

4 Diagrams you need for Externalities

(4 uses of the MsB/MsC diagram) How to draw the diagram correctly? See the 'blue box' in webnote 224.

- ⊙ addressing market failure 2.4¹: diagrams 1-4
- ⊙ 'overproduction' in Perfect Competition 2.2 (HL) – diagram 1
- ⊙ Macroeconomic statistics do not measure externalities 3.1
- ⊙ This diagram could also be used in conjunction with welfare economics / producer and consumer surplus. See webnote ED 2.
- ⊙ See webnote 252 for an explanation of welfare loss
- ⊙ To illustrate Poor resource allocation/ economic or resource efficiency

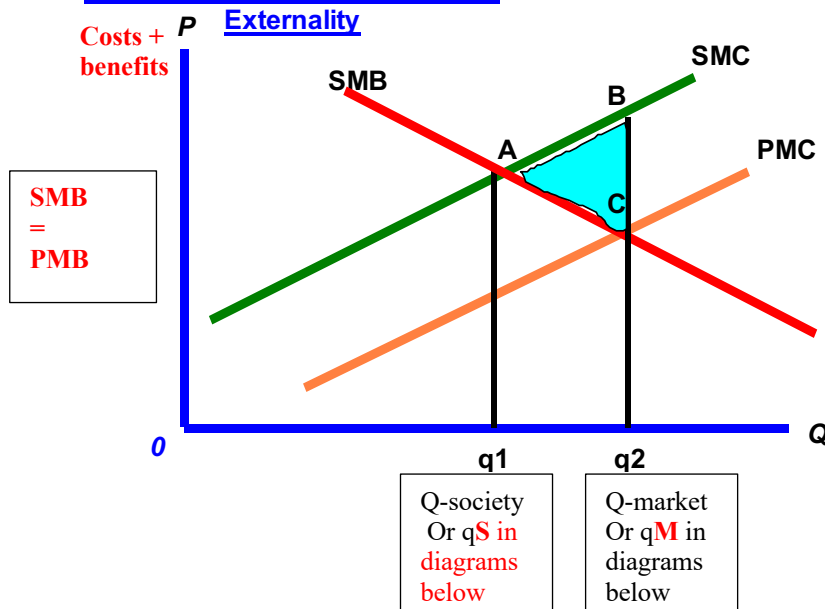
Welfare loss

= a non optimal allocation of resources.

MsB is not equal to MsC

Production externalities

Diagram 1: Negative Production Externality

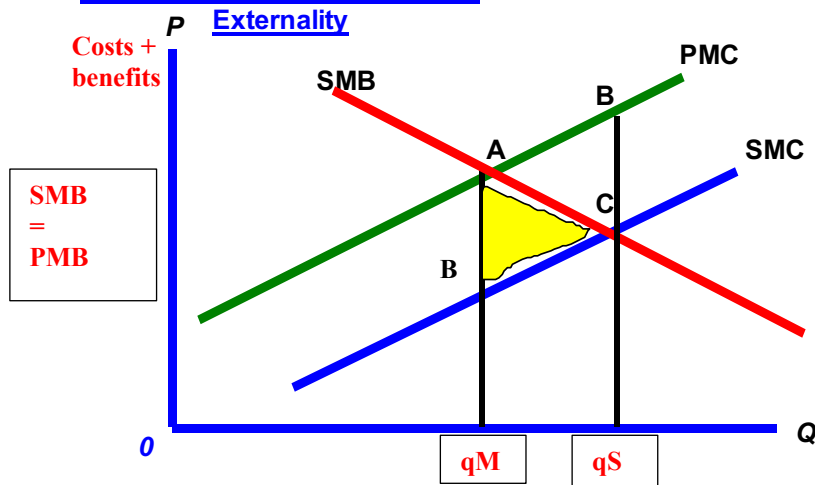


Negative Externality of Production

COMMENT: DIAGRAM 1

- Q1 or QS is the socially efficient level of output
- Market over supplies at q2 or QM
- **Overproduction** = area abc
- **Abc = welfare loss (cost > benefit)**
- This is a welfare loss or cost to society of the market failure. Examples are environmental pollution caused by industry that damage the environment and increase costs to society

