

Topic 2 – The allocation of resources

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2.1 Microeconomics & Macroeconomics

Microeconomics: study of particular markets & sections of economy

- Individual firms, consumers, & markets making individual decisions within the economy
- E.g. effect of a price change on the demand/supply of a good

Macroeconomics: study of economic behavior & decision making in whole economy

- Aggregates (total supply/demand for g/s in an economy at a particular time)
- E.g. level of inflation, national spending, national output, economic development etc.
- Decisions are made by government in managing the economy as a whole

2.2 The role of markets in allocating resources

Resource allocation – the way in which markets decide what goods & services to provide, how to produce them & who to produce them for

Price mechanism

- Prices respond to shortages & surpluses
- Price rises: consumers ration
- Reduces amount they are willing/able to buy
 - o Tells producers there is excess supply in the market
- Gives suppliers incentive to decrease supply
 - Shortages causes price to rise
 - o Surpluses causes prices to fall

Market system - method of allocating resources through market forces of demand & supply

- Goods are bought/sold in a market at an equilibrium price
- Producers produce goods that consumers demand the most

Market equilibrium

- Demand = supply for a good
- Demand changes e.g. *†*income: people can afford more goods
- Supply changes e.g. weather impacts supply (drought) = \downarrow crops)
- Market is more likely to be in state of disequilibrium than equilibrium
- Demand & supply constantly change

Economic questions

- 1. What to produce
- 2. How to produce
- 3. For whom to produce

Price mechanism - system of relying on market force of demand & supply to allocate resources

2.3 Demand

Demand – the willingness and ability to buy a product **Effective demand:** willingness to buy is backed by the ability to pay for the purchase **Quantity demand:** effective demand for a particular goods

• E.g. Want a phone but don't have the money to buy (demand)

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- GCSE/IGCSE Economics Notes
- Have the money to buy (effective demand)

Individual demand: demand from one customer

Market demand: total (aggregate) demand; sum of all individual demands of consumers

Demand curve - shows effective demand

Law of demand

- Increased price = decreased demand
- Decreased price = increased demand

Slopes down from left to right

• Demand increases as price falls (vice versa)

Movements are due to change in price

- Price rise = contraction along demand curve (less demand)
- Price falls = extension along demand curve (more demand)

Reasons for shifts

- Consumer incomes
 - Increased income = people can afford more e.g. bicycle replaced by motorcycle
- Tax on incomes (more/less disposable income)
- Rise/fall in the price of substitute (eg. tea & coffee)
- Rise in the price of complements (eg. printers & ink cartridge)
 - Two products used/consumed together
 - \circ $\,$ As demand for 1 product increases, demand for other product increases
- Successful/unsuccessful advertising
- Weather
- Legislation
- Age distribution
- Fashion/trends
- Demand varies depending on age group
- E.g. trainers are more popular amongst young people
 - Majority of population is young people = high demand





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• Contraction in demand from B to A

2.4 Supply

Supply – the willingness of producers to supply a good or services at a given price Quality supplied: amount of goods producers are willing to make & supply Market supply: amount of goods all producers supplying the product are willing to supply

Supply curve

Law of supply

- Increased price = increased supply
- Decreased prices = decreased supply

Slopes down from right to left

• Higher supply = increase in price

Movements are due to change in price

- Increase in price = extension in supply (increase in quantity supplied)
- Decrease in price = contraction in supply (reduced quantity supplied)

Reasons for shifts

- Change in costs of production (COP)
 - o Producers can produce & supply products cheaply
 - COP rises = supply falls
- Changes in quantity of resources available
 - Resources rise = supply rises (vice versa)
- Technological changes (higher productivity/output)
- Profitability of other products
 - Producers might shift to producing more profitable products (reduces supply of initial product)
- Joint supply when a product is made as a by-product of another
- Weather
- Regulation/bureaucracy
- Increased number of producers in the market





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S2) due to changes in other factories (excluding price)

