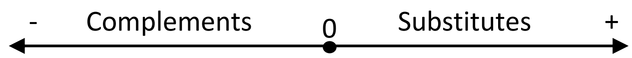
Cross price elasticity of demand (XED)

XED measures the responsiveness of quantity demanded of GOOD A given a change in price of GOOD B.

$$XED = \frac{\%\Delta Qd_A}{\%\Delta P_B}$$



Substitutes:

- Price of coke goes up, quantity demanded of pepsi goes up + ÷ + = +

Complements:

- Price of cereal goes up, quantity demanded of milk goes down – ÷ + = –

Elasticity:

- XED > 1 = closely related
- XED < 1 = weakly related
- XED = 0 = no relationship

Negative externalities

Market failure – when the free market fails to allocate resources at the socially optimum level – this leads to a net loss in social welfare.

Characteristics of public goods:

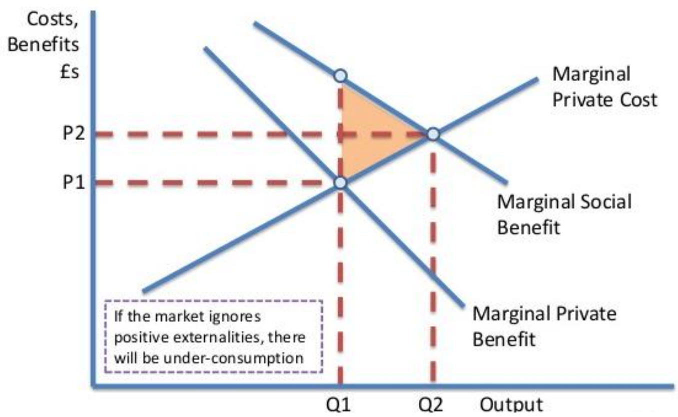
- Non-exclusion
- Shared consumption (non-rivalry) – when one person uses the good, it doesn't ruin it for other people.

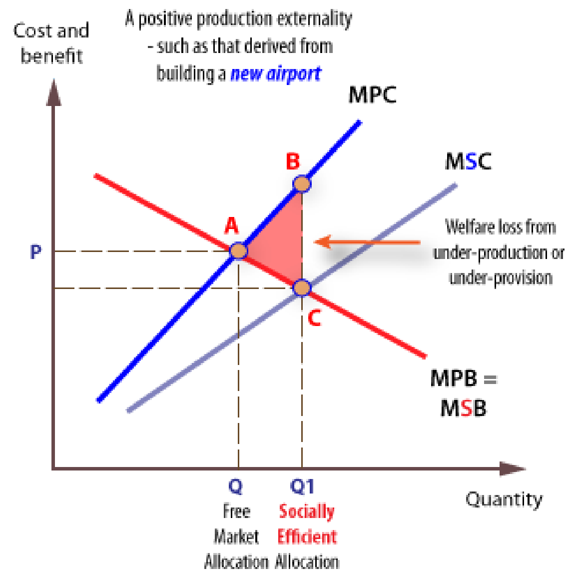
Negative externalities – detrimental third party effects as a result of the actions from a separate agent – i.e. when someone consumes or produces something (engages in an economic transaction), the effect of doing that harms a third party – somebody else not involved in that transaction is harmed

1. What curve moves:
    a. Production → Firms → Costs
    b. Consumption → Consumers → Benefits

2. Which way does it move
    a. Positive – right

6. Welfare loss → Consider MSC, MSB at private equilibrium





Positive externalities cause social benefit to be greater than private benefit. Social optimum output (Q_2) is higher than private optimum output (Q_1).

If the market ignores positive externalities, there will be under consumption.

E.g. – if a firm adopts a very good training regime, other firms can also adopt that regime, and in turn, these firms will have lower costs. E.g. if a firm discovers amazing technology, other firms can copy it and benefit.

If the market ignores positive externalities – the good or service will be underprovided.