Diagram 2: Positive Production Externality



Positive Externality of Production

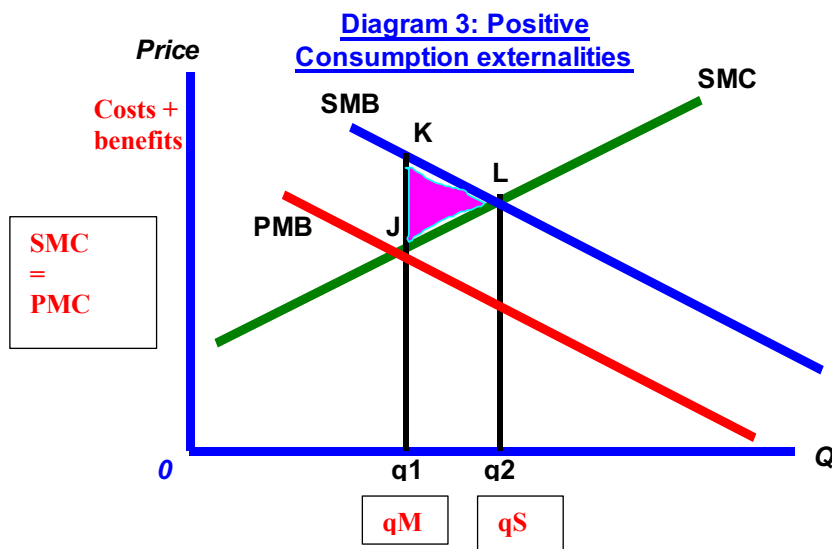
COMMENT: DIAGRAM 2

- QS is the socially efficient level of output
- Market under supplies at qM
- **Underproduction** = area abc
- **Abc=welfare loss**
- This is a welfare loss to society of the market failure. (benefit > cost)
- Example would be a chemical plant installing a water purification system that benefits other local firms e.g. a local fish farm is not paying for cost of clean water

¹ For further reading see the article on page 6 of the Economic Review, April 2003 issue, Volume 20, number 4. Title is Externalities

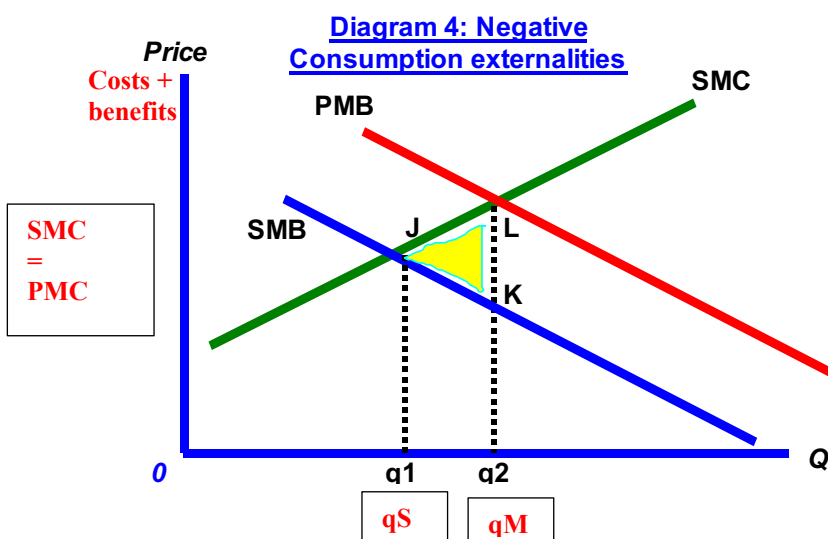
4 Diagrams you need for Externalities

Consumption externalities



COMMENT: DIAGRAM 3

- $Q2 / qS$ is the socially efficient level of output
- Market under supplies $q1 / qM$
- **Underconsumption** = area of jkl
- **Jkl = welfare loss; (benefit > cost)**
- This is a welfare loss to society
- Could apply to education (society benefits from educated individuals) and health care (avoiding an epidemic) in an LDC or to the construction of beautiful buildings that enhance the local environment



COMMENT: DIAGRAM 4

- $Q1 / qS$ is the socially efficient level of output
- Market over supplies $q2 / qM$
- **Overconsumption** = area of jkl
- **Jkl = welfare loss; (cost > benefit)**
- This is a welfare loss to society
- Example would be an individual listening to loud music that affects local neighbours
- Demerit goods e.g tobacco, drugs