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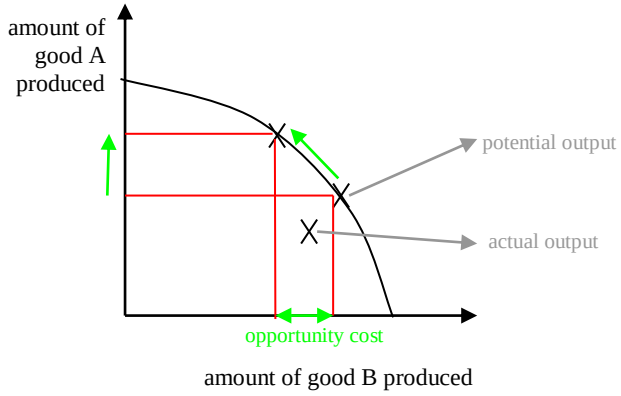
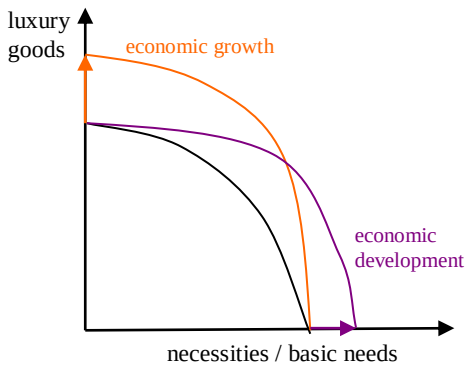
Economics

Section 1: Introduction to economics

- **social science:** a science (the pursuit of systematic and formulated knowledge) as applied to humans
  economics:
- **microeconomics:** the economics of individual parts of national economies
  macroeconomics: the study of the features of national economies
- **growth:** an increase in the amount / quantity that an economy is able to produce
  development: an improvement in the living standards of the average person
  sustainable development: economic development for one generation that will not impact (negatively) on the livings standards of the next
- **positive economics:** economics that involves factual and testable statements that are either correct or incorrect
  normative economics: economics that involves subjective, political or opinion statements
- **ceteris paribus:** "All other things being equal"
- **scarcity:** unlimited wants + limited resources / factors of production → relative scarcity
  factors of production:
  land – "gifts of nature"
  -- payment: rent
  capital – products deliberately made for the purpose of producing other goods / services
  -- payment: interest
  labour – human effort (physical and mental) used in production
  -- payment: wages
  entrepreneurship/enterprise – the form of human resource which organises all the other factors of production, for the purpose of producing goods & services
  -- payment: profit
  -- functions: management – organising resources
  ownership – providing finance
  bearing risk – accepting responsibility
  invention / innovation
- **choice:** utility – the satisfaction derived from the use of a good / service
  opportunity cost – the opportunity foregone (ie. the next best alternative), due to the decision to use resources towards something
  free good – a good that is in abundance (is relatively abundant)
  economic good – a good that is scarce and therefore demands a price (is relatively scarce)
  production possibility curves – a curve showing the maximum potential output of an economy given that: the economy makes only 2 goods
  resources can be used to produce both goods
  all available resources and the best technology is used





- **rationing systems:** 3 economic questions – What to produce?
  How to produce?
  For whom to produce?
- **mixed economies:**

Aspect	central planning (public)	free market (private)
Resource ownership	no individual ownership centralised	private ownership
Pattern of participation in decision making	government decisions / centralised -decisions "move outwards" from planners, one person tells next person what to do	-decentralised → there is economic freedom -consumers make buying decisions -entrepreneurs make production decisions
Mechanism used to achieve goals	5 year plans 1 year plans input-output models -all production is related and linked together in plan	market/price mechanism: -increase in consumer demand →shortage, so price rises →good more profitable, so supply increases →resources allocated to production of good increases -vice versa for decrease in demand
Incentives used	medals/awards/decorations fines/penalties (wage differences are limited, fixed by planners – little wage incentive)	income and profit -to increase profit costs are minimised →efficient resource use →development of new technology
What to produce?	planners decide	determined by consumer demand
How to produce?	planners decide -a guarantee of full employment → gross overstaffing	determined by producer -choose method that minimises costs
For whom to produce?	-planners determine incomes & distribution of goods -subsidised prices on basic goods → widespread shortages	determined by income -income is determined by the resources contributed to production

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- **advantages / disadvantages** of market economies and planned economies

Aspect	planned economy		market economy	
Consumer sovereignty / resource allocation	✗	unwanted goods are overproduced, wanted goods are underproduced – wastage of resources	✓	consumers determine what producers produce through purchases – no wastage on unwanted goods
Efficiency / degree of wastage	–	-less wastage on unnecessary duplication (of natural monopolies) -no consumer sovereignty -no price signals -bottle necks in complex plans reduce efficiency -wastage on planning	–	-see above -profit encourages efficient resource use -wastage on duplication -wastage on advertising etc -no planning wastage
Innovation	✗	no profit motive plan must be adhered to, ∴ unwise to take risks	✓	profit incentive to innovate (lowers production costs = more profit)
Flexibility	✗	production is interlinked, plans cannot be adjusted to demand	✓	market responds quickly to changes in demand
Economic freedom	✗	planners decide what is produced – no individual decision possible	✓	consumers decide what to buy, producers decide what to produce can make individual decisions
Public goods	✓	government provision	✗	no profit can be made from supply – not supplied
Stability / inflation control	✓	fixed prices eliminate inflation stable economic growth	✗	optimism→boom/inflation pessimism→recession/unemployment no steady growth
Unemployment	✓	planning ensures jobs for all overstaffing is a consequence	✗	unemployment during recession
Equality / income distribution	✓	wages are fixed income distribution controlled	✗	income determined by amount of resources contributed to production -many resources→high income -few resources→low income
Externalities / environmental damage	–	-in theory no profit motive for external damage/cost -no private ownership results in environmental damage	–	-external costs incur no private cost - profit not affected -private ownership means care of environment
Exploitation	✓	no private profit motive to underpay workers	✗	profit – firms want to cut costs -poor safety standards -low wages -high prices in uncompetitive markets
Achievement of national goals	✓	national focus instead of individual focus	✗	focus on individual goals
Living standards / choice and quality of goods	✗	-poor quality – plan targets must be met -wanted goods are scarce	✓	-market responds to changes in demand for goods -competition encourages higher quality

