EE475: Natural Resource Economics

Market Efficiency and Property Rights

28th January 2015
by
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Group Assignment

- There are 2 parts in the group assignment.
  - **Individual part**: Each member of the group has to find a news in the past year that relates the group's natural resource issue in Thailand or in neighboring region (such as ASEAN or GMS)
    - Translate the news (if the original is in Thai).
    - Put it in A4, Font: Times New Roman 12; space between lines1.5
    - Specifying headline, content, and source (which news agency and the link)

Group Assignment

- **Group part**: Report and Presentation on the state of the resource issue in Thailand
  - Content should cover the followings:
    - Present state of the resource
    - Problems of the resource issue in the past 5 years
    - Existing solutions or mechanisms to solve the problems done by government, private sector, and civil society
  - Please specify which of the members responsible for which topic.
  - The report should be around 10 pages (+/- 2). Font: Times New Roman 12; space between lines1.5
  - Citation: Chicago style
- Presentation: 15 minutes
- Deadline of the report: Midnight of the day of the presentation (after). In digital file.

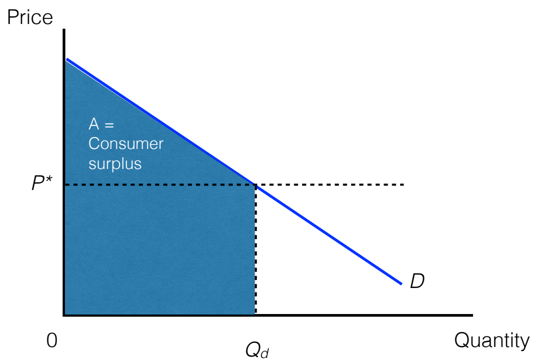
Outline

- Market and Efficiency
  - Static efficiency
  - Problems that affect efficiency
    - Externalities
    - State Failure
  - The Pursuit of Efficiency

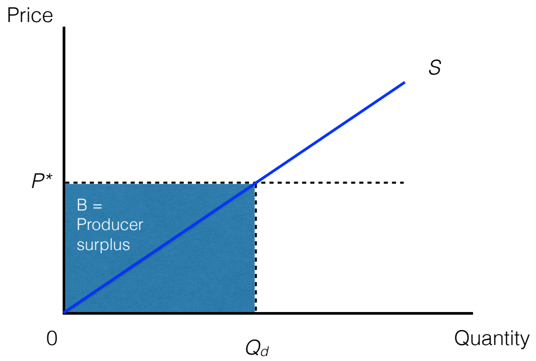
Economic Efficiency

- Static Efficiency vs Dynamic Efficiency
- Indicator for static efficiency in resource allocation is whether ***economic surplus*** or ***social welfare*** is maximized.
- What is consumer surplus and how can it be graphically illustrated ?
- What is producer surplus and how can it be graphically illustrated ?

Consumer surplus



Producer surplus



Producer surplus

- What does the producer surplus consist of?
  - in Short-run: fixed cost and profit
  - in Long-run: scarcity rent and profit
- *Scarcity Rent*: Producer surplus, especially in natural resource sector, that will not be eliminated in long-run by competition in the perfect competition market.

Property Rights

- Property rights is …
  - a bundle of rules
  - specifying who the owner of the property is,
  - specifying what privileges and limitations of the owner are.

Property Rights

- Structures of the property rights that promote efficiency of market economy.

    1. *Exclusivity* - All benefits and costs accrued as a result of owning and using the resources should accrue to the owner, and only to the owner, either directly or indirectly by sale to others.

    2. *Transferability* - All property rights should be transferable from one owner to another in a voluntary exchange.

    3. *Enforceability* - Property rights should be secure from involuntary seizure or encroachment by others.

Property Rights

- In your opinion, why are these characteristics (structure) of property rights promoting the market economy?

Resources classified by property rights regimes

- **Private-Property Resources**
    - Resources owned by individual privately.
    - In principle, private property rights should promote efficient use and sustainability of the resources because benefits and costs from owning and using the resource accrue to the owner, and only to the owner.
- **State-Property Regime**
    - Resources owned by states
    - Efficiency and sustainability problems in the management of the resources.

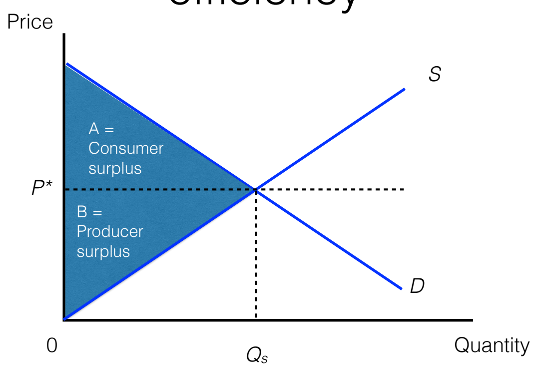
Resources classified by property rights regimes

- **Common-Property Regime**
  - Shared resources that are managed in common rather than privately.
  - Efficiency and sustainability of the management of the resource are varied.
- **Open-access Regime**
  - Resources that can be exploited on a first come, first served basis because no individual or group has the legal power to restrict access.
  - leads to the "Tragedy of the Commons" problem

Property Rights

- Is the private property the only regime that promote efficiency in resource allocation?

Market equilibrium: static efficiency



Efficient resource allocation

- Do you think that consumers and producers seek economic efficiency when they behave in the market?
- How do you think the market and the property rights system influence their behavior?