2.5 Price determination

Market equilibrium: quantity demanded = quantity supplied, X shortage/surplus

Equilibrium price: price at which demand curve intersects supply curve

Equilibrium quantity: quality demanded or supplied at the equilibrium price

- Marginal benefit = marginal cost
 - Movements to a new equilibrium
 - Increased demand (demand curve shifts right)
 - Increased supply (supply curve shifts right)



Market disequilibrium

Disequilibrium price: price at which market demand & supply curves don't meet

Revenue = Price × Quantity

2.6 Price changes

Cause – change in supply/demand

Consequences

	Effect on equilibrium market price	Effect on equilibrium market quantity
Demand shifts to the right	Increase	Increase
Demand shifts to the left	Increase	Increase

2.7 Price elasticity of demand (PED)

PED: responsiveness of demand to a change in price

Calculation

$$PED = \frac{\% \bigtriangleup quantity \ demanded}{\% \bigtriangleup price}$$

PED < 1	Inelastic	 Demand unresponsive to changes in price Quantity demanded < price Eg food, electricity 	
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GC	SE/IGCSE Economics	Notes Topic 2 – The A	llocation of Resources
PED > 1	Elastic	 Demand responsive to changes in price Quantity demanded > price Eg luxury 	
PED = 0	Perfectly inelastic	Change in price X effect quantity demanded	<u>↓</u> ,
PED = ∞	Perfectly elastic	Change in price leads to 0 quantity demanded	<u>↑</u> ,
PED = 1	Unitary	%△ quantity demanded = %△ price	^

Determinants of PED

- **1.** Availability of close substitutes \uparrow substitutes \rightarrow products easily replace if \uparrow price \rightarrow <u>elastic</u>
- **2.** Proportion of income spent on products \uparrow income, \triangle price X matter \rightarrow inelastic
- **3.** Cost of substituting between products \uparrow substitution cost \rightarrow inelastic
- 4. Brand loyalty / habit less sensitive to \triangle price \rightarrow inelastic
- **5.** Advertisement \downarrow PED \rightarrow <u>inelastic</u>
- **6.** Necessity essential \rightarrow inelastic, luxury \rightarrow <u>elastic</u>
- 7. **Durability** non-durable \rightarrow inelastic, durable \rightarrow <u>elastic</u>
- **8.** Time takes time for consumers to change habits \rightarrow long run \rightarrow <u>elastic</u>

Significance of PED

Firms	Gov
 Determine price strategies to max revenue Determine if use price discrimination (Charge different customers different price of same product coz differences in PED) Predict impact on producers following changes in exchange rate But - Difficult to calculate accurately as PED changes constantly 	 Decide products to impose taxes (usually on inelastic products)

2.8 Price elasticity of supply (PES)

PES: responsiveness of supplied to a change in price

Calculation



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$PES = \frac{\% \bigtriangleup quantity \ supplied}{\% \bigtriangleup price}$

PES < 1	Inelastic	Supply unresponsive to changes in price	
PES > 1	Elastic	Supply responsive to changes in price	↓ ↓ ↓
PES = 0	Perfectly inelastic	Change in price X effect quantity supplied	
PES = ∞	Perfectly elastic	Change in price leads to 0 quantity supplied	,
PES = 1	Unitary	%△ quantity supplied = %△ price	S1 S1 S1

Determinants of PES

- **1.** Spare capacity if has spare capacity, can \uparrow supply \rightarrow <u>elastic</u>
- 2. Level of stock ↑stock ↑elastic
- **3.** No of firms in industry \uparrow no of firms \uparrow elastic
- 4. Ease & cost of factor substitution if capital / labour occupationally mobile \rightarrow elastic coz resources can be mobilized to supply extra output
- 5. Time period & production speed long time, firm adjust production level \rightarrow elastic

Significance of PES

Firms	Gov		
	• Ensure everyone has access to affordable products		
	Encourage migrant labourRelieve shortage of labour		
	Improve PES in labour market		

