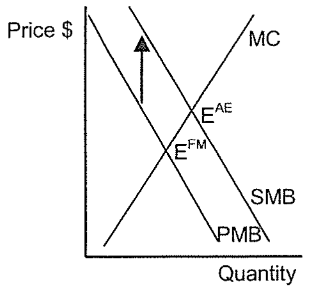
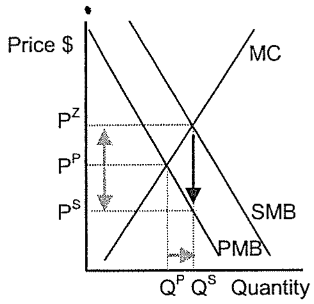
Externalities | Public goods | Imperfect information | Inequitable income distribution

- ***Positive consumption externalities***

A positive side effect (spillover benefit) that occurs when a good is consumed. Eg. education, defensive driving course, flu vaccine.



MB/PMB = private benefit to consumers, the market demand curve.
SMB = total benefit to society.
The arrow shows the spillover benefits to a third party. The benefit to society is greater than the benefit to the consumers.



The free market (private) equilibrium price and quantity is where PMB = MC (ie. where MD = MS). Only private costs and benefits are considered. The social equilibrium quantity (Q^S) is where SMB = MC.

To ensure consumers buy this increased quantity, the price to consumers must be lowered to the social equilibrium price (P^S). To ensure firms produce this increased quantity, the price they receive must increase to P^Z.

Externality – Spillover costs or benefits to a third party as a result of consumption or production of a good.

Spillover benefits – A positive side effect to a third party as a result of consumption or production of a good.

Private marginal benefit – The benefit (utility) gained from consumption of a good. This is shown by the demand curve.

Social marginal benefit – The total benefit to society from consumption. It is the private benefit to the individual plus the spillover benefit to society.

E^{AE} – Allocative efficient equilibrium/social equilibrium.

E^{FM} – Free market equilibrium.

LEARN

a) P____________ E____________ of C____________ occurs when a T_________ P________ (someone other than the B________ or the S_________) receive a S____________ benefit when a G_________ or a S_________ is C__________. The S__________ M___________ B_________ is the P__________ M__________ B________ plus the S__________ B___________. The F______ M_________ (P__________ E___________) does not account for E____________, so the P_________ equilibrium P________ is H________ (the good is over-priced) and the quantity is L__________ (the good is under-consumed).

b) What are externalities? ______________________________

c) Describe three examples of positive externalities of consumption. ______________________________

____

d) What does the PMB/MB curve show? ______________________________

e) What does the SMB curve show? ______________________________

f) Describe the difference between the private equilibrium and the social equilibrium. ______________________________

____

g) Are goods with positive externalities over-priced or under-priced? ______________________________

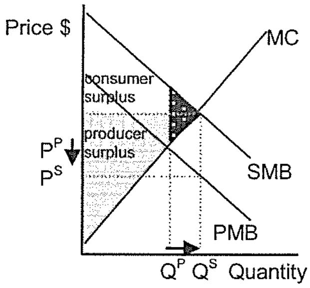
h) Are goods with positive externalities over-consumed or under-consumed? ______________________________

i) What are spill-over benefits to a third party? ______________________________

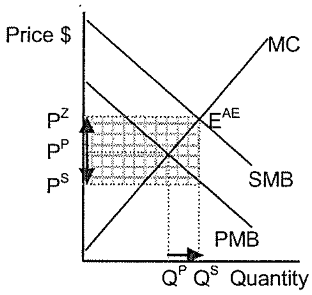
KNOW MARKET FAILURE – EXTERNALITIES

Externalities | Public goods | Imperfect information | Inequitable income distribution

- ***Government intervention - positive consumption externalities***
  The free market fails to consider spillover benefits of consumption so the government is justified to intervene (Eg. subsidy, provision).



As goods are over-priced and under-consumed, there is loss of consumer and producer surplus, as shown by the deadweight loss (DWL ▶). This illustrates the benefit that society should receive from increased consumption at a lower price but does not due to market failure.



The government may provide a subsidy so the price to consumers falls (P^P to P^S) to where the social equilibrium quantity is consumed (Q^S) and the price producers receive increases (P^P to P^Z) so they produce the social equilibrium quantity (Q^S). The subsidy results in the social equilibrium being achieved (E^{AE}), the deadweight loss being removed and allocative efficiency is increased.

Government intervention – Government forces producers/consumers to internalise the externality.

Internalise an externality – Consumers/producers receive the full benefits/pay the full costs of consumption and production.

Deadweight loss – Lost benefit to society from producer and consumer surplus not being maximised.

Subsidy – Part payment by the government to the producer so output increases and the price to consumers falls.

Social equilibrium (E^{AE}) – Allocatively efficient equilibrium.

