shifts in Demand



▲ Figure 7.4 Effect of a shift in supply for a product

Shifts in Supply and Demand



▲ Figure 7.6 Shift in supply and demand for a product

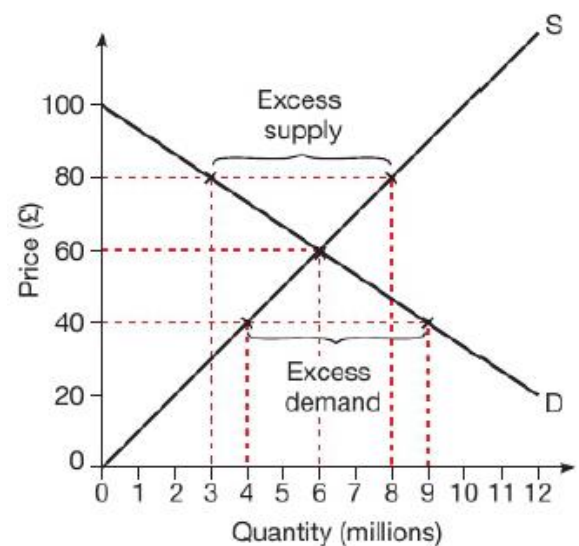
Excess Demand & Supply

SUBJECT VOCABULARY

excess demand where demand is greater than supply and there are shortages in the market

SUBJECT VOCABULARY

excess supply where supply is greater than demand and there are unsold goods in the market



▲ Figure 7.7 Excess demand and excess supply

Removing Excess Demand & Supply

- If there is disequilibrium in a market, producers can restore equilibrium by changing the price or adjusting supply.
- If there is excess supply in the market, producers could lower their prices.

Exam Style Questions

1. State one factor of production. (1) (2023)
2. Define the term public sector. (1) (2023)
3. Yusef paints portraits of tourists who visit his home town. He recently reduced the price he charges by 2.5% and quantity demanded increased by 3.2%.
 - Calculate, to two decimal places, the price elasticity of demand (PED) for Yusef's portraits. You are advised to show your working. (2) (2023)
4. Using the diagram below, draw the likely effects on the market after a popular celebrity was seen wearing trainers. Label the new curve, the new equilibrium price and the new equilibrium quantity. (3) (2023)

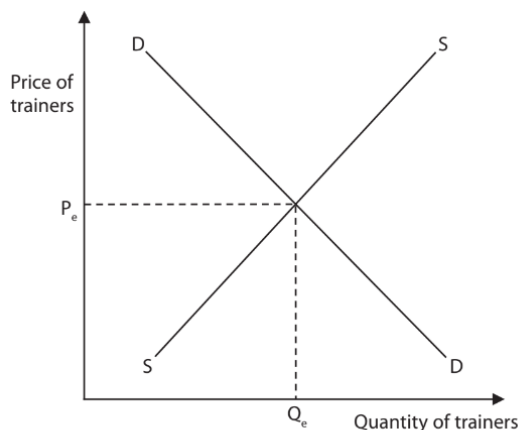


Figure 1

5. Spice Cottage is a new food producing business. Its prices are lower than market research suggests consumers would be willing to pay.

- Explain one reason why Spice Cottage may not aim to maximise its profit.

6. What is meant by the term barriers to entry? (2) (2023)

7. Draw a supply curve on the diagram below that has price elastic supply (PES). Label the impact of a price change from P1 to P2 and its impact on quantity from Q1 to Q2. (3) (2023)



Figure 3

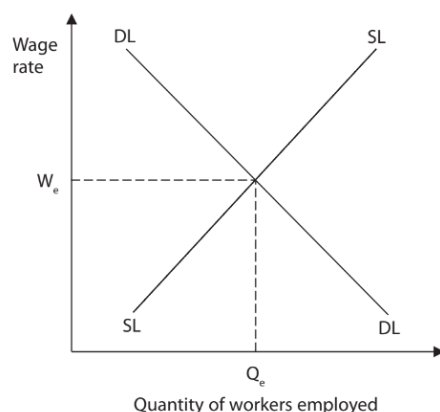
8. What is meant by the term normal good? (2) (2022)

9. Define the term niche market. (1) (2023)

10. Greg produces pottery at a small factory in his local area. At the start of the year price increased by 5.4% and quantity supplied increased by 4.7%.

