

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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i.) Case B : it has negative externality of air pollution that is harmful for environment and people around there. It happens because the corporation try to cut cost and increase the profit by operations and generate returns.

Positive : people have oil to use in daily life such as cooking, traveling

Case A : It has no effect of negative externality until excess the level of Q_m

Positive : plastic can provide more comfortable to people in society for using, shopping.

ii) Yes, by provide transaction cost to accept the agreement with other party and by using property rules to allocate the better market for both side without Government intervention. Both will receive efficient outcome.

iii) Government should restrict the production to reduce the environment problem by impose the tax or establish the rules and regulation. Also, provide law of using that product.

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i) measure the WTA to measure what compensation of people would accept to sell a good or service and to bear the negative externality.

It will decrease the environment quality in the society.

ii) We should calculate the cost-benefit to value the impact and approximate the value and cost. It can be the decision to make and forgo the project. We calculate by using the benefit minus the cost and find net present value of that policy.