LEARN

a) G_______ that when C_____________ result in S_________ B___________ to S_____________ are U_________-consumed and O______-priced when the F___ benefits to S________ are taken into account. So that the S_______ E___________ can be achieved, the G___________ may provide a S________ so the lower P______ consumers pay (P^S) means they C__________ at the S_________ E___________ Q_________ and the higher price P_________ receive (P^Z) mean they P__________ at the S_________ E___________ Q_________ (Q^S). This results in A____________ E___________ being I___________ as the D___________ loss is removed.

b) State three goods that are subsidised.____

c) Why does deadweight loss occur?____

d) What does internalising a positive externality of consumption mean?____________________________

____

e) What does the social equilibrium represent?____

f) Why does the market fail when consumption of a good results in positive benefits to society?____________

____

g) How does a subsidy result in the social equilibrium quantity being achieved?____________________

____

____

- ***Recommendation – positive consumption externalities***
  To evaluate government policies to address problems resulting from market failure, the market failure issues have to be considered. Then equity and efficiency aspects of possible policies need to be considered so a final recommendation to government can be made.

Explain why the market failed
Eg. The market for .... has positive externalities of consumption and has examples of spillover benefits such as ... These goods are currently over priced and under consumed when the full benefits to society are considered. The market outcome is inequitable/inefficient

Use an economic model to show why the market failed
Eg. Draw the PMB,SMB and MC graph and label the social (allocatively efficient) and private (free market) equilibrium prices and quantities.

Identify policies that could be used to correct the problems caused by the market failure
Eg. A subsidy could be provided/increased, the government could provide it free of charge, regulations could be imposed (eg. make it compulsory) an advertising campaign could be created to encourage consumption etc.

Illustrate the effects chosen policies will have on the market failure on an economic model
Eg. Show the effect of the subsidy/regulation on the market failure by making changes to the PMB, SMB and MC graph and labelling the new price paid by consumers, received by producers and the new quantity.

Explain how equitable and/or efficient the chosen policies are in correcting the market failure
Eg. With reference to your graph, explain in detail how each policy works to address the market failure. Explain in detail how equitable each policy is in correcting the market failure. Explain in detail how efficient each policy is in correcting the market failure.

Possibly policy 1 - subsidies
Equity: unfair as not all taxpayers benefit/opportunity cost of subsidy spending/equity increases as low income earners can now afford it.
Efficiency: increases as DWL removed however, a DWL of the subsidy payment occurs (as shown on PMB, SMB, MC model). Quantity increases.

Possible policy 2 - regulations
Equity: unfair as not all taxpayers benefit/opportunity cost of subsidy spending.
Efficiency: increases as DWL removed however, a DWL of the subsidy payment occurs (as shown on PMB, SMB, MC model)

Possible policy 3. - government provision
Equity: unfair as not all taxpayers benefit/opportunity cost of govt. spending.
Efficiency: increases as DWL removed. however, a DWL occurs if public goods are not free (as shown on charging for a public good model).

Make a justified recommendation as to which policy intervention should be used
Eg. Comprehensively explain why one of the policies is more efficient or more equitable than the other. Support your detailed explanation with an economic model if possible.

Explain another market failure

Government intervention – Government forces producers/consumers to internalise the externality.

Internalise an externality – Consumers/producers receive the full benefits/pay the full costs of consumption and production.

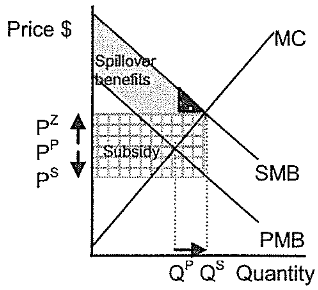
Equity – Fairness of a situation or outcome.

Efficiency – Social marginal cost equals social marginal benefit. Producer and consumer surplus is maximised. Market is allocatively efficient.

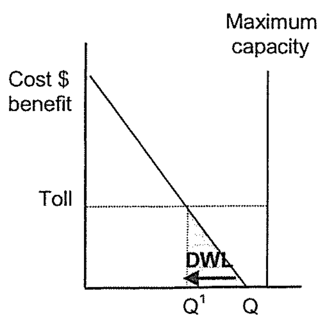
Efficiency – Society is getting the best possible benefit from the use of scarce resources (net welfare benefit is maximised) as the market is allocatively efficient. Ie. producer and consumer surplus are maximised.

Equity – The costs and benefits of the use of scarce resources are being *fairly* distributed among the population.

Positive externalities of consumption



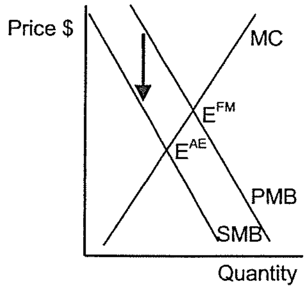
Market for a public good



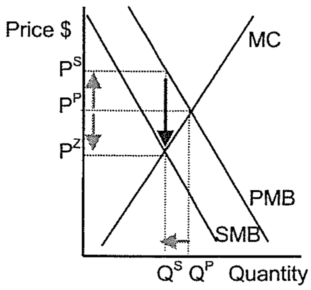
Externalities | Public goods | Imperfect information | Inequitable income distribution

- ***Negative consumption externalities***

A negative side effect (spillover cost) that occurs when a good is consumed. Eg. boy racers, smoking, air pollution from fireplaces.