- Calculate, to two decimal places, the price elasticity of supply (PES) for Greg's pottery. You are advised to show your working. (2) (2022)

11. On the diagram below, draw the effects of an increase in the school-leaving age on the labour market in a country. Label the new curve, the new equilibrium wage rate and the new equilibrium quantity of workers employed. (3) (2023)



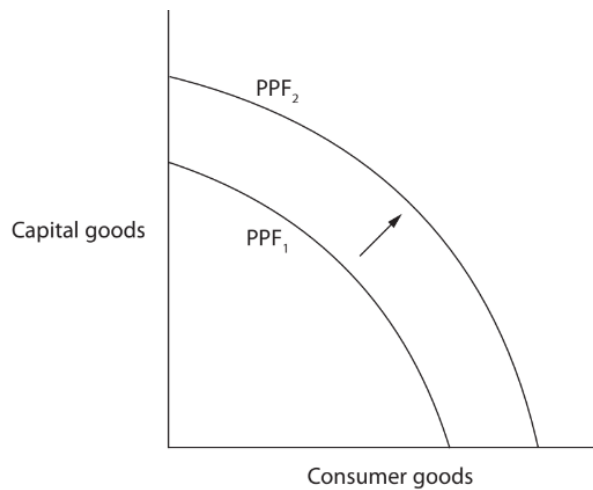


Figure 4

Figure 4 shows an outward shift in the production possibility frontier (PPF) for Zambia in 2019. Agriculture, construction and copper production are some of the main areas that contribute to the economy of Zambia.

12. With reference to the data above and your knowledge of economics, analyse why the economy has moved from PPF1 to PPF2. (6) (2023)
13. A restaurant in Cyprus can seat 136 diners each evening. The demand for seats from diners over three evenings is shown in Figure 5.

Evening	Quantity of seats demanded
Thursday	98
Friday	114
Saturday	107

Figure 5

- Calculate the excess supply of seats if the quantity supplied during these three evenings totaled 408. You are advised to show your working. (3) (2022)
14. What is meant by the term productivity? (2) (2021)
 15. Define the term producer. (1) (2021)
 16. State one reason why firms stay small. (1) (2021)
 17. Describe one reason why a computer can be a factor of production. (2) (2021)

18. Using the diagram below, draw the effects of a minimum wage (W_1) that has been set above the equilibrium wage W_e . Label the new quantity of labour demanded and the new quantity of labour supplied. (3) (2021)

