

## Positive consumption externalities



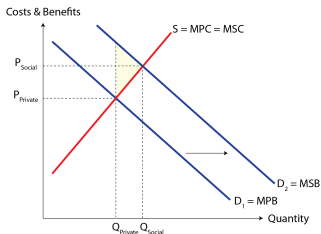
# Assessment Objectives

## Specific Expectations

AO2	Explain positive externalities of consumption and the resulting welfare loss
AO4	Draw a diagram illustrating positive externalities of consumption and welfare loss
AO2	Explain the meaning of merit goods
AO4	Calculate welfare loss that arises from positive externalities of consumption
AO2	Explain government intervention to correct positive externalities of consumption: legislation and regulation, education and awareness creation, nudges, government provision, subsidies
AO4	Draw diagrams to illustrate the above government responses
AO3	Discuss strengths and limitations of the above government policies with respect to: difficulties in measurement of externalities, degree of effectiveness, consequences for stakeholders

# Positive consumption externality

- **Positive consumption externalities** a positive externality caused by consumption activities, leading to a situation where marginal social benefits are greater than marginal private benefits ( $MSB > MPB$ )
- ▶ **Example:** The consumption of education benefits the person who receives the education, but in addition gives rise to external benefits, involving social benefits from a more productive workforce, lower unemployment, higher rate of growth, more economic development, lower crime rate, and so on.



# Positive consumption externality

- ▶ The marginal social benefit (MSB) curve lies above the marginal private benefit (MPB) curve, and the difference between the two consists of the external benefits to society.
- ▶ When there is a positive consumption externality, the free market underallocates resources to the production of the good, and too little of it is produced relative to the social optimum  $Q_S < Q_E$  and  $MSB > MSC$  at  $Q_S$ .
- ▶ In general, positive externalities (external benefits), whether these arise from production or consumption activities, lead to an underallocation of resources to the good in question, and therefore to its underprovision.
- ▶ The welfare loss arising from a positive consumption externality is the difference between the MSB and MSC curves for the amount of output that is underproduced relative to the social optimum ( $Q_S - Q_E$ ).
  - It represents the loss of social benefits due to underproduction of the good.

- **Merit goods** are goods that are held to be desirable for consumers, but which are underprovided by the market. Reasons for the underprovision include:

1. **Positive externalities**

- In this case too little is provided by the market.

2. **Low levels of income and poverty**

- Some consumers may want certain goods or services but cannot afford to buy them.

3. **Consumer ignorance**

- Consumers may be better off if they consume certain goods and services but they may be ignorant of the benefits, and so do not demand them.
- Lack of knowledge about the benefits may lead consumers to demand too little of these services.

# Correcting positive consumption externalities

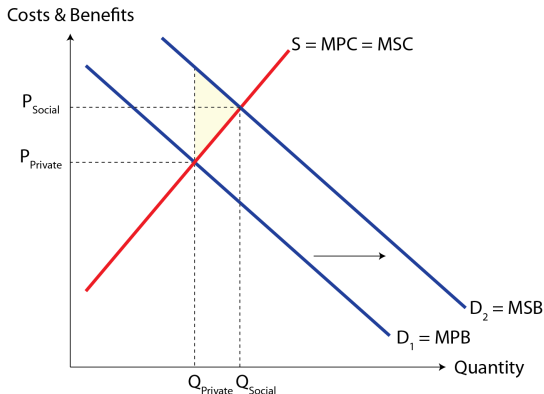
- ▶ Correction of positive consumption externalities involves either increasing demand and shifting the MPB curve towards the MSB curve through legislation or education and awareness creation.
- ▶ Alternatively, increasing supply and shifting the MPC curve downward by direct government provision or by granting a subsidy.
- ▶ Both demand increases and supply increases can lead to production and consumption at  $Q_{\text{Optimal}}$  and the achievement of allocative efficiency.
- ▶ The price paid by consumers increases when demand increases, and falls when supply increases.

## 1. Government legislation

- Legislation can be used to promote greater consumption of goods with positive externalities.
- **Example:** Most countries have legislation that makes education compulsory up to a certain age.

# Correcting positive consumption externalities

- The demand increases and the demand curve  $D_1 = MPB$  shifts to the right.
- Ideally it will shift until it reaches the MSB curve, where  $D_2 = MSB$ , and  $Q_{\text{Optimal}}$  is produced and consumed.



# Correcting positive consumption externalities

## 2. Education and awareness creation

- Governments can use education of the public, awareness creation, to try to persuade consumers to buy more goods with positive externalities.
- The objective is to increase demand for such services, and the effect is the same as with legislation as  $D_1$  shifts to  $D_2 = MSB$  and  $Q_{Optimal}$  is produced and consumed, while price increases to  $P_{Optimal}$ .

## 3. Nudges

- Nudges have similar effects as education and awareness creation programmes
- The objective is to increase demand shifting  $D_1$  toward  $D_2$ .
- **Example:** Governments can use nudges like the creation of bicycle lanes to encourage the use of bike riding and physical exercise



# Correcting positive consumption externalities

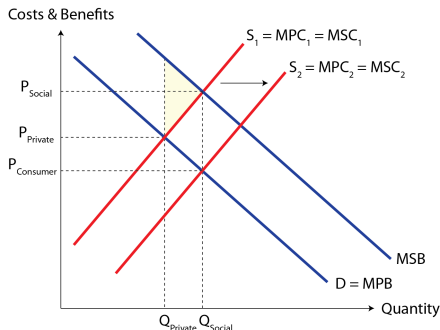
## 4. Government direct provision

- Governments are frequently involved in the direct provision of goods and services with positive consumption externalities.
- **Example:** Government (public) provision of education and health care in virtually all countries in the world.
- Direct provision has the effect of increasing supply and therefore shifting the supply curve from  $S_1$  to  $S_2$ .
- To achieve the social optimum  $Q_{\text{Optimal}}$ , the new supply curve must intersect MPB at the level of output  $Q_{\text{Optimal}}$ .
- At the new equilibrium, price falls to  $P_{\text{Consumer}}$  and  $Q_{\text{Optimal}}$  is produced and allocative efficiency is achieved.

## 5. Subsidies

- A subsidy to the producer of the good with the positive externality has the same effects as direct government provision.

# Correcting positive consumption externalities



- It results in an increase in supply and shifting the supply curve rightward.
- If the subsidy is equal to the external benefit, the new supply curve is  $S_2 = MPC_2$ , and it intersects MPB at the  $Q_{Optimal}$  level of output.
- Price falls from  $P_{Private}$  to  $P_{Consumer}$ ,  $Q_{Optimal}$  is produced and allocative efficiency is achieved.

# Evaluating policies to correct positive externalities

- ▶ Direct government provision and subsidies are widely used as methods to deal with positive consumption externalities.
  - Direct provision and granting of subsidies involved the use of government funds that rely on tax revenues.
  - Choices must be made on which goods should be supported, and by how much they should be supported.
  - In practice it is very difficult to measure the size of the external benefits, and therefore to calculate precisely which goods and services should be supported and the level of support they should receive.
  - Governments are often susceptible to political pressure and sometimes make choices based on political rather than economic criteria.
- ▶ It is difficult to design effective nudges in view of insufficient knowledge about how people respond to nudges and choice architecture.

# Evaluating policies to correct positive externalities

- ▶ Legislation, education and awareness creation are subject to similar limitations concerning calculating the size of the external benefits.
  - Such policies raise the price of the good to consumers, which may make the good unaffordable for some consumer groups.