

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?

Question 1

i) Case A is externality exist when the production exceed Q_m which can be classify as a negative externality because the resident of the Dreamland has to suffer from the emission. But the the production does not excess Q_m they will result in no effect to the resident. Case B is externality exist which is negative externality from the increasing use of oil created the increasing amount of CO_2 .

ii) In case A, we can use coase theorem can be use to solve market insufficient. Since the people can use property right to demand social cost

Case B, we can not use coase theorem.

ii) The government can imposed Putting put, Putting price, Estroblishing rule policie.

Question 2

i) we should compare both case for WTP and WTA

to know whether the project is worth value to be gain and loss based on an estimate of the utility gain or loss for individual

ii) We should use step to analyse CBA

1. Define project
2. Identify impacts of project
3. Value the impacts
4. Discount cost and flows to Present values
5. Apply the net present value