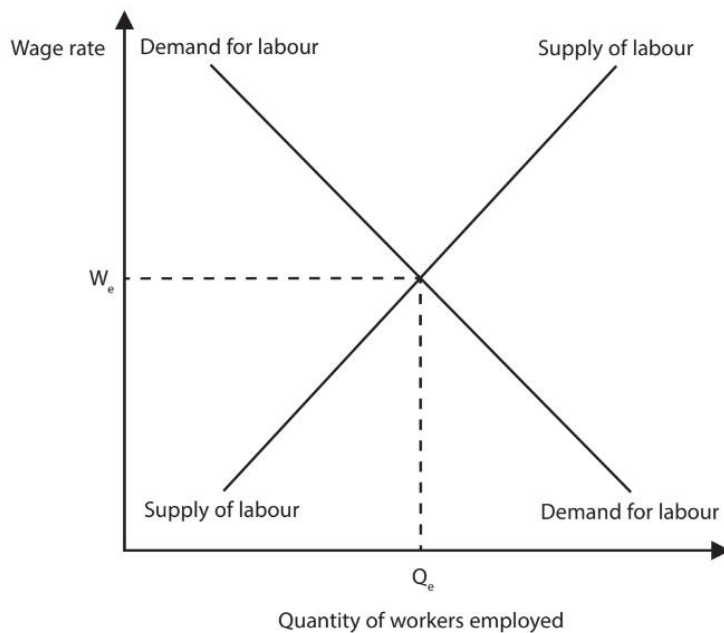


Figure 3

19. What is meant by the term economies of scale? (1) (2021)
20. State one example of a factor of production that can be classified as land. (1) (2021)
21. Define the term monopoly. (1) (2021)
22. Using the diagram below, draw the likely effects on the market for cars of the introduction of more effective technology in production. Label the new curve, the new equilibrium price and the new equilibrium quantity. (3) (2021)

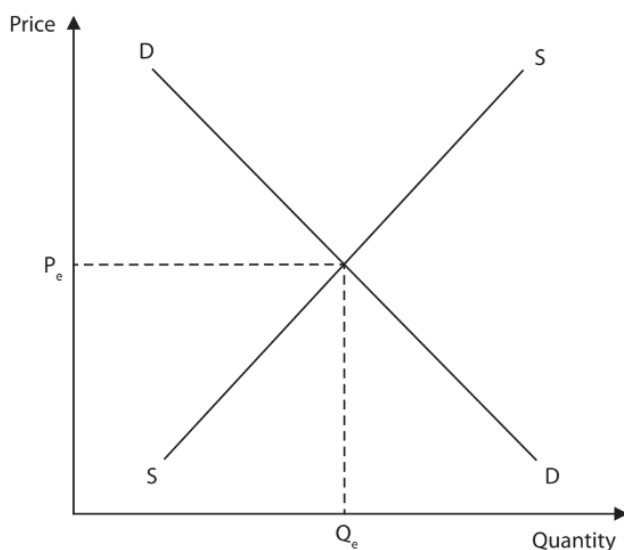


Figure 1

23. Describe one benefit to consumers of privatisation. (2) (2021)

24. On the blank pie chart below, draw and label the appropriate sizes of the primary (P), secondary (S) and tertiary (T) sectors for a developing economy such as Haiti.

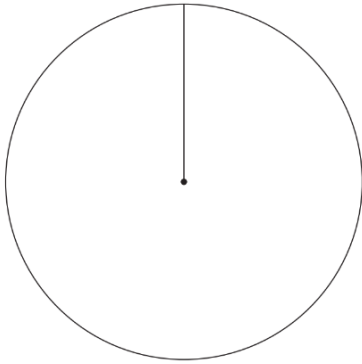


Figure 3

25. The problem of scarcity is that there are unlimited wants and finite resources. Define the term wants? (1) (2020)

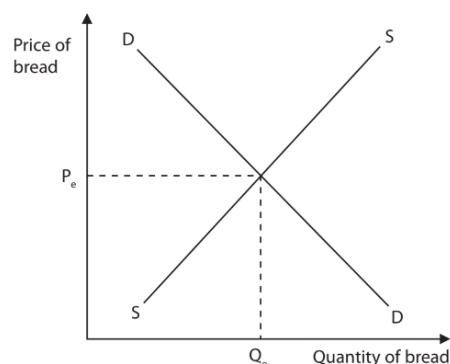
26. Private facilities in which swimmers can change clothes are available at the swimming pool in Ciney, Belgium. The quantity demanded for these facilities during each of the first three months of 2019 is shown in Figure 1.

Month	Quantity of private facilities demanded
January	3,600
February	3,200
March	3,100

Figure 1

- Calculate the excess demand for private changing facilities for the first three months of 2019 if the quantity supplied during each month was 3,000 (9,000 in total). You are advised to show your working. (2) (2020)

27. Using the diagram below, draw the likely effects on the market for bread after a decrease in the population. Label the new curve, the new equilibrium price and the new equilibrium quantity. (3) (2020)



28. In the box below, draw a production possibility frontier (PPF) for a firm that can produce diaries and/or calendars. On your PPF, draw what would happen if production of calendars increased.

