Microeconomic notes

Central problem of economics – scarcity

- Definition: limited resources available are unable to satisfy the unlimited human wants

2 main microeconomic aims: efficiency and equity

- Productive efficiency – absence of waste in the production process
    - All points on the PPC are productive efficient.
    - All points on the LRAC are productive efficient
    - Productively efficient when it is producing at the lowest point of SRAC
- Allocative efficiency
    - Only one point on PPC is allocative efficient
    - Achieved when P = MC / MSB = MSC
    - Allocative inefficiency results in deadweight loss

The production possibility curve (PPC) shows all the different maximum attainable combinations of goods or services that can be produced in the economy, when all the available resources are used fully and efficiently, at a given state of technology.

- Potential growth – outward shift of PPC boundary
- Actual growth – outward shift of point of production inside PPC

Demand and supply

Demand refers to the quantity of a good or a service that a consumer is willing and able to purchase at each possible price point during a given period of time, ceteris paribus.

Determinants of Demand:

- Population (size)
- Expectation of future prices and income
- Taste
- Related goods (XED)
- Income (YED)

Supply refers to the quantity of a good or a service that a consumer is willing and able to sell at each possible price point during a given period of time, ceteris paribus.

Determinants of supply:

- Cost of factors of production
- Related goods
- Expectation of future prices

Elasticity

Price elasticity of demand measures the responsiveness of quantity demanded to a change in its own price, ceteris paribus. $PED = \frac{\%change\ in\ Qd}{\%change\ in\ P}$

Price elasticity of supply measures the responsiveness of quantity supplied to a change in its own price, ceteris paribus. $PES = \frac{\%change\ in\ Qs}{\%change\ in\ P}$

Income elasticity of demand measures the responsiveness of demand of a good to a change in consumer income, ceteris paribus. $YED = \frac{\%change\ in\ D}{\%change\ in\ Y}$

Cross elasticity of demand measures the responsiveness of demand of a good to a change in the price of a related good, ceteris paribus. $XED = \frac{\%change\ in\ D}{\%change\ in\ price\ of\ related\ good}$

Price elastic supply – quantity supplied changes more than proportionately to a change in price	**Price inelastic supply** – quantity supplied changes less than proportionately to a change in price
Many firms competing (PC/ MC)	Few firms (monopoly, oligopoly)
Availability of variable inputs like labour and raw materials	Scarce resources
Non-capital intensive (factor mobility)	Capital intensive; with specialised labour and machinery (factor immobility)

Price elastic demand	**Price inelastic demand**
Large amount of close substitutes	Little substitutes
Costs high proportion of income	Costs low proportion of income
Non-addictive goods	Addictive goods
Implications: firms reduce price to increase revenue/ govt impost tax to reduce consumption	Firms increase price to increase revenue/ govt impose taxes to increase govt revenue
Producer pay higher tax incidence/ receive more subsidies	Consumer pay higher tax incidence/ receive higher subsidies

YED	
YED negative (<0)	Inferior good
YED positive (>0)	Normal good
YED positive (0<YED<1)	Necessity
YED positive (YED >1)	Luxury
Application	Increase production of luxury goods during economic growth. Increase production of inferior goods during recession

XED	
XED negative (<0)	Complements
XED positive (>0)	Substitutes
Application	For substitutes: firms should slash price or compete by non-price methods (product differentiation)

Microeconomic evaluations:

- Ceteris paribus is usually assumed in concepts when in reality this condition rarely holds true
- Imperfect competition; perfect competition usually assumed but is rare

Government intervention

1. Price floor

- Aims: achieve equity by protecting the welfare of certain groups & create a consistent surplus so stocks will be accumulated
- Problems: allocative inefficient, distorts price signals, producers become complacent, may attract new producers, which creates excessive surplus, stock storage → waste of money