Market Failure and Efficiency

- Public Goods problem - discussed last week
- Externalities
- State failure

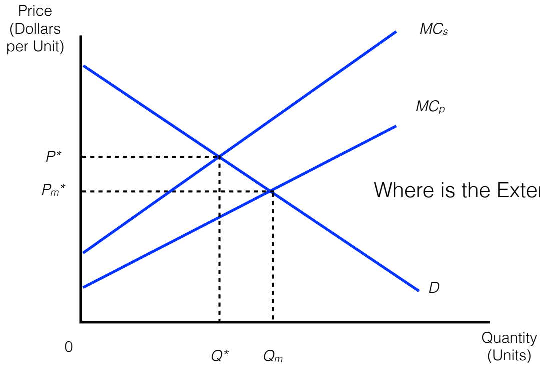
Market failure: Externalities

- What is the definition of ‘Externalities’?

Market failure: Externalities

- Example: A steel factory at water source vs a resort at the end of the river
  - Assumption: the two firms have different owner.
  - The steel factory uses the river as a sink for its waste.
  - The resort uses water for consumption, utility and recreation for their guests.
  - Because the factory does not receive any cost from the polluted water, the factory does not have any concerns regarding the problem and thus release polluted water into the river more than it should and affect the resort.

Market failure: Externalities



Where is the Externality?

Market failure: Externalities

- How do externalities problem relate to property rights?

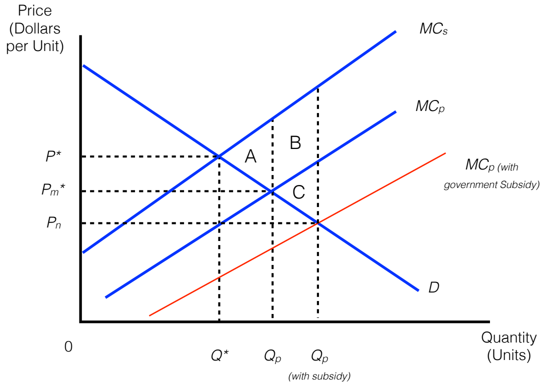
Government Failure

- Government and political process can be the cause of inefficiency in resource allocation.
- Providing wrong incentives is the root of the problem.
- Rent Seeking
- Examples
  - Producers seek protection from competitive pressures
  - Consumer groups seek price ceiling or special subsidies.
- Increase benefits of the interest group, lower the surplus to society as a whole.

Government Failure

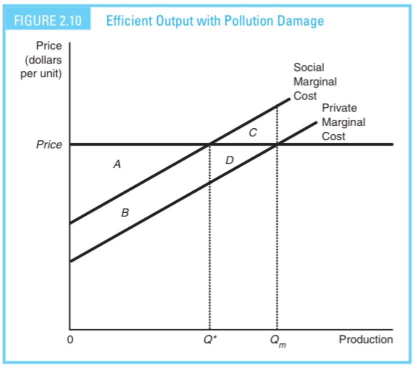
- Why, normally don't the losers rise up to protect their interests?
- Why voters (you?) remain ignorant to the problems?

Government Failure



The Pursuit of Efficiency

- Cautions:
  - Entering the realm of Normative Economics
  - Please be aware that solutions from economists are based on certain values that are aligned with ‘democracy’ and ‘capitalism’.



Source: Tietenberg & Lewis (2012), p.39

Private Resolution through negotiation

- Small number of affected party

- This is the case of the steel factory and the resort.
- Because the steel factory is at the water source, it controls the quality of water at the end of the river.
- What would the resort owner do if the goal is to motivate the steel factory to reduce its production from Q_m to Q*, thus, less water pollution?

The Pursuit of Efficiency

- <u>Question</u>
- Is it always the case that the affected party has to convince the other to reduce the externalities?

The Pursuit of Efficiency

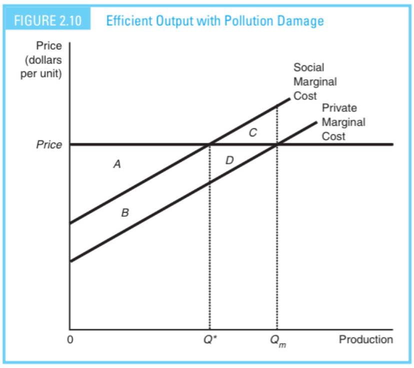
- The Courts: Property rules and Liability Rules
- The property rules
  - specify the initial allocation of the entitlement.
  - *In our case*: Conflicting entitlements - the right to add waste products to the river and the right to have an attractive river.
  - The court merely decides which right is preeminent and places an injunction against violating that right.
- In the absence of a court decision, the entitlement is naturally allocated to the party that can most easily seize it.

The Pursuit of Efficiency

- Coast Theorem - Ronald Coase (1960)
  - As long as negotiation costs are negligible and affected consumers can negotiate freely with each other (when the number of affected parties is small), the court could allocate the entitlement to *either* party, and an efficient allocation would result.
  - The only effet of the court's decision would be to change the distribution of surplus among the affected parties.

The Pursuit of Efficiency

- If the court decides that the entitlement of the resort, i.e. the right to attractive river, is preeminent, that means it is the factory that violates the right and has to negotiate with the resort in order to avoid injunction.
- What would happen if the factory negotiates with the resort?



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The Pursuit of Efficiency

- If the negotiation does work, then the 'Liability Rules'
  - The liability rules award monetary damages, after the fact, to the injured party.
  - The steel factory has to compensate the resort for all damages incurred: the area between two marginal cost curves from the origin to the chosen level of output.
  - Internalization of Externalities
- Limitation: High transaction costs

The Pursuit of Efficiency

- In your opinion, what are the limitations of options we have discussed?

Question

- Do you think the options to the pursuit of efficiency we discussed earlier are applicable to the case of Greater Mekong Subregion?