(3) (2020)

29. Each year the Turkish Government raises the national monthly minimum wage. It increased from 2 020 Turkish Lira (TRY) in 2018 to 2 558 Turkish Lira (TRY) in 2019.

- With reference to the data above and your knowledge of economics, analyse why the Turkish Government might want to increase the minimum wage every year. (6) (2020)

30. What is meant by the term supply? (2) (2020)

31. State one example of an occupation that is in the secondary sector of the economy. (1) (2020)

32. Define the term labour.(1) (2020)

33. Using the diagram below, draw the likely effects of an increase in income on the equilibrium price and quantity for wireless headphones. Label the new curve, the new equilibrium price and quantity.

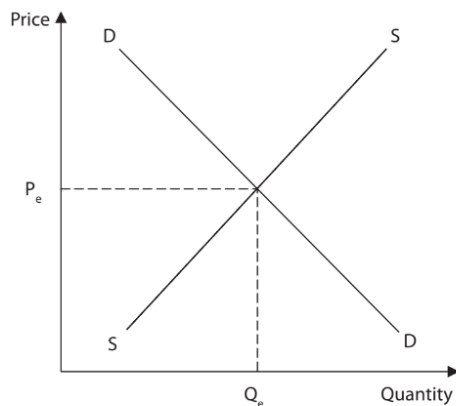


Figure 1

34. McAfee is a US-based global computer software security company. In 2017, its revenue was over \$2.5bn. The company operates a 'fundraising match programme'. This means when one of its 7,600 employees participate in a fundraising activity, such as a walk, run or cycle event, the company will contribute an equal amount. For every \$1 raised for charity by an employee, the company will also contribute \$1 to the charity, up to a maximum of \$1 000 per person.

- With reference to the data above and your knowledge of economics, analyse the possible reasons why McAfee chooses not to profit maximise but instead operates the fundraising match programme. (6) (2020)

35. State the formula for profit. (1) (2020)

36. Define the term finance. (1) (2020)

37. An economy can produce consumer and capital goods. This economy originally produced at PPC1 with all resources fully employed but due to positive economic growth, it can now produce at PPC2 with all resources fully employed.

- Using the axes below, draw two production possibility curves (PPC) to show an economy moving from PPC1 to PPC2. Label both production possibility curves and the axes. (3) (2020)