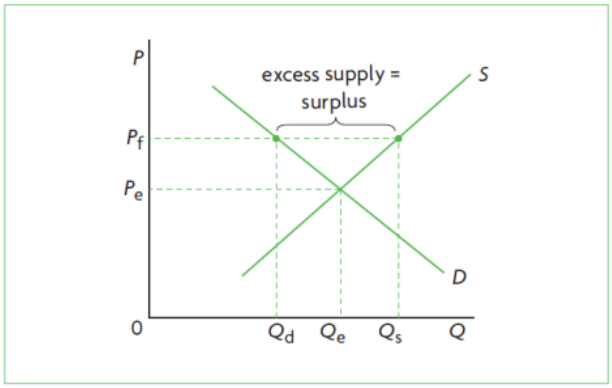


Figure 4.15 Price floor (minimum price) and market outcomes

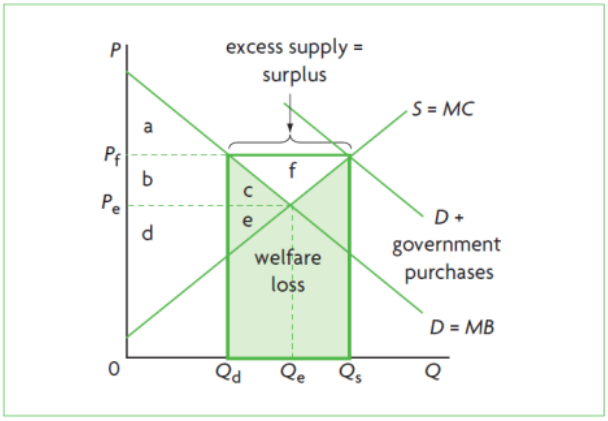


Figure 4.17 Welfare impacts of a price floor (minimum price) for agricultural products and government purchases of the surplus

2. Price ceiling

- Aims: achieve equity by keeping prices of a good affordable to the majority, stabilise prices, prevent producers from exploiting the market
- Problems: allocative inefficient, distorts price signals, emergence of black market

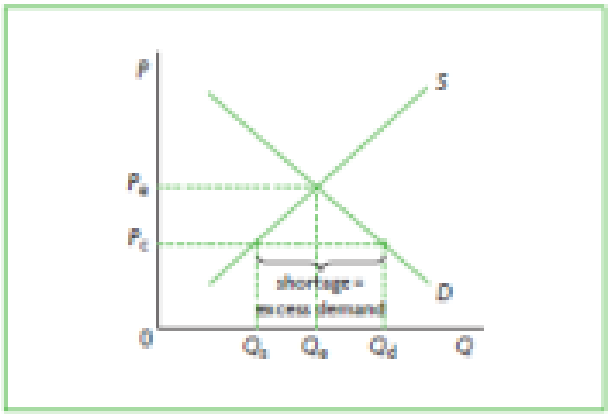


Figure 4.12 Price ceiling (maximum price) and market outcomes

Figure 4.13 Welfare impacts of a price ceiling (maximum price)

Market failure

Market failure occurs when the free market fails to efficiently allocate resources.

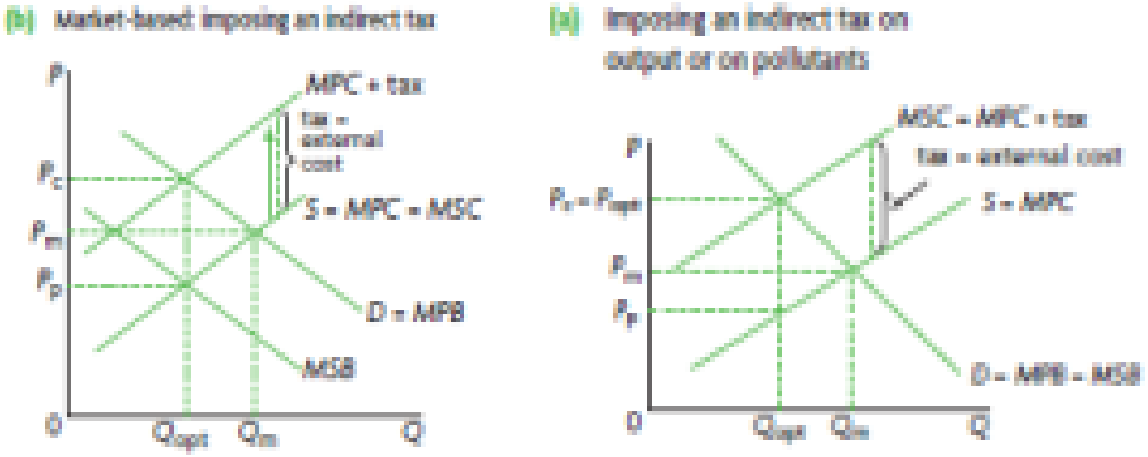
Public good is considered a complete market failure as the free market will not allocated *any* resources to the production of public goods.