MB/PMB = private benefit to consumers, the market demand curve.
SMB = total benefit to society. Some private benefits of consumption (PMB) are offset by costs (negative benefits) imposed on a third party -the arrow↓ (SMB).



The free market (private) equilibrium price and quantity is where PMB = MC (ie. where MD = MS). Only private costs and benefits are considered. The social equilibrium quantity (Q^S) is where SMB = MC.

To ensure consumers buy this reduced quantity, the price must be increased to the social equilibrium price (P^S). To ensure firms produce this reduced quantity, the price they receive must fall to P^Z.

Externality – Spillover costs or benefits to a third party as a result of consumption or production of a good.

Spillover costs – A negative side effect to a third party as a result of consumption or production of a good.

Private marginal benefit – The benefit (utility) gained from consumption of a good. This is shown by the demand curve.

Social marginal benefit – The total benefit to society from consumption. It is the private benefit to the individual plus the spillover benefit to society.

E^{AE} – Allocative efficient equilibrium/social equilibrium.

E^{FM} – Free market equilibrium.

LEARN

a) N__________ E__________ of C__________ occur when a S__________ cost is imposed on a T______ P________ (someone other than the B________ or the S________) when a G________ or a S________ is C________. The S________ M________ B________ is the P________ M________ B________ minus the S________ C________. The F______ M________ (P________ E________) does not account for E________, so the P________ equilibrium P________ is L________ (the good is under-priced) and the quantity is H________ (the good is over-consumed).

b) What are externalities?____________________

c) Describe three examples of negative externalities of consumption.____________________

____

d) What does the PMB/MB curve show?____________________

e) What does the SMB curve show?____________________

f) Describe the difference between the private equilibrium and the social equilibrium.____________________

____

g) Are goods with negative externalities over-priced or under-priced?____________________

h) Are goods with negative externalities over-consumed or under-consumed?____________________

I) What are spillover costs to a third party?____________________

KNOW INTERNAL TEMPLATE

Externalities | Public goods | Imperfect information | Inequitable income distribution

- ***Recommendation – negative consumption externalities***
  To evaluate government policies to address problems resulting from market failure, the market failure issues have to be considered. Then equity and efficiency aspects of possible policies need to be considered so a final recommendation to government can be made.

Explain why the market failed
Eg. The market for .... has negative externalities of consumption and has examples of spillover costs such as ...These goods are currently under priced and over consumed when the full costs to society are considered. The market outcome is inequitable/inefficient.

Use an economic model to show why the market failed
Eg. Draw the PMB,SMB and MC graph and label the social (allocatively efficient) and private (free market) equilibrium prices and quantities.

Identify policies that could be used to correct the problems caused by the market failure Eg. A sales tax could be imposed or increased, the government could ban/place restrictions on it, regulations could be imposed (eg. age limit, consumption limit, minimum price) and an advertising campaign created to discourage consumption etc.

Illustrate the effects chosen policies will have on the market failure on an economic model
Eg. Show the effect of the sales tax/regulation on the market failure by making changes to the PMB, SMB and MC graph and labelling the new price paid by consumers, received by producers and the new quantity.

Explain how equitable and/or efficient the chosen policies are in correcting the market failure Eg. With reference to your graph, explain in detail how each policy works to address the market failure. Explain in detail how equitable each policy is in correcting the market failure. Explain in detail how efficient each policy is in correcting the market failure.

Possibly policy 1 – sales tax
Equity: unfair as not all consumers cause problems/sales tax is regressive in nature/equity increases if low income earners can now afford it.
Efficiency: increases as DWL removed however, a DWL of the tax revenue occurs (as shown on PMB, SMB, MC model). Quantity decreases.

Possible policy 2 – regulations eg. raise consumption age/minimum price
Equity: unfair as not all consumers cause problems/minimum price impacts more on lower income earners.
Efficiency: increases as DWL removed. However, a DWL of the sales tax revenue occurs (as shown on PMB, SMB, MC model).

Possible policy 3. – advertising campaigns
Equity: unfair as not all consumers cause problems/opportunity cost of govt. spending.
Efficiency: increases if market demand decreases and spillover costs reduced so DWL reduces. Quantity sold falls.

Make a justified recommendation as to which policy intervention should be used
Eg. Comprehensively explain why one of the policies is more efficient or more equitable than the other. Support your detailed explanation with an economic model if possible.

Explain another market failure

Government intervention – Government forces producers/consumers to internalise the externality.

Internalise an externality – Consumers/producers receive the full benefits/pay the full costs of consumption and production.

Equity – Fairness of a situation or outcome.

Efficiency – Social marginal cost equals social marginal benefit. Producer and surplus is maximised. Market is allocatively efficient.

Efficiency – Society is getting the best possible benefit from the use of scarce resources (net welfare benefit is maximised) as the market is allocatively efficient. Ie. producer and consumer surplus are maximised.

Equity – The costs and benefits of the use of scarce resources are being *fairly* distributed among the population.

Negative externalities of consumption