

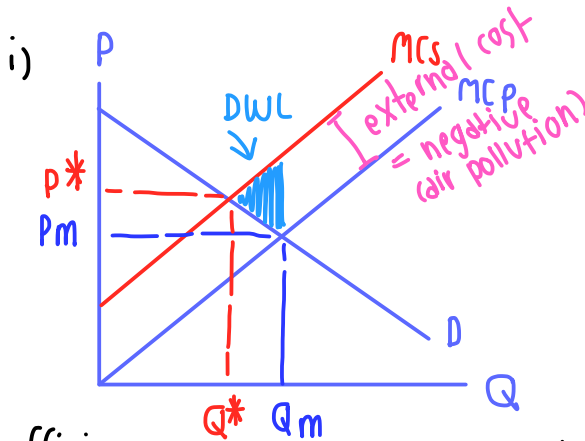
**Case A:** The production of a plastic factory 'K Chemical' is located nearby a house village 'Dreamland'. If the production of the plastic factory reaches a certain level at  $Q_m$ , it will release air pollutions to the level that destroy clean air around the Dreamland village. However, if the production of the plastic factory does not exceed  $Q_m$ , it will create no significant impact for people living in the Dreamland village.

**Case B:** In Thailand, the CO<sub>2</sub> emissions from oil consumption in transport sector increased from 51 million tons of CO<sub>2</sub> in 2008 to about 63 million tons of CO<sub>2</sub> in 2018.

Please answer the following questions for both Case A and Case B above

- Does an externality exist? If so, classify the externality type (e.g., positive vs. negative, costs vs. benefits) and explain how inefficiency problems could arise in this case.
- If an externality exists, could the Coase Theorem be applied to solve market inefficiencies in this case? Please explain your answer (Hint: is it possible to use property right rules and solve the problem?)
- If the Coase Theorem does not apply, what the government could do to solve the problem?

case a



<sup>negative</sup>  
Externality exist because it will release air pollutions (social costs or negative impacts) to the level that destroy clean air around the dreamland village.

The inefficiency problems can arise when the plastic factory has overproduction to maximize their benefits but the market price excludes the external social impacts.

- if there no negotiation plastic factory will produce in order to maximize their profit. **yes**, The Coase Theorem could be applied if property right is assigned to plastic company the cost is borne by village, vice versa.
- government can impose policies, regulations to restrict the production of plastic. (putting a cap)
  - putting a price
  - establishing rules.

case 2 same as case 1, but the Coase theorem can't be applied with this case!!

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## Question 2 (2 points)

Suppose an investor is considering a wind farm project to produce electricity. The wind farm will create noises that affect people living in a house village Dreamland.

- i. How could you estimate the compensation amount for people living in the Dreamland to approve the wind-farm construction? (Hint: Choose WTP vs. WTA question, methods to estimate WTP and WTA).
- ii. What should be considered in the cost-benefit analysis to decide if the wind farm project should be built or not?

i if wind farm have right  $\rightarrow$  WTA for  $\downarrow$  good  
no right  $\rightarrow$  WTP for  $\uparrow$  good  
use WTA to measures what compensation  
a person would accept to give sth up.!!

ii) CBA; use for make decision-making rule to decide that  
the wind farm project should be built or not.  
it will compare benefits and costs.

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