

Property Rights

Kolstad - Chapter 6

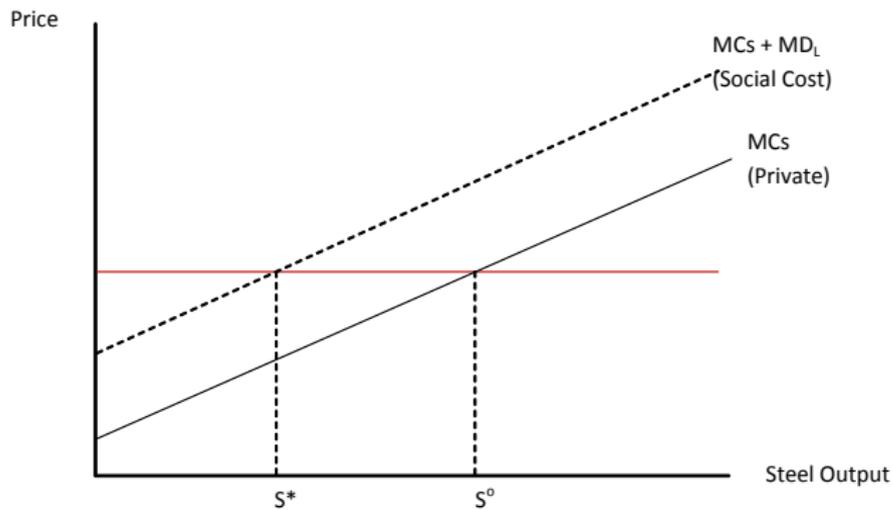
Introduction

- "The Polluter and the Victim": Who should have rights?
- It makes any difference who has the right to pollute?
- What is the correct amount of pollution?
- Assume:
 - 1 Steel mill produces steel, S , and Pollution emissions at a cost $C_s(S)$
 - 2 Laundry produces clean clothes, L , at a cost $C_L(L, S)$ and $C_L^s(\cdot) > 0$
 - 3 P_s price of steel and P_L price of laundry (they are fixed)
 - 4 Benchmark Case: How much to produce if we could internalize the externality? Simple way is to merge these firms!

$$\pi_m(S, L) = P_s S + P_L L - C_s(S) - C_L(L, S)$$



$$\max_{S,L} \pi_m(S, L)$$



- Assume a world in which some producers or consumers are subject to externalities generated by other producers or consumers. Further, assume:
- Everyone has perfect information
- Consumers and producers are price takers
- There is a costless court system for enforcing agreements
- Producers maximize profits and consumers max. utility
- There are no income or wealth effects
- There are NO transaction costs
- In this case initial assignment of PR regarding the externalities does not matter for efficiency. If any of these conditions does not hold, the initial assignment does matter!

- What is the relevance of the Core to the Coase Theorem?
- Failure is an empty core. Status quo prevails!
- Example:
- Suppose 3 firms: Laundry (L), Steel mill (S) and Railroad (R)
- Possible cooperative arrangements:

$$A_1 = \{R, S, L\} \quad A_2 = \{R, (S, L)\} \quad A_3 = \{(R, S), L\}$$

$$A_4 = \{(R, L), S\} \quad A_5 = \{(R, L, S)\}$$

Partition	Payoff	Description
A_1	$\{3, 8, 24\}$	Each firm acts independently
A_2	$\{3, 36\}$	Steel mill and laundry merge
A_3	$\{15, 24\}$	rail road and steel mill merge
A_4	$\{31, 8\}$	rail road and laundry merge
A_5	$\{40\}$	All three merge