- Non-excludability (absence of price signal → government must provide public goods)
- Non-rivalrous in consumption (must be provided for free)
- Governments usually produce public goods

- Increase burden on tax payers

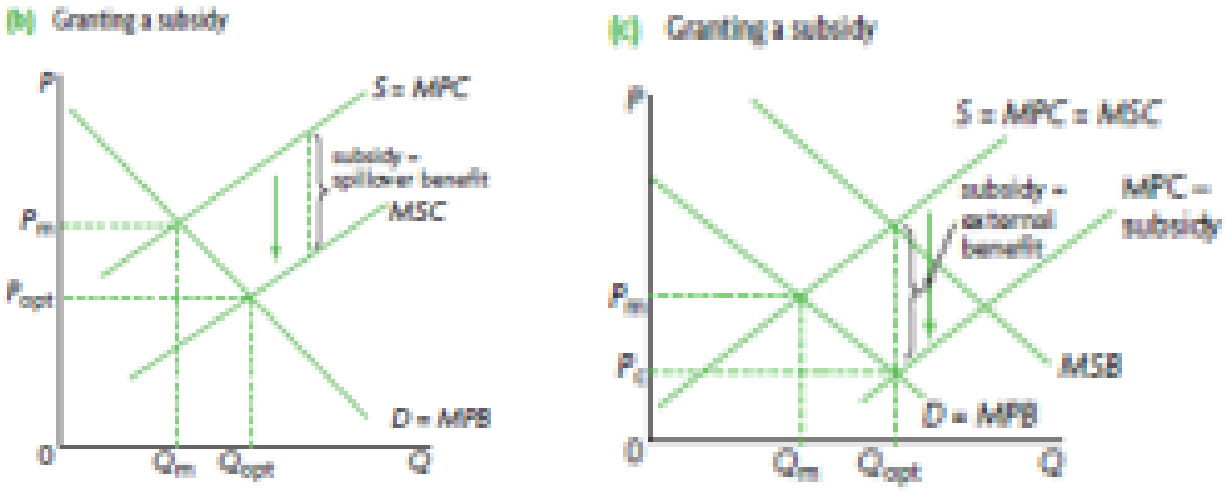
Externalities are costs or benefits from production or consumption experienced by society but not by producers or consumers themselves. Externalities are considered partial market failure as the free market will either over or under produce goods with externalities.

- Solutions to negative externalities: tax, tradeable permits, regulation or ban,
- Solutions to positive externalities: subsidies



Correcting negative externalities of consumption (b)/ production (a)

Tool	Pros	Cons
Tax	Still allows markets to operate Ensures firms/ consumers near the full cost of their actions Provides incentive for firms to find ways to reduce externality Generates tax revenue	Difficult to quantify externalities Unfeasible to have standard tax across all as externality may vary between parties If demand is price inelastic, tax may not be effective
Cap and Trade – each permit allows firms to pollute up to a certain amount, permits are sellable	Internalises the externality by establishing a market for it Provides incentive for firms to reduce their externalities	Difficult to measure externalities to determine the number of tradeable permits to be released It is also hard to enforce the limit specified by the permits Difficult to withdraw permits once they are owned by firms
Education, campaigns, advertisement		Difficult to achieve results Increase burden on tax payers to fund such schemes
Regulation / ban	Easy to understand and enforce Can be implemented quickly and effects are seen quickly	Does not allow market to operate High investigative and legal costs required for enforcement and prosecution
Subsidy	Still allows market to operate Ensures society receives full benefits of consumption Increases both producer and consumer surplus, everyone benefits	Difficult to quantify externalities May cause inefficient as firms lack incentive to develop production methods Increases burden on tax payers



Correcting positive externalities of production (b) / consumption (c)