MICROECONOMICS AND POLICY ANALYSIS - U8213
Professor Rajeev H. Dehejia
Class Notes - Spring 2001

Externalities
Wednesday, March 28
*Reading:* "The Tragedy of the Commons"

Externality: Actions of one party impose costs or benefits on a party not directly involved in the transaction (ex: Pollution - negative externality).

Decisions of individuals in the transaction are not optimal from a social standpoint. Private benefits do not equal the social benefits.

Overprovision = Negative Externality
Underprovision = Positive Externality

The marginal cost usually ignores the cost of the society. If there are costs imposed on society based on a firm's actions it will not be accounted for in the MC.
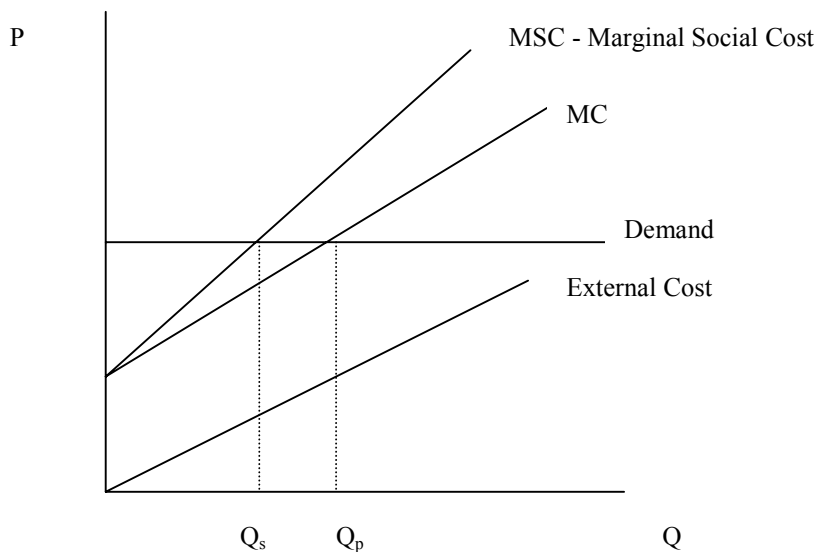
The optimal quantity is less than the actual quantity. The Marginal Social Cost is the marginal cost plus the "external cost".

Will the benefit to society be more than the loss to the firm? Yes, but will explain later (relates to Coase Theorem)

"The Tragedy of the Commons" Reading:

Infinite growth can not be sustained.
Malthus: Natural check on population growth.

Common Property Resources: A resource in which are shared among individuals and is available to everyone. A resource in which no individual is excluded from consuming.

How is the allocation of labor determined for a productive activity? Imagine fishingpeople deciding how many hours to spend fishing and how many hours to spend at the alternative which is working at the factory for a specific wage. The fishingperson would compare the returns on fishing vs. working at a factory.
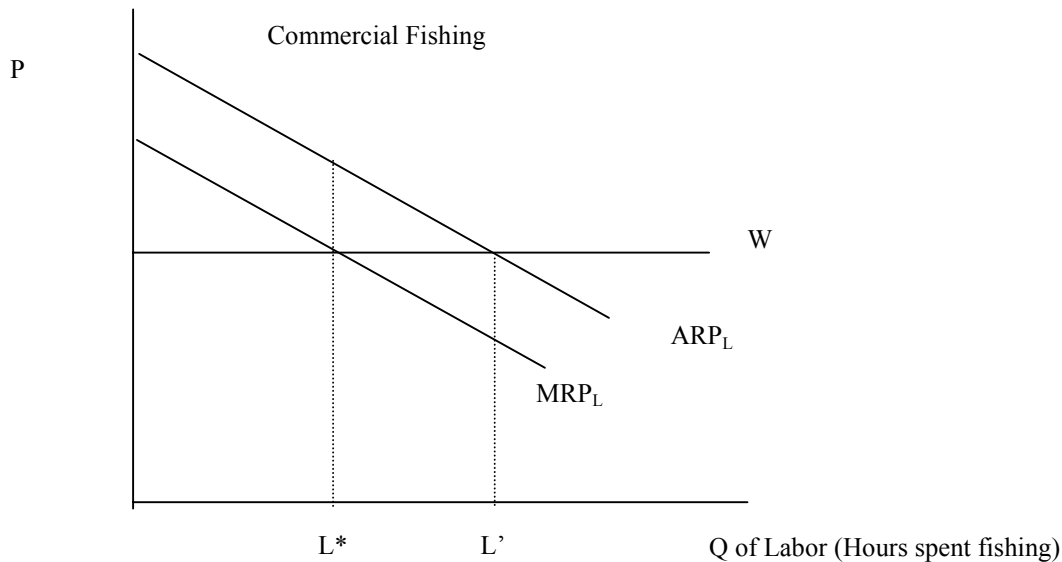

