

Chapter 7: Externalities and Public Goods



By Wayne Geerling
Monash University

Negative Externalities in Midnight Oil's “River Runs Red”

Internal v. External Costs

- Externalities occur when social (internal +) costs exceed private (internal) cost.
- Consider the true cost of driving your car:
 - How would your demand for driving change if you had to pay the cost?

Externalities

- **Externalities**
 - The _____ or _____ of a market activity that affect a _____ party
- **Market failure**
 - Occurs when there is an _____ allocation of resources in a market
- Externalities are one type of market failure.

Correcting for Negative Externalities

- Internalising the externality
 - The individual involved in the activity takes account for social
- For negative externalities:
 - Force individual to
 - production
 - production
- Overall output is , illustrated by a shift in supply.

Correcting Negative Externalities

(with regulations and taxes)

Price



Quantity

Congestion in “Full Japan Train”

Stockholm Congestion Tax

Uber

Smart parking
meters

Toll Lanes

**Dynamic
Pricing -**
the price
varies
with supply
and demand

The Coase Theorem

- If an outcome is not socially optimal, then at least some people can be made better off without harming anyone: there's “
.”.
- This creates an incentive for individuals to take steps to improve the situation.
- If at no cost, people can negotiate the purchase and sale of the
to perform activities that cause externalities, then they can always arrive at
solutions to the problems caused by externalities.

Barking Dog in *King of Queens*

Coase Theorem Example

- Suppose your roommate likes to play loud music, but it disturbs you. The table below reflects your happiness under both scenarios.

	No Loud Music	Loud Music
Roommate	\$50/month	\$70/month
You	\$50/month	\$10/month

- What is the socially optimal outcome?
 - A. Your roommate plays loud music
 - B. Your roommate doesn't play loud music

Assume your roommate has the legal right to play music. Negotiation is costless.

	No Loud Music	Loud Music
Roommate	\$50/month	\$70/month
You	\$50/month	\$10/month

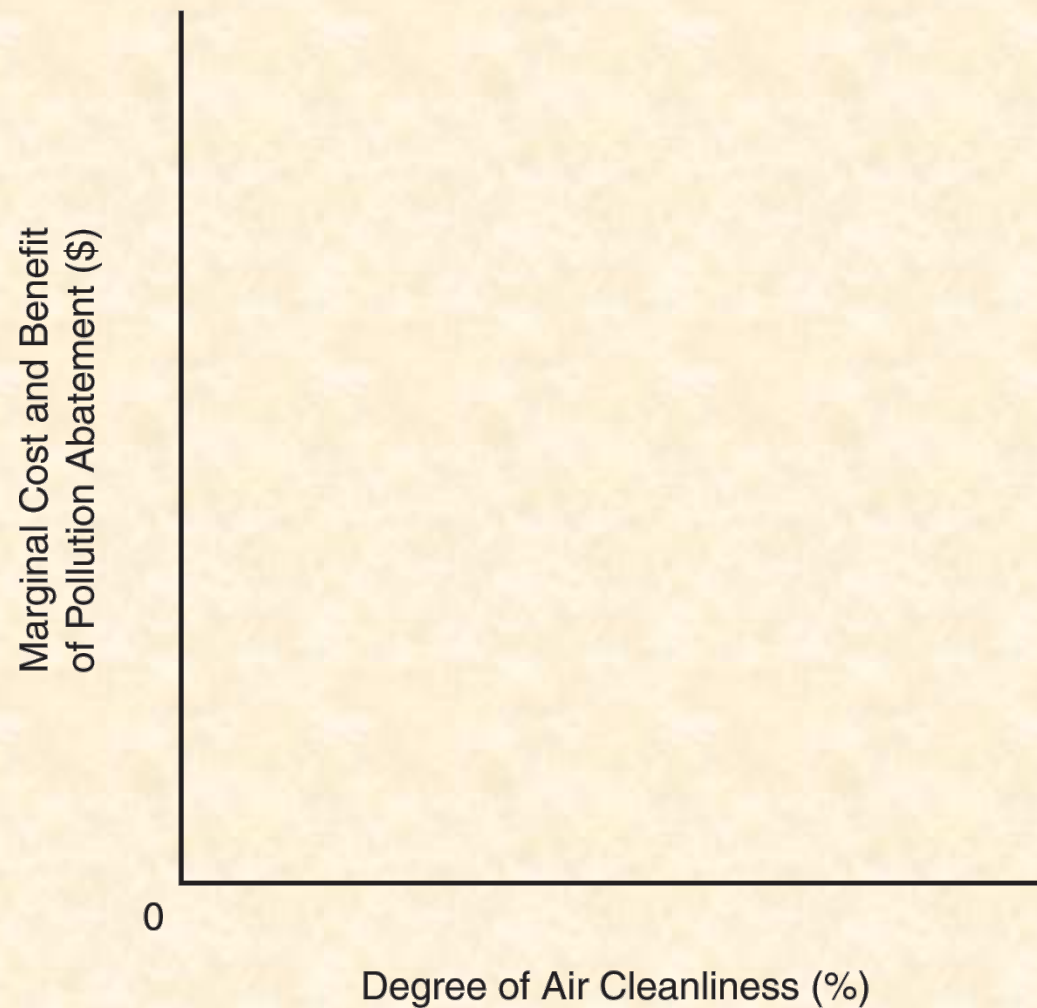
- What's the maximum amount you are willing to pay your roommate to stop playing music?
- Answer:
- What's the minimum amount your roommate is willing to accept to stop playing music?
- Answer:

Assume your roommate has the legal right to play music. Negotiation is costless.

