Announcement ⇒ Cancel class for 2 weeks (Sep 7, 9, 14, 16)

Makeup class on

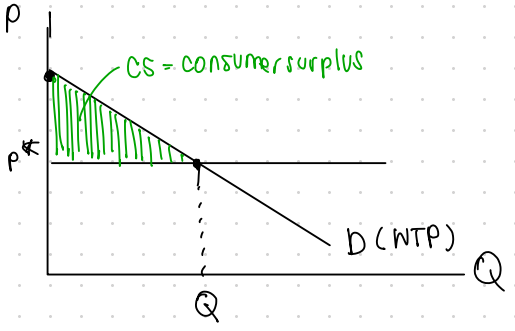
1. Thursday Aug 25 at 17:00 - 20:00 pm
2. Thursday Sep 22 at 17:00 - 20:00 pm

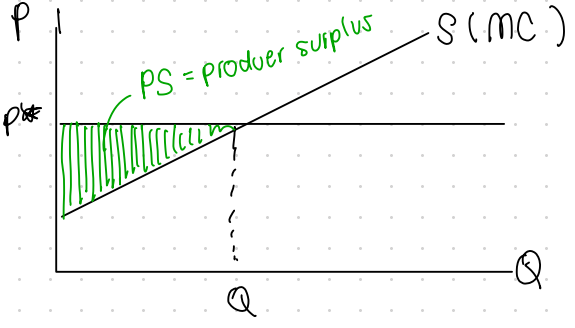
Recap. ⇒ Week 1 ⇒ Topic 1 + global warming case

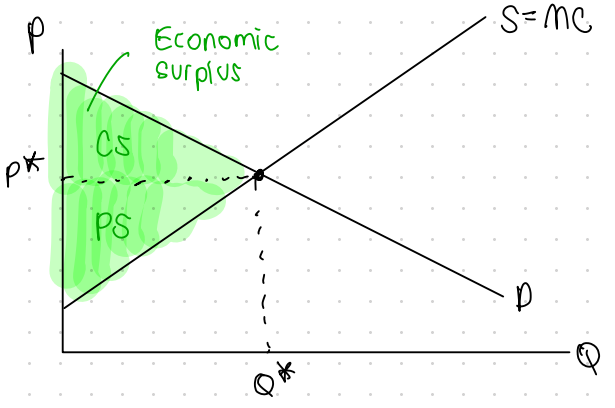
⇒ Assignment 1 due on this Sat Aug 20

Today ⇒ Week 2 ⇒ Topic 2 on Economic Approach.

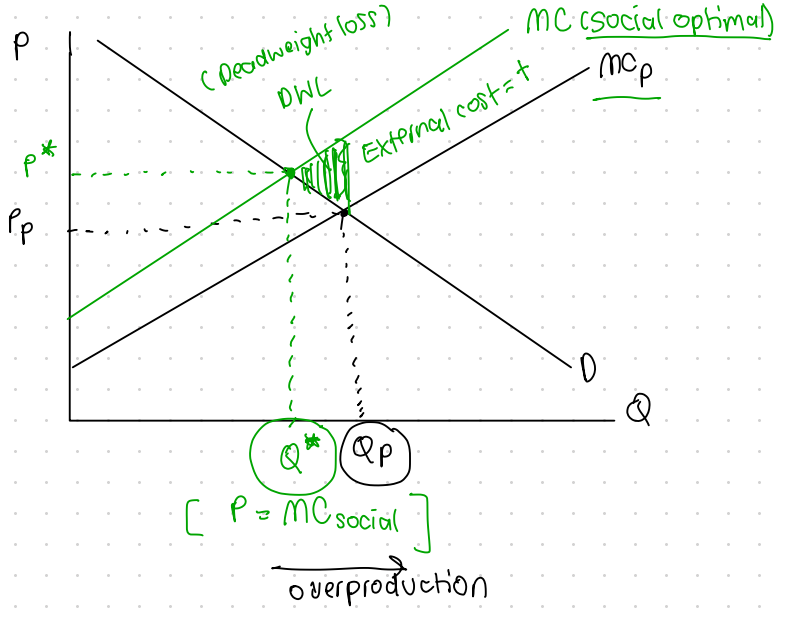
Consumer surplus (CS)



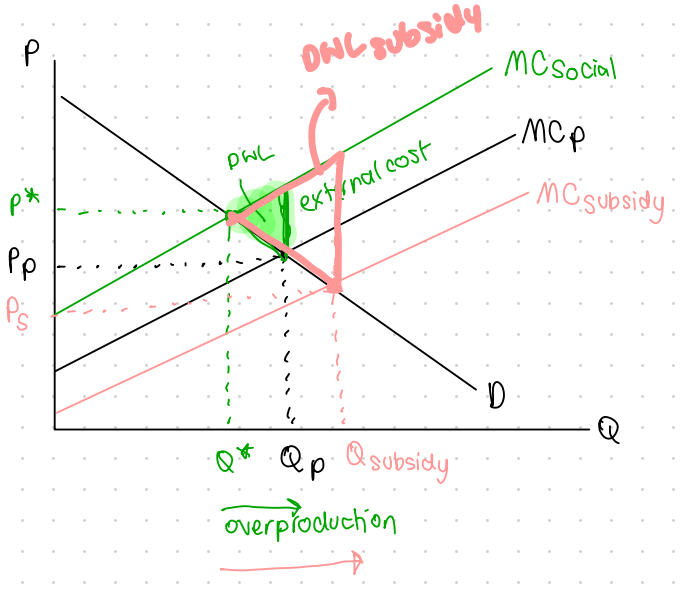




Example: A steel market and its external costs (production wastes into the river)



Steel market with subsidy from the government



Recap

Efficient market allocation

- → static efficiency (max. economic surplus : CS + PS)
- → competitive market (P = MC)
- → well-designed system of property rights

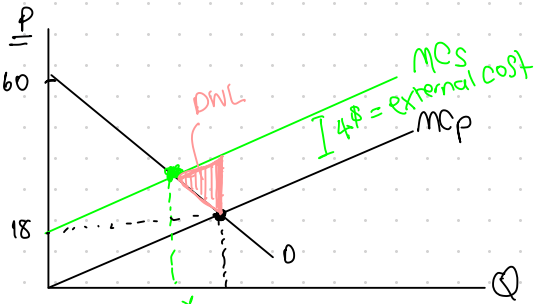
Sources of inefficiencies

- → market failure
- → Goverment failure
- → Public goods
- → Asymmetric information

Exercise

Demand : $P = 60 - 7Q$

Supply : $MC = 3Q$; Pollution cost = 4 $



$5.6 = Q^*$ $Q_p = 6$

Q1: Draw a graph showing demand curve, MC_P, MC_S

Q2: Find private equilibrium (P_p, Q_p) when externalities are ignored.

Q3: Find social optimal allocation (P^*, Q^*)

Q4: Calculate deadweight loss (DWL)

$P = MC_p$

$60 - 7Q = 3Q$

$Q_p = 6$

$P_p = 60 - 7(6) = 18$

$P = MC_S$

$60 - 7Q = 3Q + 4$

$Q^* = 5.6$

$P^* = 60 - 7(5.6) = 20.8$

↳ DWL $= \frac{1}{2} \times$ base $\times$ height

$= \frac{1}{2} \times 4 \times 0.4$

$= 0.8$