Merit and demerit goods & information failure

Merit Goods

- Under consumed/provided
- Missing information regarding full private benefits
    - E.g. merit good – school – long term benefits not fully understood because focus is on the benefit provided right now thus good tends to be underconsumed
- Have positive externalities in consumption

De-merit

- Over consumed/ provided
- Mainly information regarding full private benefits
    - E.g. cigarettes etc…– might not realise that in 20 yrs will get cancer because of it
- Have negative externalities in consumption

Advantages

- Incentive to lower pollution (by investing in new technology or making equipment more efficient for example) – can sell permits for profits
- Reduces level of pollution to social optimum level – increased welfare – increased efficiency
- Market based solution – efficiently allocating permits
- Efficient and equitable for firms – firms still have choices – never overly disadvantaged

Disadvantages

- Deciding level of pollution allowed – how to determine it?
- High administration costs and difficult and costly to enforce
- Fines may not be strict enough – firms might continue polluting and take the fine
- Geographical distribution of pollution heavily concentrated in one area
- Need for international cooperation – global market / problem of pollution

Depends on

1. Level of information – government needs to know optimum level of pollution etc…
2. No. of firms who are able to reduce pollution – if high number can reduce, policy more likely to work

Government failure

When cost of implementing a policy overcomes the benefits that come about from implementing the policy in itself – Makes situation worse – greater loss of social welfare

Occurs when

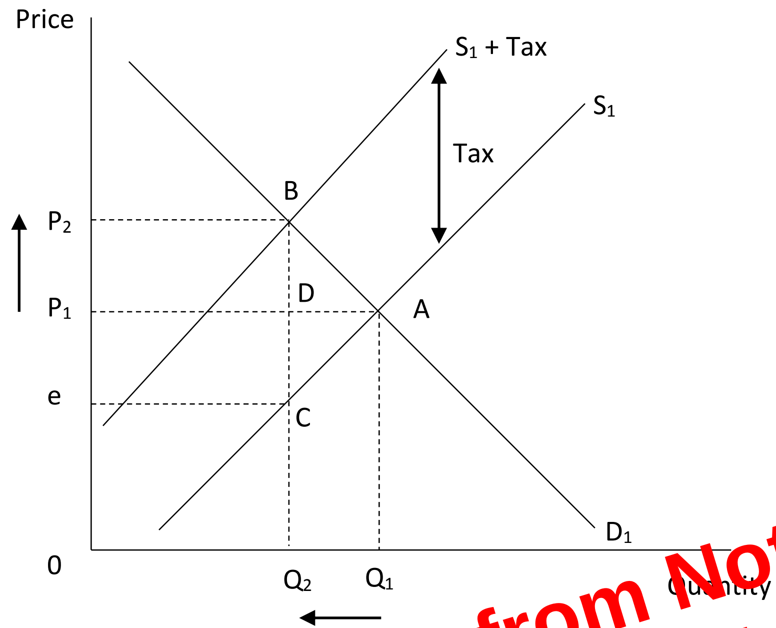
1. Admin costs are very high – greater chance of costs being higher than benefits
2. Information problems – no guarantee government has more information than free market agent (e.g. what's the right level of tax or right amount to subsidise etc…)
3. Unintended consequences – if government imposes very severe taxes or regulation for example, firms may shutdown or leave and setup elsewhere – not the intention

When government fails, it makes the situation worse than the market failure was in the first place.

Market economy (= capitalism, laissez-faire) – private sector is left to run freely – owns all the resources and allocates goods and services through market mechanisms

Command economies (= centrally planned economy, socialism) – public sector (state) – controls and distributes the resources, hires workers, gives incomes etc…

Indirect taxation



1. Supply curve shifts upwards – increase in cost of production
2. Price increase, quantity decrease
3. Government revenue – rectangle P_2BCe
4. Producer burden – rectangle P_1DCe
5. Consumer burden – rectangle P_1P_2BD
6. Producer revenue
   a. Old – rectangle Q_1AP_10
   b. New – rectangle $0Q_2Ce$
   c. Revenue loss = Old – new
7. Dead weight loss
   a. Triangle ABC

Impact on consumers

- Lose consumer surplus – have to pay higher prices (inelastic demand = consumers pay higher portion of tax)
- Workers may suffer as – as output falls workers may be fired etc…

Impact on producers

- Lose producer surplus

Impact on government

- Revenue generated
- If inelastic, less likely to cause unemployment as consumers take most of the burden, not the producers