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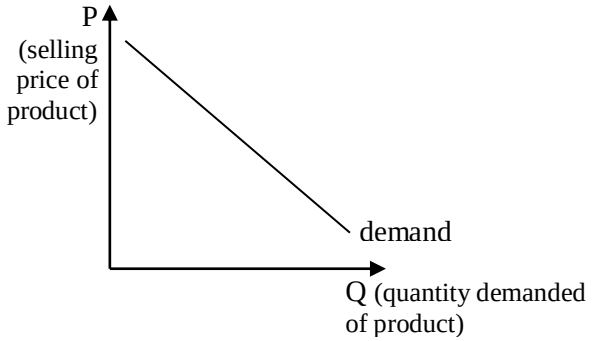
- **transition economies:** (from planned to mixed / market)
  causes of transition: disadvantages of planned
  processes: introduction of private property ownership
  -privatisation of state-owned firms by sale or voucher
  deregulation of price / price controls removed – market signals "enabled"
  wage controls removed – incentive to work etc.
  state subsidies cut
  foreign investment allowed / new trading partners found (USSR case especially)
  exchange rates introduced
  problems: slow adjustment to new capitalist values and legal systems (eg. lack of property rights)
  -lack of entrepreneurs
  -people "ripped off" by entrepreneurs
  fiscal crisis – much less revenue for government due to decrease in taxes, profits from state firms
  collapse of traditional trade flows (eg. USSR)
  high inflation – prices rise when price controls and subsidies removed
  high unemployment – jobs lost when overstaffing eliminated from state enterprises

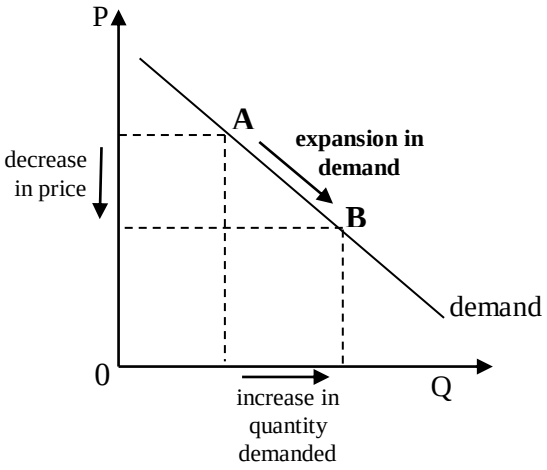
Section 2: Microeconomics

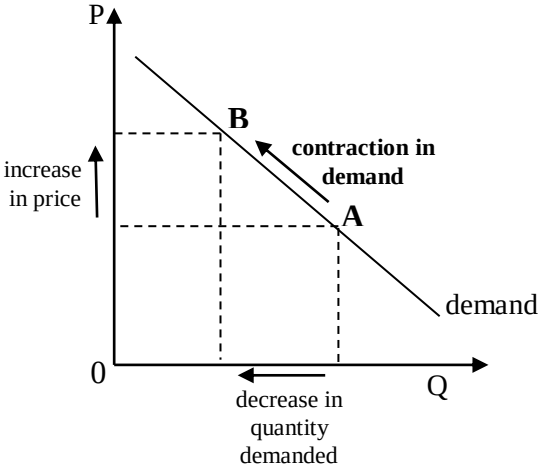
- **market:** any situation where buyers/demanders and sellers/suppliers can interact
  may be local, national or international
- **market structures:**

Characteristic	Perfect / pure competition	Monopolistic competition	Oligopoly	Monopoly
Number and size of firms (sellers)	Very many small firms	Many small firms	2-4 dominant firms, possibly some other smaller firms	One firm – occupies whole industry
Number of buyers				
Type of product	homogenous	slight differentiation	homogenous / very similar (differentiated by conditions of sale / characteristics of product)	homogenous (more likely) or differentiated
Barriers to entry	nil	very few	significant	total
Other	-individual firms are price takers – no control over price -government supports industry research & development	-firms have little control over price -costs of running firm are high -wide consumer choice	firms are interdependent – respond to rivals' actions	generally aim to operate in elastic region of demand curve
Examples	agriculture wheat farmers orchardists	retail trades/services restaurants / cafés hairdressers	telecommunications airlines banks pizza retail (ie. Pizza Hut, Dominos are dominant firms)	Australia Post (50c letter) gas / water (natural monopolies)

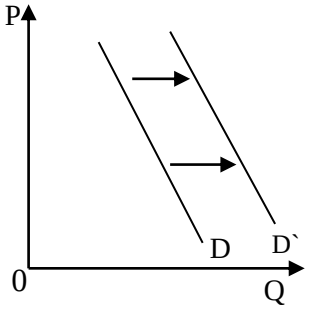
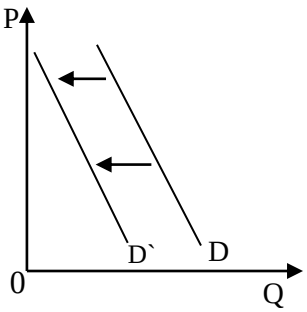
- **price signals and resource allocation:** goods that are in high demand and are therefore scarce demand a high selling price – this attracts producers to the market as high price means higher profit
  → goods in high demand are produced in preference to those not in demand
  → resource allocation is efficient
- **demand:** the quantity buyers are willing and able to buy at a given price per unit of time
  law of demand: The quantity demanded decreases as the price increases and vice versa.
  →downwards sloping demand curve







