

Externalities

Pollution

Smoking

Ugly houses

Drunk driving

Loud noises

Strong perfume

Barking dogs

Fire hazards

Education

Bad Drivers

Disease

Experiment 6

We're trading lawn ornaments today. Every lawn ornament sold inflicts a $\star\frac{1}{2}$ cost on every other trader - whether they buy, sell, or not.

If you have a cost of $\star 23$, what is the lowest price you should accept?

If you have a value of $\star 30$, what is the highest price you should be willing to pay?

In Session 1 (Experiment 6.1), the market is unrestricted.

In Session 2 (Experiments 6.2 and 6.3), a $\star 20$ tax is imposed on sellers.

In Session 3 (Experiment 6.4), some people are given pollution permits. These are tradeable - if you have a permit, you can sell it to others. In order to sell a lawn ornament, a permit is necessary.

Note that two markets are operating simultaneously in this experiment - the market for permits and the market for lawn ornaments. We'll run a warmup for session 3 to make sure everyone understands how it works.

Market Interventions

Government is used for two main purposes, *market failure* and *redistribution*.

Market failure refers to bad outcomes of competition, and the government may intervene in the market place to improve the outcome.

In addition to monopoly, there are two other main sources of market failure: *Public Goods* and *Externalities*.

Externalities are present when people other than the parties to a transaction or activity are affected.

Public Goods are goods that private firms have trouble charging for because they can't exclude users who don't pay.

A *Public Good* is a good in which my consumption does not prevent you from consuming it as well.

There are two features to public goods that characterize them. The first is *nonrivalry*: my consumption of the good doesn't reduce the amount of the good for you to consume.

The second feature is *nonexcludeability*: if the good is provided, the seller can't prevent anyone from enjoying it. Goods which are not public are called *Private Goods*.

Most public goods are not *pure public goods*, they have some private component.

Public Goods create a market failure because of *free-riding*. A *free-rider* is someone who enjoys the public good but doesn't pay for it.

An *external effect* is a benefit or cost imposed on others through your actions. If others benefit, its a *positive externality*.

If others are hurt, its a *negative externality*.