2.9 Market economic system

Types

1. Free market economy eg Hong Kong

Relies on market forces of demand & supply in private sector to allocate resources with minimal • gov intervention

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Adv		Dis
1.	Competition helps firms to pay attention & respond quickly to consumers wants → stimulate innovation, ↑ efficiency	 Income & wealth inequalities Richer ppl have more choice & econ freedom Producers meet needs & wants of rich ppl, neglect poor ppl
		2. Environment issues
2.	 Freedom of choice Producers & consumers choose what to produce / consume 	 E.g. use non-renewable resources → pollution

- 2. Planned economy eg North Korea
- Relies on gov in public sector allocating resources

3. Mixed economy eg Japan

- Combination of free market & planned economy
- Changes in demand & supply changes price & quantity
- Allocation of resources is determined by profit motive

Adv			Dis		
	1.	Freedom of choice		1.	Heavy
	2.	↓ social cost coz gov analysis social			tax
		cost & benefits		2.	\checkmark
	3.	↓ inequality			efficient
	4.	Monopolies under close supervision			

How gov solve market failure?

Solution	Definition	Graph	Adv	Dis
Maximum price	Gov sets price below equilibrium price	P Pe Max Price Q1 Qx Q2 Q	 Products more affordable Encourage consumption 	 Create shortage ↑ tax
Minimum price	Gov sets price above equilibrium price	P Min Price Pe Q1 Qe Q2 Q	 Producers know in advance the price they'll receive → enable plan investment & output 	 Create surplus Encourage over- production



GCSE/IGC	SE Economics Notes	EXAM PAPERS PRACTICE	ic 2	– The Allocation o	of Re	esources
			•	Encourage output of certain goods/services		
Indirect taxation	Aim to ↓ demand for demerit goods	Price p_2 p_1 q_2 q_2 q_1 q_2 q_1 q_2 q_2 q_1 q_2 q_1 q_2 q_2 q_1 q_2 q_2 q_1 q_2 q_2 q_2 q_3 q_4	•	↑ tax ↓ demand ↑ gov revenue	•	Great impact on low income earners
Subsidies	Payment by gov	Price P P P Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q	•	↓production cost	•	↑ tax Difficult to set up appropriate subsidy coz hard to measure external benefit
Regulations	eg - complete ban - age limit		•	↓consumption ↑awareness	•	Cause black markets to provide products Ppl break rules eg fake ID cards
Privatisation	Transfer ownership of assets from public to private sector		•	↓gov tax & debt Private firm ↑competitive	•	Create monopoly Still require gov intervention → protect public interest
Nationalisation	Purchase of private sector assets by gov		•	Protect employment Promote economic stability	•	Large oppo cost
Direct provision	eg - education - healthcare		•	Goods/services accessible to all ppl Private benefits for individual &	•	Oppo cost Over- consumed Long queues ↑shortage



external	•	Free riders
benefits for 3rd		
parties		

2.10 Market failure

Market failure - occurs when market force are unsuccessful in allocating resources efficiently

Private costs: direct costs of production & consumption of a individual, firm or gov Eg (pro) wages, (con) price paid for goods by conusmers

External costs: -ve side-effects of production & consumption incurred by 3rd parties for which no compensation is paid Eg (pro) air, (con) passive smoking

Social costs: private costs + external costs

Private benefit: benefits of production & consumption enjoyed by a individual, firm or gov

Eg To <u>producer</u> - profit received To <u>consumer</u> - satisfaction gained

External benefit: +ve side effects of production & consumption experienced by 3rd parties for which no money is paid Eg vaccination protect surrounding ppl

Social benefits: private benefits + external benefits

Types of market failure		Definition / Cause	Example	Gov solution
1.	Public goods	 goods/services that are non-excludable & non-rivalrous no one willing to pay → producers lack motivation → X supply 	Street lighting	Тах
1.	Merit goods	• goods/services when consumed create +ve spillover effects in economy	Education	Subsidy
1.	Demerit goods	 goods/services when consumed create -ve spillover effects in economy X gov intervention → over- produced/consumed 	Cigarettes	Tax Banning
1.	Monopoly	 Single supplier, price maker X gov control → exploit market power 		Attract foreign firms →↑competition
1.	Geographical immobility			Provide public housing & transport
1.	Occupational immobility			Provide more training