Determinants of demand - factors affecting market demand (other than price) / "autonomous factors":
-cause a shift of the whole demand curve

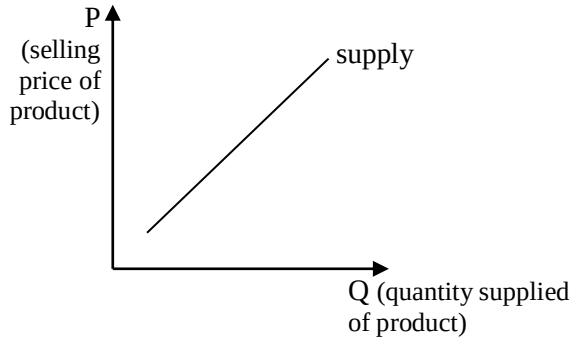
Factor	**Causing increase in demand**	**Causing decrease in demand**
[diagram]		
Household real income	increase in real income	decrease in real income
Tastes, preferences, fashions	move in favour of product	move in opposition to product
Advertising	successful advertising	unsuccessful / less advertising
Health aspects	improves health	detrimental to health
Weather	favours product	goes against product
Change in price of substitute	price of substitute increases (this product is now relatively cheaper)	price of substitute decreases (this product is now relatively more expensive)
Change in price of complement	price of complement decreases	price of complement increases
Population	higher population	lower population
Expectations about prices	expect higher future prices (buy more now)	expect lower future prices (buy more later)

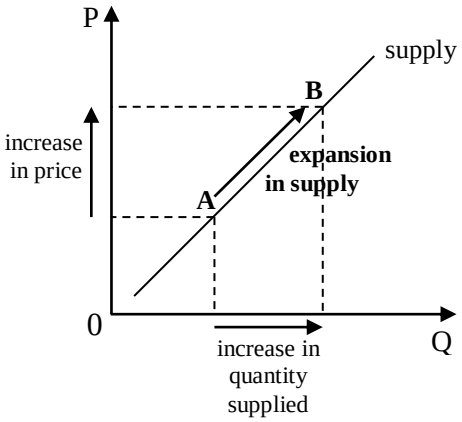
note: A move along the curve is caused by a change in the price of the good or a change in the quantity demanded of the good, and is termed an *expansion* or *contraction* in demand. A shift of the whole curve is caused by a change in an autonomous factor, and is termed an *increase* or *decrease* in demand.

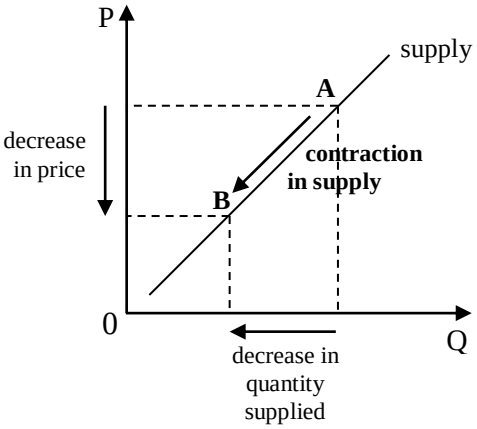
- **supply:** the quantity of a good or service suppliers are willing and able to supply at each price per unit of time

  Law of supply: As price increases the quantity supplied increases.

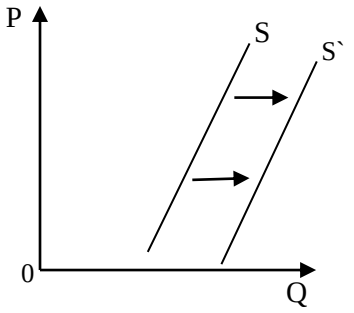
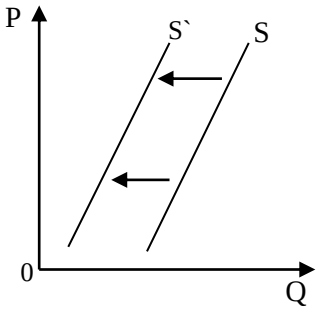
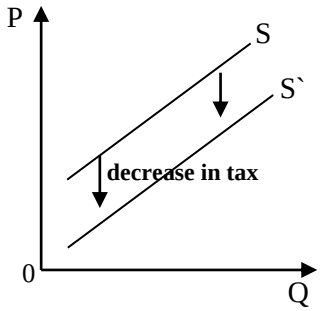
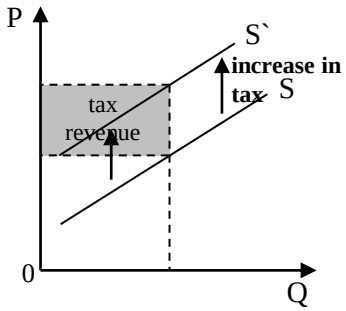
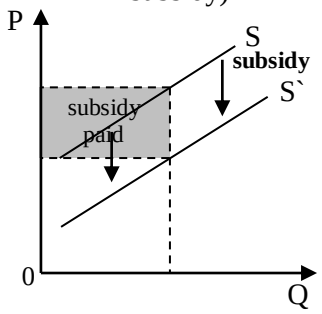
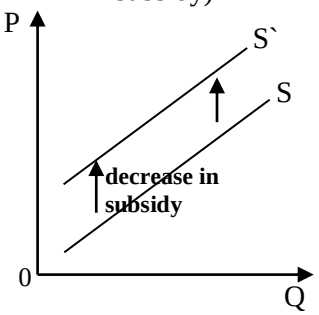
  →upwards sloping supply curve