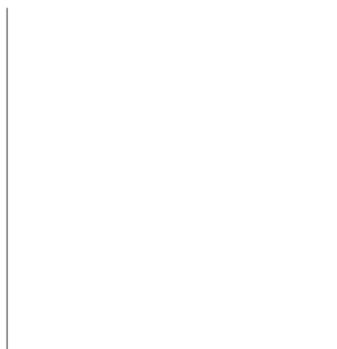


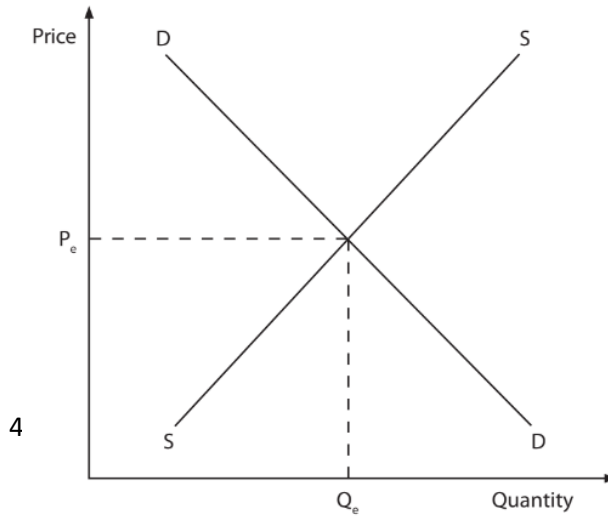
Figure 2

38. What is meant by the term demand? (2) (2020)

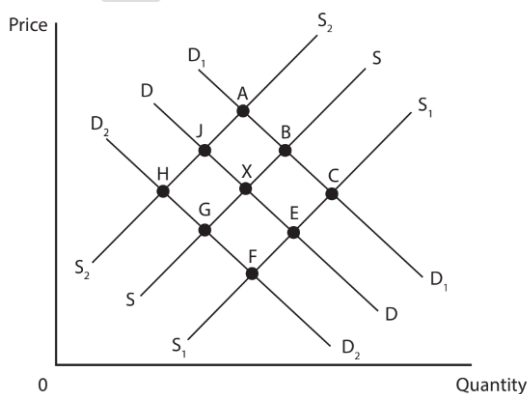
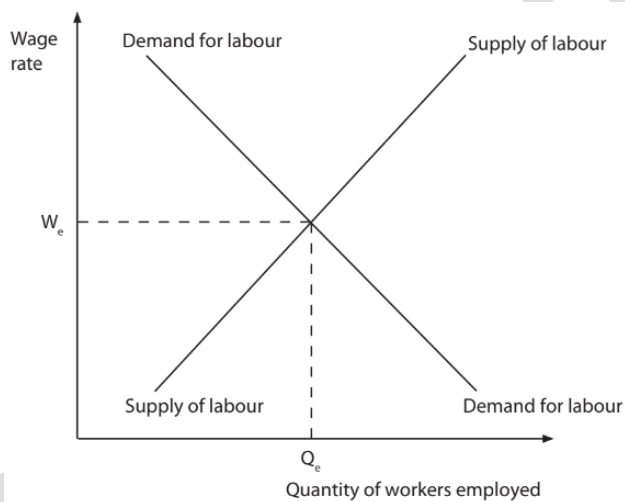
39. Define the term tertiary sector. (1) (2020)

Quantity	Total fixed costs	Total variable costs
2,000	\$7 340	\$4 760

40. Calculate the average cost per unit for the firm when it makes 2,000 units. You are advised to show your working. (2) (2019)
41. Using the diagram below, draw the effects on the market for crops after a hurricane destroys farm land. Label the new curve, new equilibrium price and new equilibrium quantity. (3) (2019)



to shift to the left. (1) (2019) Using the diagram 1) being set above the equilibrium wage (W_e). I the new quantity of labour supplied. (3) (2019)



43. The original equilibrium point is X. For each of the following changes, starting from X, identify the new equilibrium point in Table 1. Each letter may be used more than once. (4) (2019)

Change	New equilibrium point
A rise in the wages of electric car production workers	
An advertising campaign for electric cars	
A fall in consumer incomes	

Figure 1b represents a production possibility curve for a country.

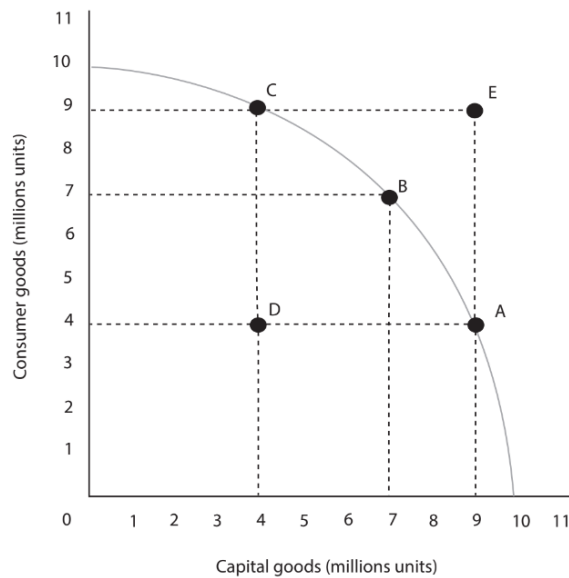


Figure 1b

- Which of the points, A, B, C, D or E, represents an underutilisation of resources? (1) (2019)
- Using the data in Figure 1b, explain what is meant by opportunity cost. (1) (2019)