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1. Information failure • Good where pp effects		Good where ppl unaware of long-term effects	Chocolate	Education		

2.11 Mixed economic system

Mixed economy

- Decisions are made by a combination of the govt & the private sector (market)
- Eg. USA, India, China, Singapore, Japan etc.



Exam questions

3

3 In 2013, the market price of houses rose in China but fell in Greece. The Chinese Government tried to reduce the rise in house prices by discouraging borrowing. In Greece, the equilibrium price of houses fell, largely because of a decrease in income. In some countries, governments give subsidies to housebuilders to influence the market for houses.

(a)	Define 'equilibrium price'.	[2]
(b)	Explain two reasons why borrowing may decrease.	[4]
(c)	Using a demand and supply diagram, analyse why a fall in incomes may reduce the mar price of houses.	ket [6]
(d)	Discuss whether the building of houses should be subsidised.	[8]
(a)	Define 'equilibrium price'.	[2]

(a) Define 'equilibrium price'.

- the price which equates demand and supply (2)
- market clearing price (1) which ensures no surplus or shortage (1)
- the price which will not change (1) unless market conditions change (1)

Note: award 2 marks if they show a correct diagram showing demand = supply

(b) Explain two reasons why borrowing may decrease.

1 mark for identification and 1 mark for explanation:

- a rise in the rate of interest (1) will increase the cost of borrowing (1)
- a reduction in the availability of loans (1) will make it more difficult to borrow (1)
- a rise in income (1) may reduce the need to borrow (1)
- an increase in the state provision of health care/education (1) may mean that people do not have to borrow to cover health care/education expenses (1)
- a reduction in the price of expensive items e.g. houses, cars (1) may mean that people can buy the items without borrowing (1)
- a reduction in confidence about the future (1) may mean that people will be afraid they will not be able to repay loans (1)
- a change in age structure (1) the young may borrow more than those of middle age (1)
- a change in social attitudes (1) it may become less acceptable to borrow (1)
- an increase in government subsidies to firms (1) may reduce the need for firms to borrow from banks (1)

[4]



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(c) Using a demand and supply diagram, analyse why a fall in incomes may reduce the market price of houses. [6]

Up to 4 marks for the diagram:



- axes accurately labelled (1)
- dem and and supply curves accurately labelled (1)
- the shift of the derr and curve to the left (1)
- original and new equilibriums indicated either by lines to the axes or equilibrium prices clearly highlighted (1)

Up to 2 marks for written analysis:

(d) Discuss whether the building of houses should be subsidised.

[8]

Up to 5 marks for why they should be:

- subsidising houses will provide an incentive to build houses (1) increase the supply of houses (1) reduce the price of houses (1) this may make it easier for the poor to buy houses (1) increase the quality of the lives of the poor (1)
- subsidising houses will increase economic activity (1) to produce more houses would require more labour (1) this would reduce unemployment (1)
- housing is a necessity (1) so building more houses may reduce poverty/homelessness (1)

Up to 5 marks for why they should not be:

- would involve an opportunity cost (1) government spending could be used on other areas e.g. education/health care (1)
- may generate external costs (1) for example, pollution and destruction of the natural environment (1)
- there may be no demand for extra houses (1) in this case there will be an oversupply of houses/inefficient use of resources (1)
- building firms may become reliant on subsidies (1) and this increase inefficiency (1)

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4 Increasing demand from China has made New Zealand the world's biggest exporter of dairy products. Its exports of milk to China increased by 45% in 2013. More than 300000 hectares of land in New Zealand have been transferred to dairy use from other forms of farming and forestry use since 2000. The increase in milk production has caused the average cost of its production to fall and changes in production methods have affected the price elasticity of supply of milk.