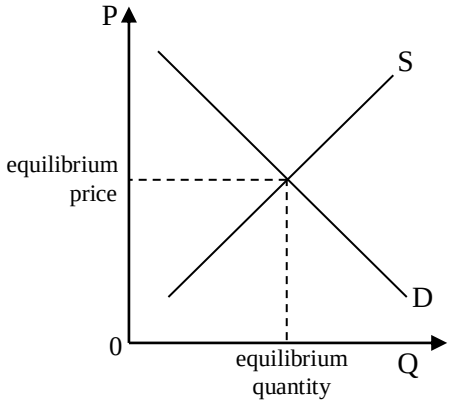


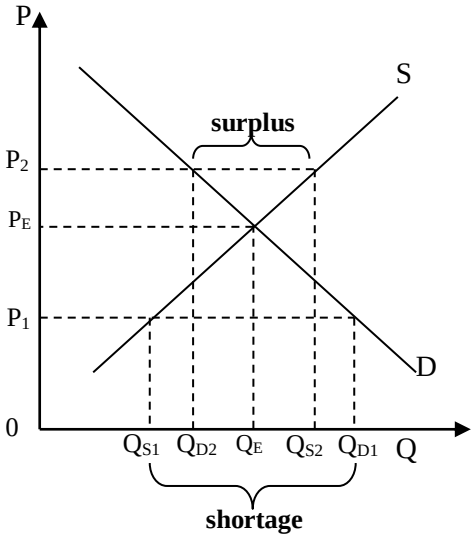


Determinants of supply – factors affecting market supply (other than price) / autonomous factors:
-cause a shift of the whole supply curve

Factor	Causing increase in supply	Causing decrease in supply
[diagram]		
Taxes	decrease indirect taxes (drops curve by amount of tax) 	increase indirect taxes (raises curve by amount of tax) 
Subsidies	increase subsidies (drops curve by amount of subsidy) 	decrease subsidies (raises curve by amount of subsidy) 
Costs of production	lower production costs (make product more profitable)	higher production costs (make product less profitable)
Level of technology	improved technology	decreased level of technology
Seasonal influences / weather	favourable conditions	unfavourable conditions
Price of producer substitute	price of producer substitute falls	price of producer substitute rises
Producer preferences	in favour of product	against product
Exports	decrease in exports	increase in exports
Imports	increase in imports	decrease in imports

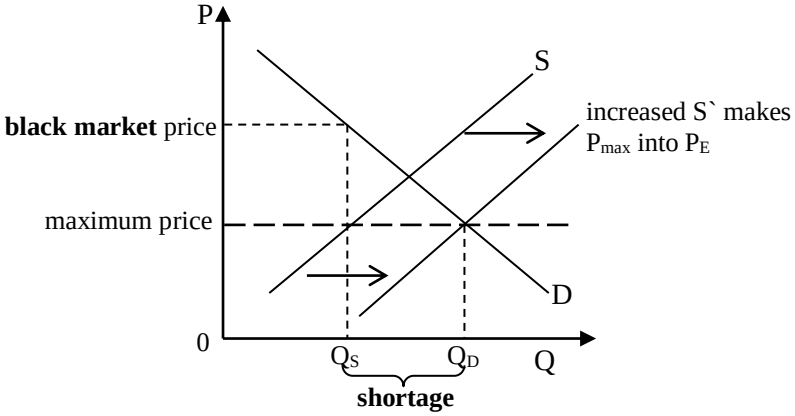
- **interaction of demand and supply:** equilibrium market clearing price and quantity is established where demand and supply curves meet – when established the market is said to be "at equilibrium".





- At P_1: $Q_{D1} > Q_{S1}$ → shortage
  ∴ price is bid up by keen buyers
- At P_2: $Q_{S2} > Q_{D2}$ → surplus
  ∴ price decreases to clear surplus
- At P_E: $Q_S = Q_D$ → no shortage or surplus
  ∴ no tendency for price to change; market is at equilibrium

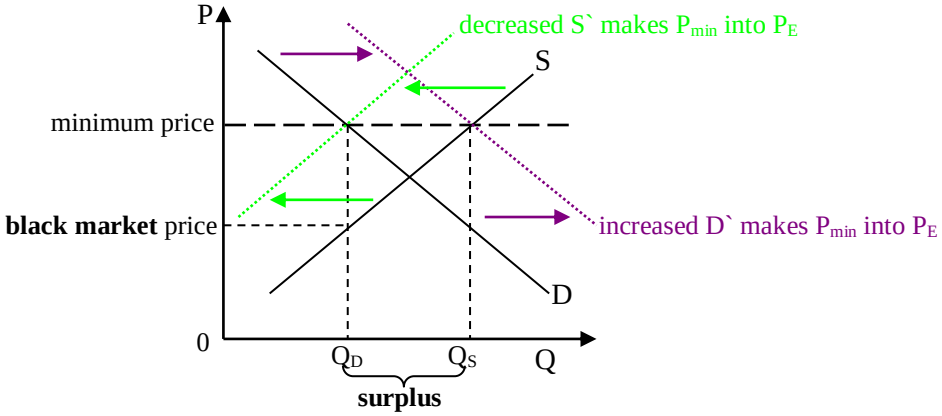
- **price controls:**
  <u>maximum price / price ceiling:</u> imposed below equilibrium price so that the product is affordable for all
  -results in a shortage, which produces: queueing
  waiting lists
  ration vouchers to equally distribute good
  A black market with illegal higher prices may develop where D meets Q_S.
  -solutions to shortage: subsidise private producers to increase supply (clears shortage)
  government could supply the shortage
  allow imports to increase supply

