

**Department of Economics, University of Indonesia
Environmental and Natural Resource Economics**

Arianto A. Patunru

Property Rights, Externalities, Market Failure

**Readings: Tietenberg Ch.4; Hartwick and Olewiler Ch 6 and 7;
Randall Ch. 8 and 20; Coase JLE 1960**

Note: The following notes are the keypoints we shall cover in three sessions/classes. I will go over the intuition and rationale in the first session. If we're not done, I'll cover the rest in the first half of the second session. The remaining time will be devoted to translate what we have discussed into mathematics and/or graphs, so you can grasp and present them more systematically. In addition to the above readings, I suggest Ch 13 and 14 of Landsburg's *Price Theory & Applications*, 4th Ed. Many of these readings will be covered again in the Sessions 13, 14, and 15 of the course (see syllabus). Check updates up on my website.

- People trade because one party has **property rights** on something the other doesn't. Property right is the right to decide how the property shall be used.
- Property rights produce incentive to the beholder to produce and to maintain the property.
- Some things might be unowned. They are usually called common property. But, if no one owns a common property, it's just another way of saying everybody owns it. Everybody can use it, but no one feels responsible. Everybody has all the incentive to consume as much as possible today. This leads to the "tragedy of the commons". If property rights are clearly defined, the tragedy is unlikely. Why? If you own a forest land, you have the incentive to maintain and improve it with long term perspective. Who benefits? What if a property is owned by the state? Who really owns it?
- When an individual's action affect another person utility without proper compensation, **externality** problem arises. It can be either negative (you smoke next to me, I don't like the smoke, and you don't pay me anything) or positive (you sing next to me, I like the song and your voice, but I don't pay you anything). An external cost is a cost imposed on others. If it is instead counted as part of the source's private costs, than the "externality is internalized".
- Warning: Externality can go both ways. When I decide to play my stereo in the middle of the night, I impose an externality on my neighbor next door. The problem is solved if I asked for a permission beforehand, and he granted me. But note: When the neighbor decides to go to bed, while I am still listening to my stereo, and he demands a right to sleep in peace, he imposes an externality on me, no? How can he and me solve this problem? Read on.
- Warning: Do not be too quick in assigning whether somebody's action creates negative or positive externality. Because by definition, almost anything you do affect one or more other parties without any compensation involved. In other time,

- you might create *both* negative and positive externalities and they may cancel out (can you think of an example?)
- Technical: Market equilibrium is still at the crossing of supply- and demand curve. However, the market equilibrium is not socially optimal. The social optimum itself is at the intersection of supply curve and social benefit curve. The latter lies underneath the demand curve in the case of negative externality. So, the outcome is not (socially) efficient (do you remember the Fundamental Theorem of Welfare Economics?). This is what we call **market failure**. (The market fails to achieve socially desirable outcome).
 - Warning: do not confuse (market) “inefficiency” and “unfairness”.
 - Example: Think about pollution. Why is it called a “bad”, not a “good” in public’s eyes? How do you show a public good, instead, in a diagram? Where does the social benefit curve lie?
 - Coase Theorem. It doesn’t matter who pays whom, as long as the property rights are clearly defined. (You pay me if you want me to pollute less, or I pay you if I have to pollute more). Can you see now, why disrespecting property rights can be harmful?
 - So what are the solutions to the problems of externalities or public goods? If transaction costs are low, leave the parties alone. (Transaction costs arise when property rights are incomplete, free riding occurs, or behavior is not observable). Otherwise, the government may step in. Use tax for negative externality and subsidy for positive externality. What’s the new, possible danger? **Government failure**. This is called the “public good problems of government”. Who can solve it: market or government?
 - To think about: Imagine an economist-turned-developer. He builds a condominium and sells the units with a condition: every buyer should join the “condo association” with some extra fee. The association takes care of the apartment general maintenance. No tenant can paint his window without other tenant’s permission. How is this policy different with government coercion? Hint: Do you *have* to buy a unit in the apartment?
 - To think about: Do you notice that there are cotton buds “made by” Carrefour? Do you really believe they are made by Carrefour? But why do they use the generic brand? Hint: Information is in general a public good.