

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?

Case A

- i) For case A, the externality is exist in negative. It cause a pollution in the area an it can effect to people in Dreamland village.
- ii) Yes, if the property right is assigned, the cost is borne by the resort. Damage cost and payment to reduce the level of damage.
- iii) The government can solve this problem by apply more strict rules to punish them and create a new rules to make people care more about environment.

Case B

- i) the externality is exist in negative. People are trend to use more resources and it will cause the global warming.
- ii) Yes, if the property right is assigned, the cost is borne by the resort. Damage cost and payment to reduce the level of damage.
- iii) The government can solve the problem by improve the transportation to be more eco-friendly.

Question 2

- i) Choose WTP to increase the environmental quality.
- iii) Use the 6 step of the cost-benefit analysis