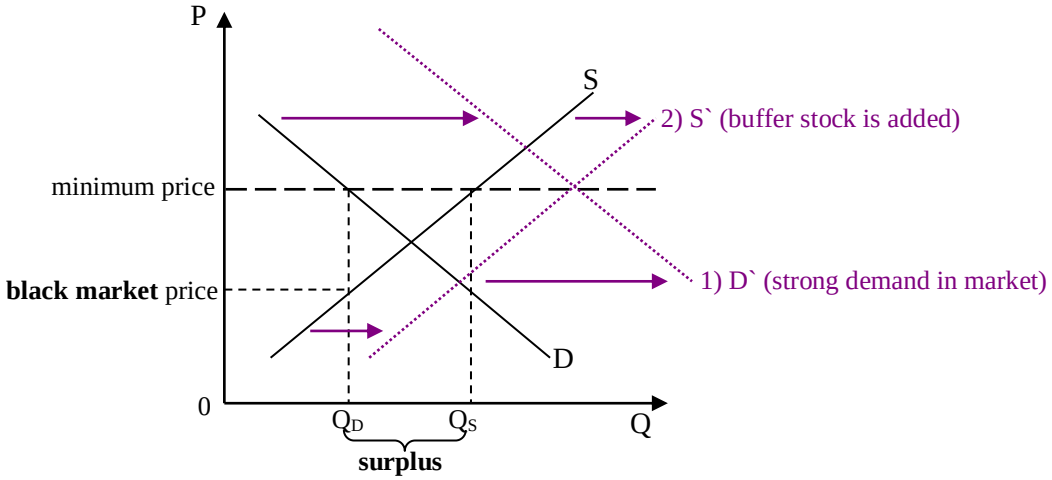


minimum price / price floor: imposed above equilibrium price to protect suppliers' income (eg. rural producers)

-results in surplus: Those able to sells at minimum price receive good income, but those who hold surplus potentially receive no income.
A black market may develop at lower price where Q_D meets S.

-solutions to surplus: government buys surplus (increases demand)
suppliers paid to leave industry (decreases supply)
Buffer stock scheme – excess can be stockpiled and resold when market is strong (ie $P_E > P_{min}$)...only successful where prices in market fluctuate





commodity agreements: where the supply of a product is limited through producer quotas (eg OPEC)

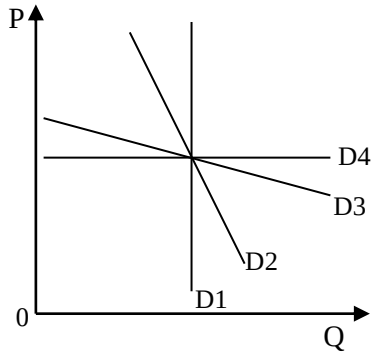
- **price elasticity of demand (PED / $P\varepsilon_D$):** the responsiveness of the quantity demanded to a change in price (in relative terms)

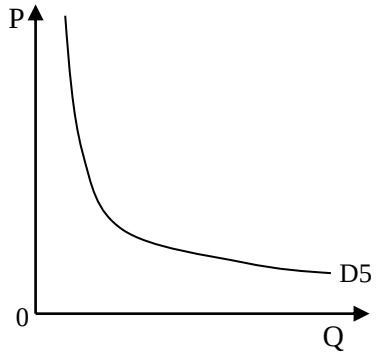
$$P\varepsilon_D = \frac{\%\Delta Q_D}{\%\Delta P} = \frac{\frac{\Delta Q_D}{Q_D}}{\frac{\Delta P}{P}}$$

If: $|P\varepsilon_D| > 1$, demand for product is price <u>elastic</u> (as $\%\Delta Q_D > \%\Delta P$)

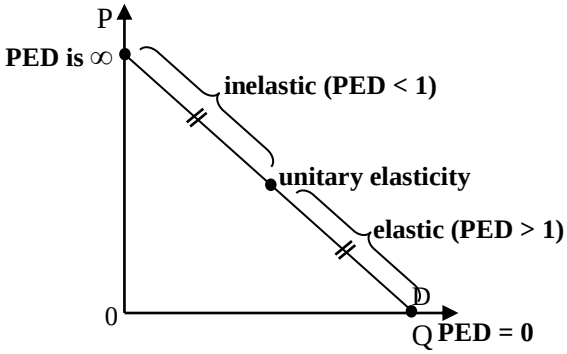
$|P\varepsilon_D| = 1$, demand for product has <u>unitary price elasticity</u> (as $\%\Delta Q_D = \%\Delta P$)

$|P\varepsilon_D| < 1$, demand for product is price <u>inelastic</u> (as $\%\Delta Q_D < \%\Delta P$)





D1: perfectly inelastic demand
D2: relatively inelastic demand
D3: relatively elastic demand
D4: perfectly elastic demand
D5: D curve with unitary elasticity along whole length (retangular hyperbola)



<u>Determinants of price elasticity of demand:</u>

Goods with price elastic demand	Goods with price inelastic demand
many close substitutes	few/no substitutes
non-essential / luxury good	essential / necessity
big budget item	small budget item
non-addictive	addictive
durable	non-durable
	May be a cheap complement to an expensive good eg. petrol (complement to car)

- **cross-elasticity of demand:** the responsiveness of the quantity demanded of one good (X) when the price of another good (Y) changes

$$\text{cross } \varepsilon_D = \frac{\%\Delta Q_{DX}}{\%\Delta P_Y}$$

-If cross $\varepsilon_D = 0$, → goods are <u>unrelated</u>
-If cross ε_D is **+**, → goods are <u>substitutes</u> (the more positive, the closer the substitutes)
-If cross ε_D is **-**, → goods are <u>complements</u> (the more negative, the stronger the complements)