	No Loud Music	Loud Music
Roommate	\$50/month	\$70/month
You	\$50/month	\$10/month

- What's one possible solution?
- Answer:
- Note: if you owned the property rights, your roommate would

The Optimal Amount of Pollution is NOT Zero



Positive Externalities

- Benefits experienced by _____ parties
- “_____” of the good is consumed and produced

Correcting for Positive Externalities

- Help individuals realize external
- Finance and/or consumption of the good
- Laws requiring consumption
- Overall consumption is , illustrated by a shift in demand

Correcting for Positive Externalities (subsidies)

Price



Quantity

Negative externality

Market Q
socially desirable

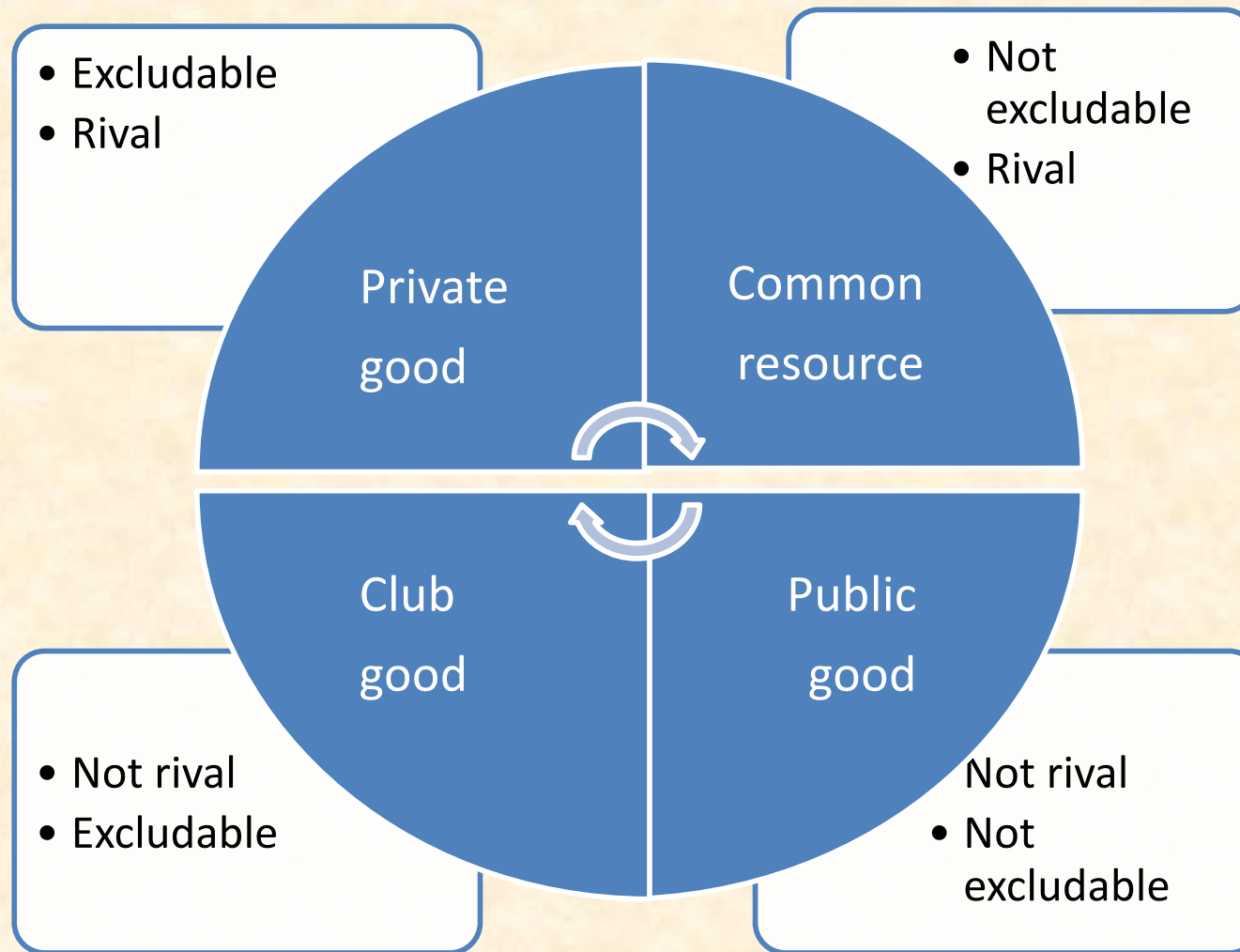
Positive externality

Market Q
socially desirable

Private and Public Goods

- Economists differentiate private and public goods based on two characteristics:
- **Excludable**
 - It is possible to _____ consumers who have not paid for it from having access to it.
- **Rival**
 - The good cannot be _____ by more than one person at a time.

Different Kinds of Goods



Street
Musician –
would you
toss in \$1?

What if you
could swear?

Free-Riding in the Bud Light Commercial “Swear Jar”

What is wrong with this picture?

- **Tragedy of the Commons**

- The tendency for a resource that has no price to be used until its marginal benefit = 0.
- Examples: air, water (oceans), popcorn at the movies.

Tragedy of the Commons in *South Park*, “Peeing in the Pool”

Fishing Game



(1) There are four contestants – each has a magnetic fishing pole. Choose your champion!

(2) The game is divided into two rounds:

(a) The first 30 seconds:

- gold jingle bells are worth \$100.
- silver jingle bells are worth \$200.
- blue jingle bells are worth \$500.
- red jingle bells are worth \$1,000.

(b) The second 30 seconds:

- gold jingle bells are worth \$200.
- silver jingle bells are worth \$400.
- blue jingle bells are worth \$1,000.
- red jingle bells is worth \$2,000.

Overcoming Tragedy of the Commons

- **Proactive management**