(a)	Why may less wheat be the opportunity cost of producing more milk?						[2]	

(b) Explain two reasons why the supply of a product may be price-inelastic. [4]

4 (a) Why may less wheat be the opportunity cost of producing more milk? [2]

- Opportunity cost is the cost of the (next) best alternative foregone (1).
- Land / resources used for growing wheat may be used to keep cows (1) reducing the amount of wheat that can be produced (1).

(b) Explain two reasons why the supply of a product may be price-inelastic.

1 mark for each reason identified and 1 mark for explanation:

- It may take time to produce the product (1) this means that it will take time to adjust supply in response to a change in price / example of a product that it takes time to produce (1).
- It may not be possible to store the product (1) this means that it cannot be taken out of storage when price rises / products cannot be put into storage when price falls (1).
- It may be costly to adjust supply (1) e.g. it might be necessary to build new factories and this may discourage firms from adjusting supply (1).
- The supply of a natural resource may become limited (1) e.g. gold maybe close to depletion (1)
- 5 In January and February 2014 there were calls for the UK Government to build more flood defences. Homes, factories and other resources were damaged and some destroyed by floods. It was argued that government intervention was needed in this case as there was evidence of market failure.

(a)	Define 'market failure'.	[2]
(b)	Explain how government regulation may reduce market failure.	[4]

- (c) Analyse the effect of a decrease in resources on government economic aims. [6]
- (d) Discuss whether the social benefits of building flood defences will exceed the social costs involved. [8]

5 (a) Define 'market failure'.

- Where the market forces of demand and supply (1) do not achieve efficiency (1)
- When social costs are greater than social benefits (1) example of external cost e.g. monopoly or external benefit e.g. merit or public goods (1)

[2]

[4]



(b) Explain how government regulation may reduce market failure.

[4]

- Regulation involves rules and laws (1).
- Firms may be banned (1) from producing products that create external costs (1) example such as water pollution (1).
- Firms may be fined (1) if they create external costs (1) example e.g. air pollution (1).
- Consumers may be banned from consuming products that create external costs (1) or where there are high private costs (1) some of which people are unaware of (1) example e.g. cigarettes (1)
- Consumption of some products that have external benefits (1) and/or high private benefits (1) some of which people are unaware of (1) may be made compulsory (1) e.g. primary school education (1).

(c) Analyse the effect of a decrease in resources on government economic aims. [6]

- Fewer resources will make it more difficult to achieve economic growth (1) there will be fewer factors of production to produce goods and services (1) output may fall or rise more slowly (1).
- Fewer resources may increase costs of production (1) supply may fall by more than demand/there may be a shortage of e.g. raw materials (1) cost-push inflation may occur (1).
- Natural disasters (1) can lead to cost push inflation (1) loss of employment (1) government expenditure exceeding government income (1)
- The current account may move into a deficit/larger deficit (1) as exports may decline (1) while e.g. food may have to be imported (1).
- Destruction of factories may reduce unemployment opportunities (1) which may increase unemployment (1) but more workers may be needed to e.g. rebuild factories (1).

(d) Discuss whether the social benefits of building flood defences will exceed the costs involved. [8]

Up to 5 marks for a discussion of why social benefits maybe greater:

- Social benefits are private benefits plus external benefits (1).
- Explain private benefits (1) e.g. greater employment, greater revenue for firms, protection of homes / reduction in high risk of flooding (up to 3)
- Explain external benefits (1) e.g. increase in house prices in the area, greater tourism, reduced cost to emergency services and benefit payments (up to 3)

Up to 5 marks for why social costs maybe greater:

- Social costs are private costs and external costs (1).
- Explain private costs (1) e.g. cost of land, raw material labour and buildings, may only be a low risk of flooding (up to 3)
- Explain external costs (1) e.g. pollution, destruction of wildlife habitats, opportunity cost of resources (up to 3).