- **income elasticity of demand ($Y\varepsilon_D$):** the responsiveness of the quantity demanded of a good to a change in income

$$Y\varepsilon_D = \frac{\%\Delta Q_D}{\%\Delta Y}$$

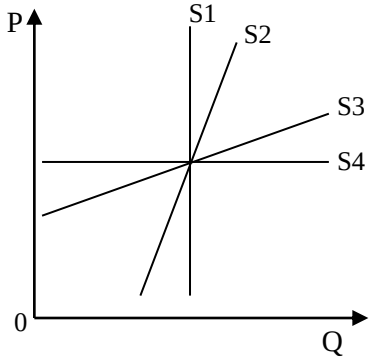
-If $|Y\varepsilon_D| > 1$, good is income elastic
-If $|Y\varepsilon_D| < 1$, good is income inelastic

<u>normal good:</u> a good where an increase in income results in an increase in the quantity demanded of it
∴ its $Y\varepsilon_D$ is *positive* **+**
<u>inferior good:</u> a good where the quantity demanded decreases as income increases
∴ its $Y\varepsilon_D$ is *negative* **-**

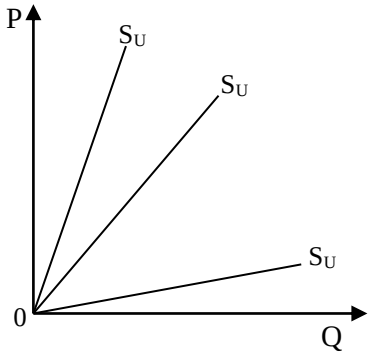
- **price elasticity of supply (PES / $P\varepsilon_S$):** the responsiveness of the quantity supplied of a good to a change in price

$$P\varepsilon_S = \frac{\%\Delta Q_S}{\%\Delta P}$$

-If $|\mathbf{P\varepsilon_S}| > 1$, supply of good is price <u>elastic</u>
-If $|\mathbf{P\varepsilon_S}| = 1$, supply of good has <u>unitary price elasticity</u>
-If $|\mathbf{P\varepsilon_S}| < 1$, supply of good is price <u>inelastic</u>



S1: perfectly inelastic supply
S2: relatively inelastic supply
S3: relatively elastic supply
S4: perfectly elastic supply
S_U: curves with unitary PES

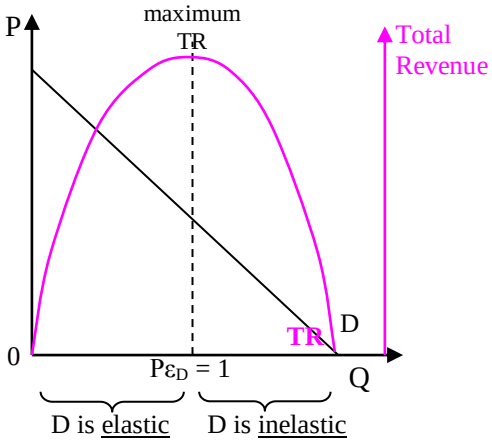


<u>determinants of price elasticity of supply:</u>

Goods with price elastic supply	**Goods with price inelastic supply**
short production period	long production period
production not at full capacity	production at full capacity
able to hold stocks / non-perishable	not able to hold stocks / perishable
long time frame (of measurement)	short time frame (of measurement)
many *producer* substitutes	few *producer* substitutes

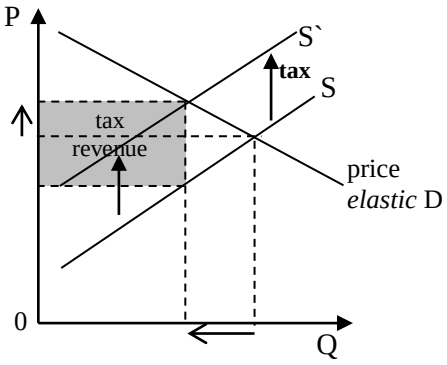
- **applications of concepts of elasticity:**

PED and business decisions: the effect of price changes on total revenue:

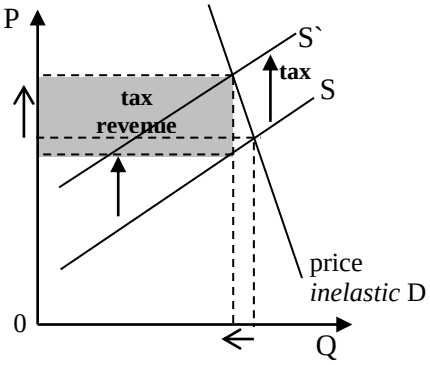


To increase TR:
-If D is price elastic
→ decrease prices
-If D is price inelastic
→ increase prices
-If D has unitary price elasticity
→ keep prices the same (TR is at maximum)

PED and taxation:
-indirect taxes decrease the supply / raise the S curve by the amount of the tax



An indirect tax on goods with price *inelastic* demand collects **more** tax than one on goods with price *elastic* demand.
∴ taxes on tobacco, petrol alcohol are common