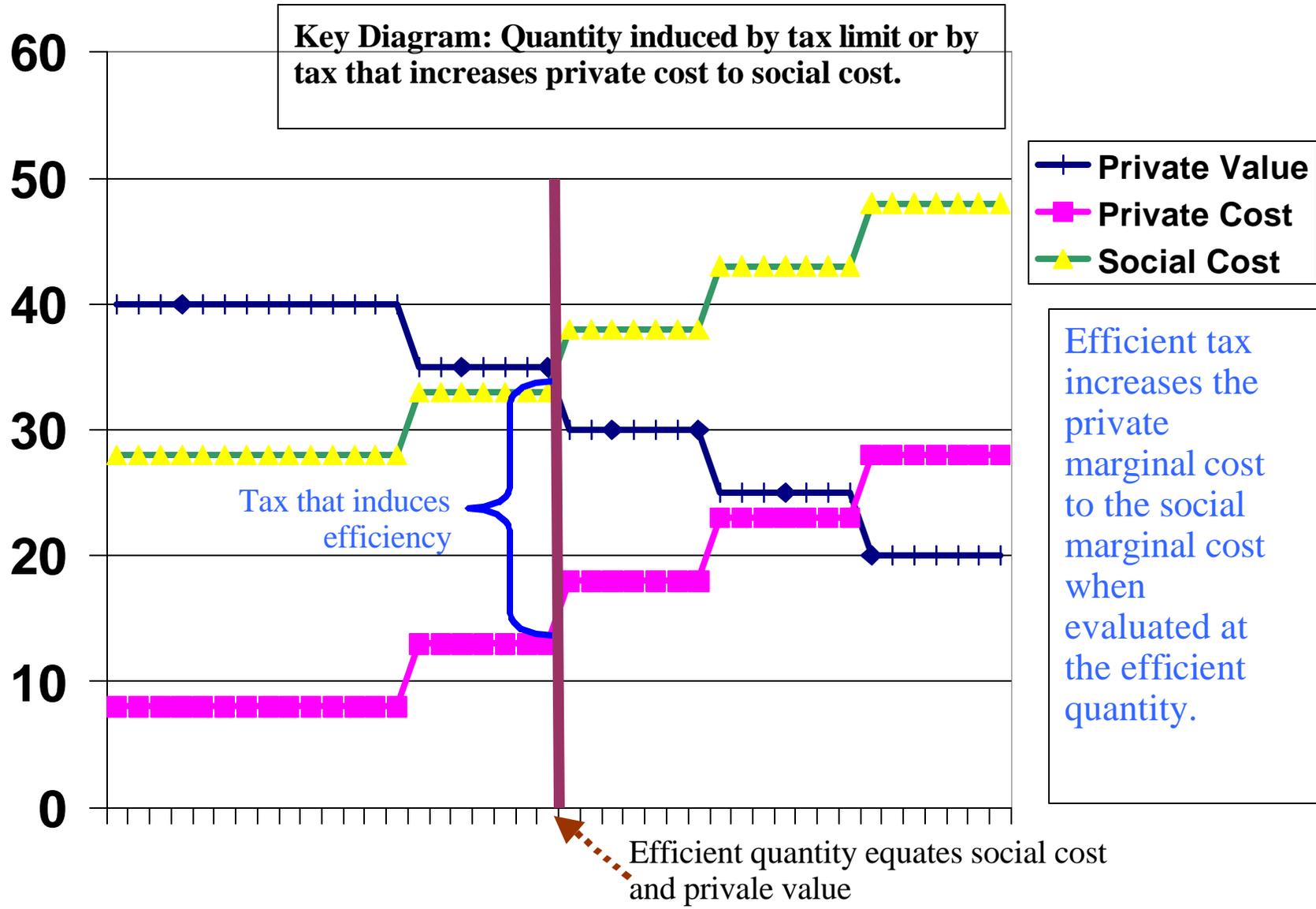
Household governments must deal with this situation as well, and they typically *regulate* - no loud noises after 10pm on weeknights, say. On a bigger scale, we regulate pollution.

Many externalities arise because *property rights* are not well-defined.

For negative externalities, two main methods are used to cure the market failure.

First, taxes may be imposed. The appropriate tax is the external marginal cost.

Second, quantity regulation may be imposed.



A *Price Ceiling* imposes a maximum price that may be charged. Examples: Rent control, wage and price controls (1970s), oil and natural gas (ended in 1980s), usury laws.

A price ceiling has no effect if the price ceiling is above the equilibrium price. Otherwise, the quantity traded is given by supply.

A *Price Floor* puts a minimum price that may be legally charged. Examples: Minimum wage, some agricultural products, oil in Canada

A price floor has no effect if the price floor is less than the equilibrium price. Otherwise, the quantity traded will be given by demand.

A Price-Floor with government purchase of excess supply occurs on some agricultural products (e.g. cheese). The quantity traded is now given by supply, and if the price floor exceeds the equilibrium price, more is traded than is efficient.

A per-unit or percentage tax shifts reduces supply by the amount of the tax, reducing the quantity traded.

The size of the dead-weight loss depends on the elasticities of demand and supply.

For perfectly inelastic supply, taxes and ceilings floors have no DWL.

For perfectly inelastic demand, taxes and price floors have no DWL.

Price ceilings, floors and taxes are called distortions because they distort economic behavior away from the efficient outcome (maximum gains from trade).

Distortions create incentives for people to create the unrealized gains from trade.

Examples:

Search activity, waiting in line ("queue")

Illegal transactions

In addition, price ceilings and floors may lower the cost of discrimination (example: minimum wage laws).