

Quiz 1

(5 points)

Time: 10 September 2021 at 15:00-15:30 (30 minutes)

There are 2 questions. You need to answer all questions. Please **submit** your answers in a PDF file with a file name “**Quiz1_StudentID_Name**” via BE Moodle class before **15:40**.

Question 1 (3 points)

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 CO₂ emissions from oil consumption in transport sector increased from 51 million tons of CO₂ in 2008 to about 63 million tons of CO₂ in 2018.

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

- i. 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.
- ii. 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?)
- iii. If the Coase Theorem does not apply, what the government could do to solve the problem?

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?

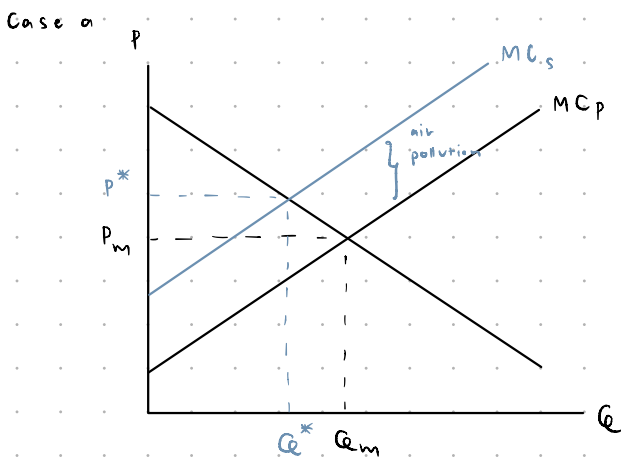
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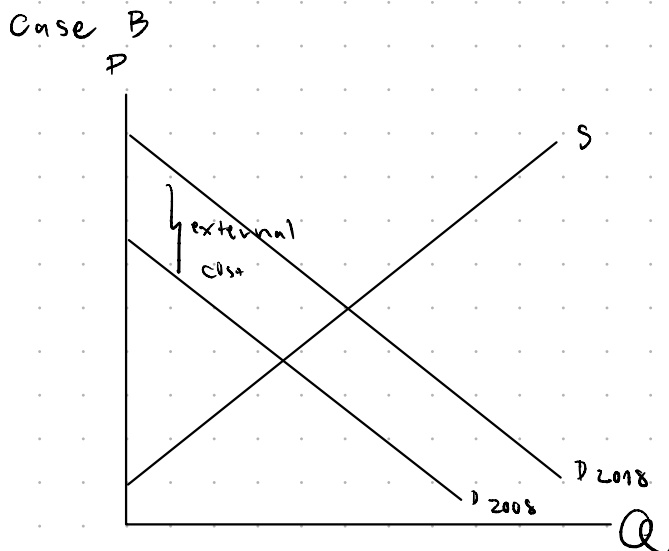
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i) An externalities which is an air pollution exists. It is a negative effect to the society. In this case, inefficiency problems could not arise because there is not exceed the production quantity Q_m .

ii) No, because there is an air pollution but no impact to the people who lives in the dreamland village

iii) Choose use establishing rules and putting price policy because when they impose tax on their production, they will reduce the production that can be reduce the pollution.



(i) Yes, because there is a pollution from the consumer consumption. It's a negative impact. It is arise because $D \uparrow \rightarrow S \uparrow$ also it's overproduction

(ii) there's a large population amount that is consume they cannot negotiate.

(iii) putting a price that impose tax on consumers.

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i) to estimate the compensation to the people who affected by this project, you have to ask for WTA question for the damage cost. The method to estimate WTA is CVM.

ii) Compared between cost and benefit by using net present value
if it's positive $\rightarrow$ invest
negative $\rightarrow$ not invest