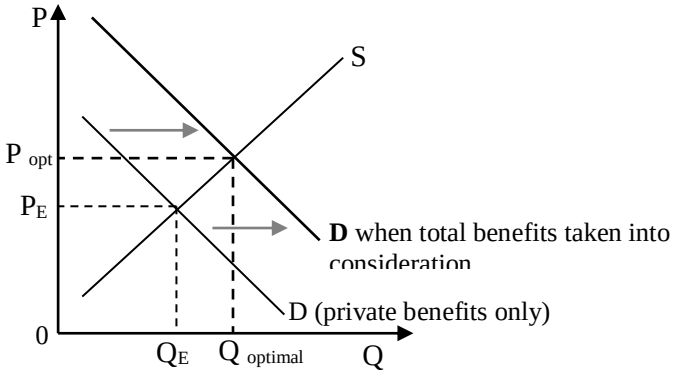
Significance of income elasticity for sectoral change as economic growth occurs:
-Production in developing countries consists mainly of primary sector industries (eg basic food crops, minerals) producing goods that have mostly *income inelastic demand*.
-As global incomes increase, this means demand for the countries' produce does not increase much → countries' *exports do not increase*.
-But as incomes within these countries increase, domestic consumers' demand for secondary/tertiary sector *income elastic* goods increases (through *conspicuous consumption*) → *imports into countries increase*.
→ Trade balance is unfavourable/worsens.
Solution: Some developing countries have access to *income elastic* goods (but must be sustainable)
eg timber, seafood, tourism →export and improve trade balance

- **reasons for market failure:**

<u>positive and negative externalities:</u>

In the market system: consumers buy products to satisfy *private* wants
→ only recognise *private* benefits of product
However: *total benefits* = private benefits + *external benefits*

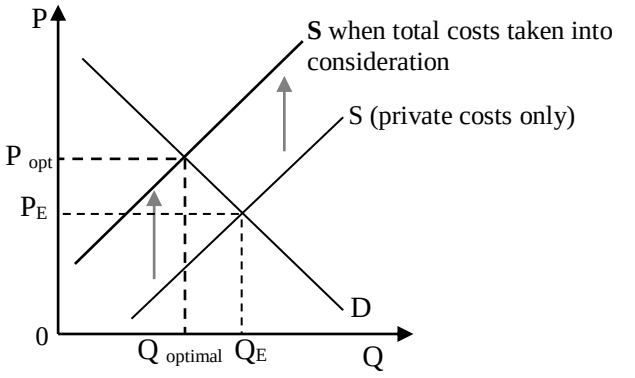
external benefits/positive externalities: positive effects on external parties who had no part in the decision
merit goods: goods with external benefits



Merit goods are *underproduced*:
ie. Q_E is less than $Q_{optimal}$

Solutions:
legislation
direct (government) provision
subsidies
advertising to encourage

Also, in the market system: suppliers produce products according to consumer's demands
→only recognise *private* costs of production and ignore *external costs*
external costs/negative externalities: negative effects on external parties who had no part in the decision
demerit goods: goods with external costs



Demerit goods are *overproduced*:
ie. Q_E is greater than $Q_{optimal}$

Solutions:
legislation
subsidies on better substitutes
taxation
tradeable permits
extension of property rights
advertising to discourage

<u>short-term and long-term environmental concerns:</u>
-see negative externalities
sustainable development...

<u>lack of public goods:</u>
pure public goods: will not be produced in a free market situation as private suppliers cannot make profit from their production, due to the following characteristics:
-cannot exclude non-payers – "free rider" problem
-the extra/marginal cost of an extra user is zero
-
eg. defence, policing, street lights
Solutions: direct government provision through taxation

underprovision of merit goods:
-see positive externalities

overprovision of demerit goods:
-see negative externalities

abuse of monopoly power:
Strong market competition should result in *low prices* and *good quality*, ie the market is "self-regulating".

eg. perfect competition, monopolistic competition (do not require strong regulation apart from misleading advertising laws)

But markets with few firms (*oligopoly* and *monopoly*) are uncompetitive and need regulation to prevent *restrictive trade practices* – practices that restrict competition.

eg. collusion
price agreements
resale price maintenance
exclusive dealing
monopolisation
price discrimination
merger
takeover
collective boycott
} see sheet on Restrictive Trade Practices

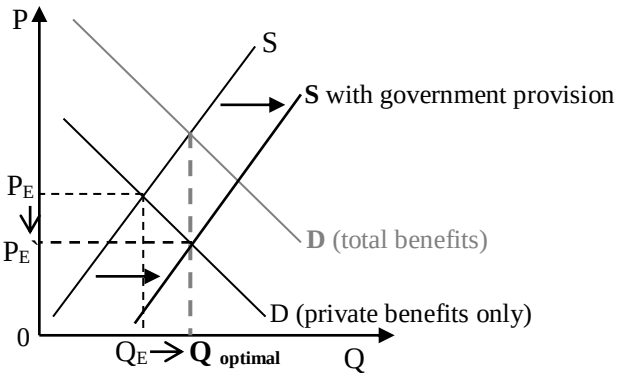
[In Australia: Australian Competition and Consumer Commission (ACCC)
Trade Practices Act]

Solutions: legislation

- **possible government responses:**

legislation:
Laws to render practices that lead to market failure illegal (decreases demand/supply).
-examples:
positive & negative externalities / merit & demerit goods: school leaving age, environmental laws
environmental concerns: fishing regulations
abuse of monopoly power: Trade Practices Act