How many fishermen will fish?
Workers will enter up to the point L' where $ARP_L = w$ because it is a common property resource. If it were private property, workers would enter until $MRP_L = w$. A common property resource results in too many fisherpeople on the lake than what is socially optimal.

With a common property resource zero rent (surplus) is realized. People will enter until $ARP_L = w$ of fishing.

What is the rent (surplus) at L*? The triangle or square (they are equal)

What is the rent (surplus) at L'? $(ARP_L - w) * w = 0 * w = 0$
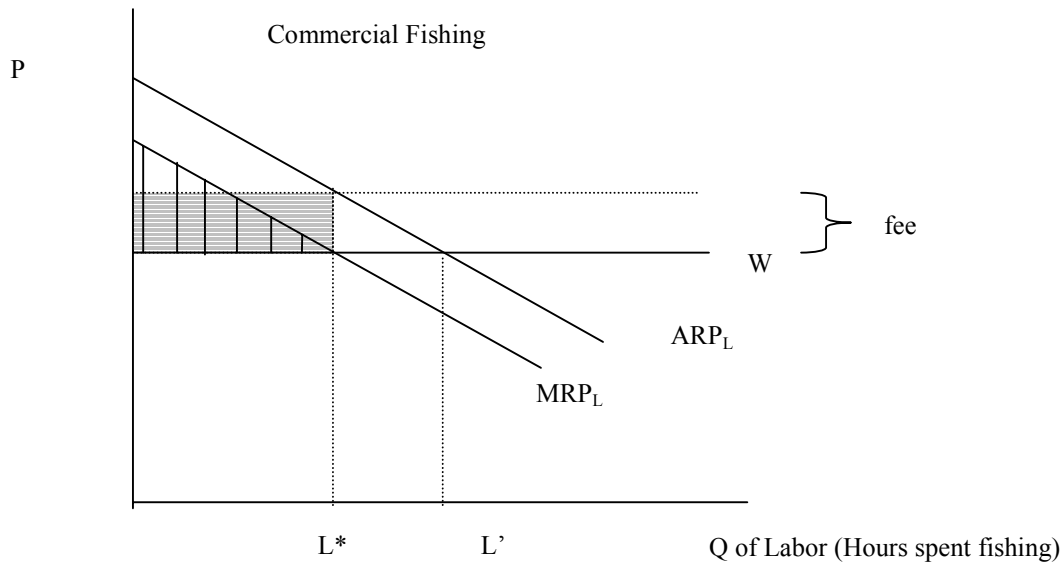
Rent is dissipated by free entry and the inability to exclude others. With a common property resource it will be used until the rent is fully dissipated.

What are the solutions?

Taxes or Fees – in the case of the fisherman, a fee could be charged to fish on the lake (see diagram above). The fees would force a socially optimal number of fishermen. What happens to the rent? The rent is absorbed by the fees.

Quantity regulation (rather than price) – force the fishermen to produce a certain amount. Whether you use taxes or a regulated quantity you end up with the same result.

Privatization – one possibility would be to privatize the lake and then decide how many fishermen to allow to fish on the lake.

Tradable permits – this is often used in cases of pollution. You can pay someone else to reduce pollution instead of reducing your own pollution. This helps achieve the given level of abatement at the lowest cost.