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[2]

2 A lack of electricity regularly results in power failure in the Lebanon. The daily gap between supply and demand may increase if the Lebanese economy continues to grow. The Lebanese Government is planning to build more power stations but there is a risk that the social costs of operating power stations may be greater than the social benefits.

(a)	Define 'demand'.	[2]
(b)	Explain what impact an imbalance between supply and demand is likely to have on price a the quantity traded.	and [4]
(c)	Analyse why economic growth may increase demand for electricity.	[6]
(d)	Discuss whether the social costs of operating power stations are likely to be greater than social benefits.	the [8]

2 (a) Define 'demand'.

- the willingness (1) and ability to buy a product (1)
- (b) Explain what impact an imbalance between supply and demand is likely to have on price and the quantity traded. [4]
 - if supply exceeds demand (1), there will be a surplus (1)
 - the equilibrium position in the market will change (1)
 - price will fall/be driven down (1)
 - the quantity traded will rise (1)

Accept a diagrammatic approach for up to 2 marks.





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OR

- if demand exceeds supply (1) there will be a shortage (1)
- the equilibrium position in the market will change (1)
- price will rise/be driven up (1)
- the quantity traded will rise (1)

Accept a diagrammatic approach for up to 2 marks.



(c) Analyse why economic growth may increase demand for electricity. [6]

- economic growth will increase income (1) higher income will increase demand for e.g. televisions and laptops (1) electricity is a complement to televisions etc./used to operate televisions (1)
- with higher income, some people may switch from other fuels to electricity (1)
- economic growth involves higher output (1) electricity is used in the production of a variety of products (1) higher output will require more electricity (1)
- economic growth involves investment in capital equipment (1) e.g. new machines will require electricity to run them/electricity is a complement (1)
- economic growth often involves new technologies (1) which use electricity to function (1)
- with economic growth more people will now have access to electricity (1) more towns and villages may now be on the grid/electricity may have reached more areas (1)

(d) Discuss whether the social costs of operating power stations are likely to be greater than the social benefits. [8]

Either Social costs = private costs + external costs <u>or</u> social benefits = private benefits + external benefits (1)

Up to 3 marks for explaining social costs:

- private costs are costs to producers/consumers (1) examples: labour costs, rent, insurance (up to 2)
- external costs are harmful effects on third parties/social costs minus private costs (1) examples: air pollution, noise pollution, risk of accidents, fall in price of nearby houses (up to 2)



Up to 3 marks for explaining social benefits:

- private benefits are benefits to producers/consumers (1) examples: revenue, satisfaction gained from consuming the fuel generated, reduction in risk of power outages (up to 2)
- external benefits are beneficial effects on third parties/social benefits minus private benefits (1) examples: rise in employment in the area, improved transport links in the area (up to 2)

Up to 3 marks for coming to a conclusion e.g.:

- may be influenced by whether the power stations are run by the state or the private sector (1) state sector may be more inclined to base decisions on social costs and benefits (1)
- may be influenced by the government policy measures (1) designed to reduce market failure (1) external costs may be minimised by e.g. taxes, laws (1)
- may be influenced by the age of the equipment used (1) old equipment may be more likely to cause external costs (1)
- private costs are likely to be very high for a power station (1) because of the large and expensive capital equipment involved (1)
- 7 (a) Define 'mixed economy'.
 - an economy with a private sector (1) and a public sector (1)
 - a mix of both free market (1) and planned economies (1)
 - resources allocated by both the price mechanism (1) and government decisions/consumers and government deciding what is produced (1)
 - some prices determined by market forces (1) and some by directives/the government (1)
- 7 The world's population is forecast to rise to 9 billion by 2050. It is predicted that Nigeria, a developing country with a mixed economy, will move from having the seventh largest population at 158 million in 2013 to having the third largest at 400 million in 2050. Some governments try to reduce the growth of their populations by using a range of government policy measures.
 - (a) Define 'mixed economy'.

[2]

[2]