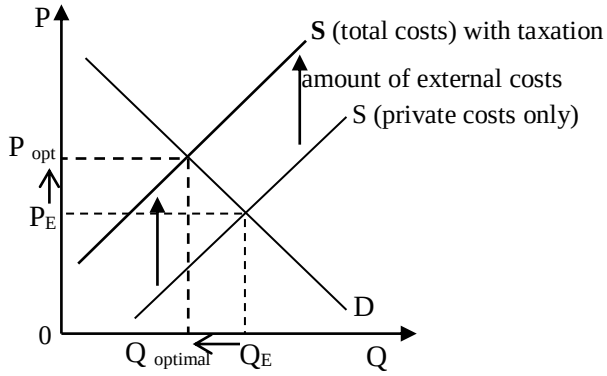
direct provision of merit and public goods:
Where the government provides these goods, thus increasing supply and achieving $Q_{optimal}$ – is usually funded through taxation.
-examples:
positive externalities / merit goods: healthcare



lack of public goods: street lighting, defence

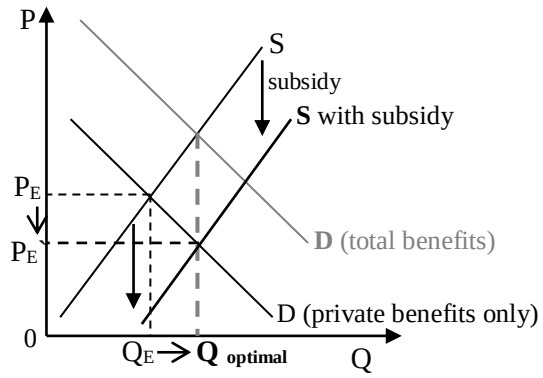
taxation:
[Direct taxation may be used to fund government provision of merit/public goods.]

Indirect tax on a good to the value of its external costs *decreases supply* and thus achieves $Q_{optimal}$.
Taxation revenue can then be used to remedy remaining external costs.
-examples:
negative externalities / demerit goods: cigarette tax

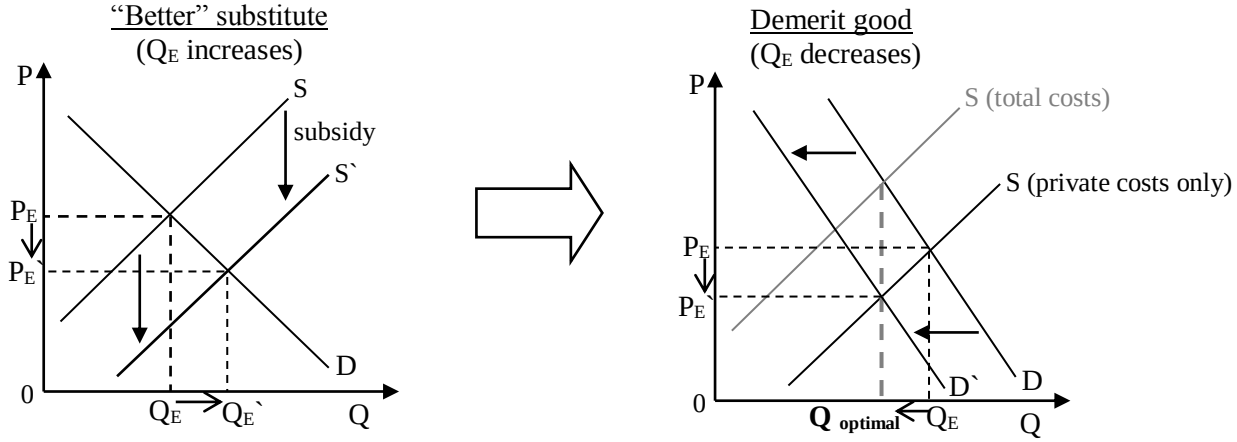


environmental concerns: petrol tax

subsidies:
Subsidies *increase the supply* of goods, enabling $Q_{optimal}$ to be attained.
-examples:
positive externalities / merit goods: subsidised education



negative externalities / demerit goods: subsidising a "better" substitute for demerit good



environmental concerns: (see negative externalities / demerit goods)
[lack of public goods: ???]

tradable permits:
Tradable permits are distributed to limit the provision of a demerit good to *acceptable levels*.
They may be *auctioned off* – the highest bidders are those who need the resource the most.
Once obtained the licences may be *sold* from one producer to another – an *incentive to find/use "better" methods/technology* with less externalities and so not requiring a licence.
-examples:
negative externalities / demerit goods:
environmental concerns: commercial fishing licences

extension of property rights:
The ownership of a resource or *environmental asset* is an incentive for the owner to take care of it, as when its value increases they receive direct benefit.

advertising to encourage or discourage consumption:
Successful advertising will either increase or decrease the *demand* for a product, hopefully to attain $Q_{optimal}$.
-examples:
positive externalities / merit goods: positive advertising for children's literacy (increases D)
negative externalities / demerit goods: negative advertising against smoking (decreases D)
environmental concerns:

international cooperation among governments:
...
-examples:
environmental concerns:...

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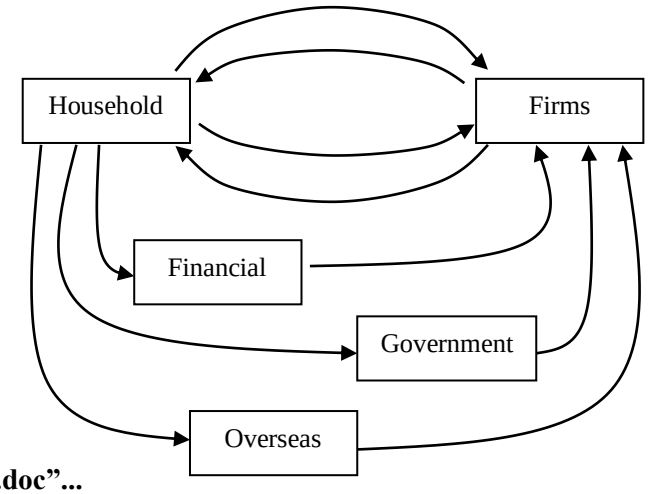
Section 3: Macroeconomics

3.1 Measuring national income

- **circular flow of income:** to give structure to the national economy by classifying the economy into sectors



- **see "economics2.doc"...**