EE375 Applied Economics for Natural Resources and Environment
Semester 1/2021 (August 9 - November 27, 2021)
Instructor: Dr. Supawan Saelim

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 Qm, 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 Qm, it will create no significant impact for people living in the Dreamland village.

Case B: In Thailand, the CO_2 emissions from oil consumption in transport sector increased from 51 million tons of CO_2 in 2008 to about 63 million tons of CO_2 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?

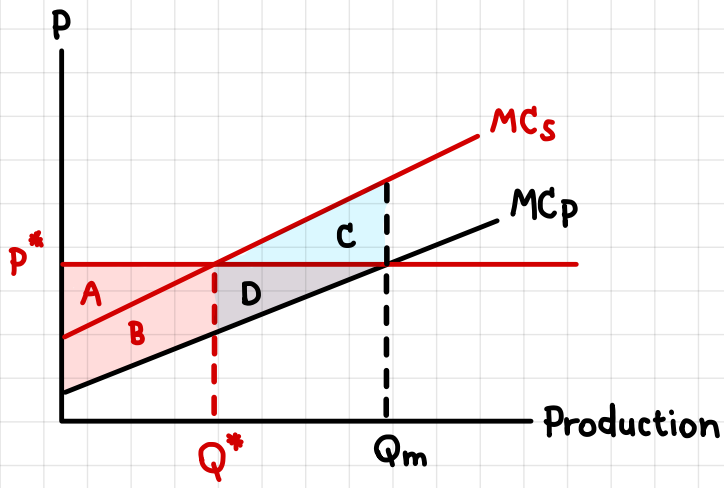
Q1

i) Case A => Negative b/c industries produce pollution to nearly area.

Yes, it would be negative external costs by the subsidization to the production of plastic rises pollution from increased plastic production.

Case B negative b/c CO_2 is increased

ii)



iii) Putting Price : Impose tax on a plastic

Putting a cap : Restrict pollution of plastic

Factory pay D+C

Plastic accept → R = A+B+C+D

not accept → R = A+B+D

Plastic compensate C+D

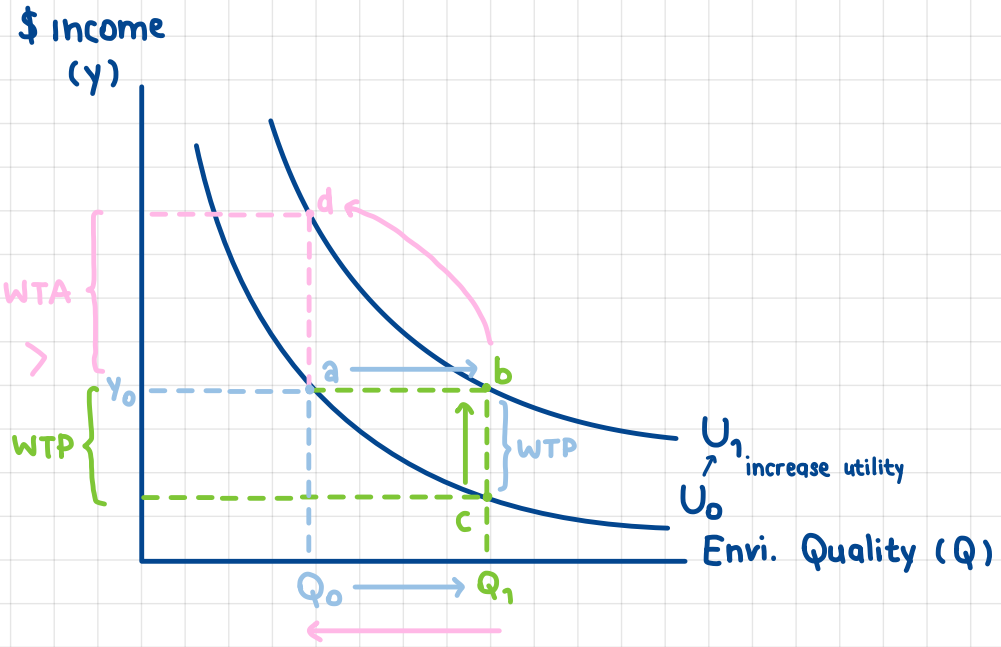
Economic surplus

= A with negotiation (better off)

= A-C without negotiation

Q2

i)



ii)-Stated - preference approaches

- Revealed - preference

- Other indirect methods

~~A~~ CVM, HPM, BT