Assignment 3
Assigned on Nov 9th, 2021. To be submitted on Nov 18th, 2021 before midnight.

Instructions

(1) Please read the instruction carefully. Also take this habit with you into the exam room.
(2) Please read each question carefully and answer the questions straightforwardly. Always provide economic reasons at lease a paragraph for your analysis, or a graph when necessary, even when the question does not indicate so.
(3) Handing and submitting assignments are only available via BE Moodle.

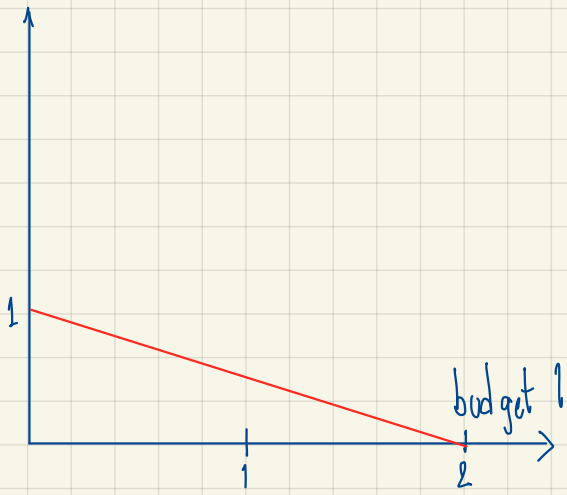
Answering the questions and preparing answer sheets

(1) Answers are to be handwritten, in either digital or analog form, in a blank canvas or any clean paper. Make sure that your handwriting is clearly visible and readable.
(2) There is no need to rewrite the question. Just indicate the question number clearly for each of the answer, such as 1.a).
(3) When done, for the digital case, collage all the pages into a single PDF file. For those who write on sheets of paper, take photo of all pages then convert all of them into a single PDF file as well.
(4) Name your PDF file as StudentID_YourNickname, such as 640123456_Bo.

Submitting your answers

(1) Make sure your file does not exceed 10MB. This is the maximum file size for BE Moodle upload.
(2) Login to BE Moodle, head into the course, then the assignment topic.
(3) Choose your file to submit. Done. There will be timestamp for your upload date and time, so please make sure to not submit later than that.

1a.

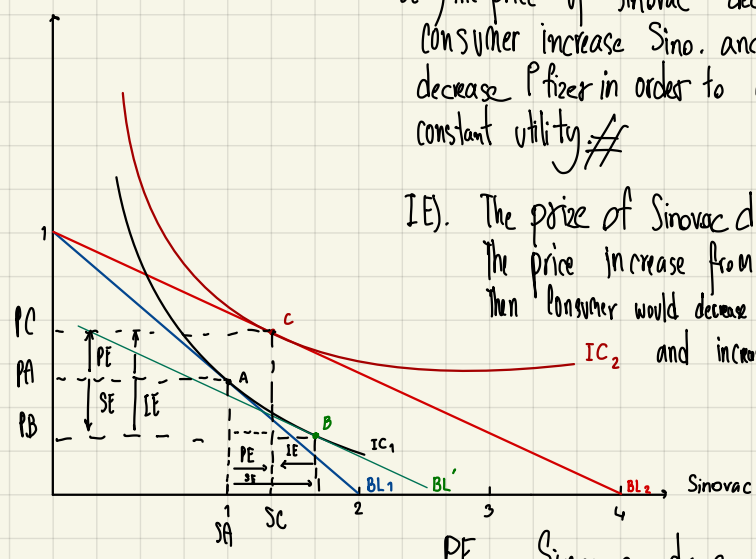


Pfizer : cost 40 $
Sinovac : cost 20 $

Consumer has 40 $
40 = 40P + 20S
only Pfizer 40 = 40 P P = 1.
only Sinovac 40 = 20 S 2 = 2.

∴ Suppose that Pfizer and Sinovac not Perfect substitute. Then the Ic indifference convex slope.

1b. Pfizer.

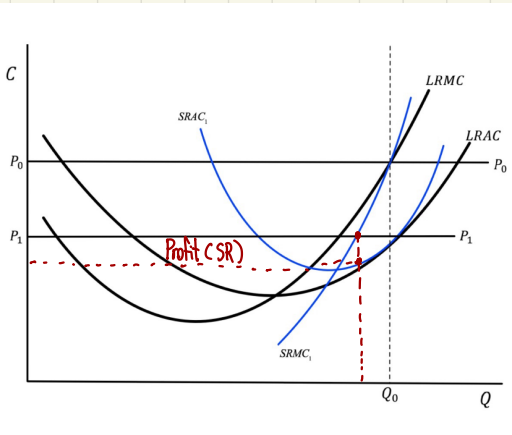


SE.) The price of Sinovac decline Consumer increase Sino. and decrease Pfizer in order to get the constant utility #

IE). The price of Sinovac drop power of buying The price increase from BL1 to BL2. Then Consumer would decrease Sinovac as interior good. IC_2 and increase Pfizer #.

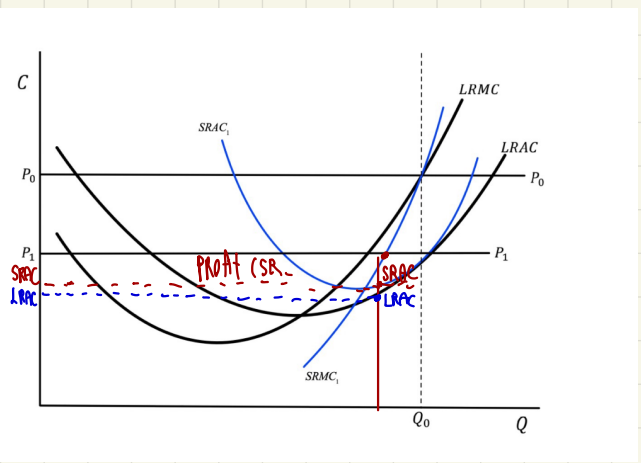
PE. Sinovac drop, consumer increase.

2a).



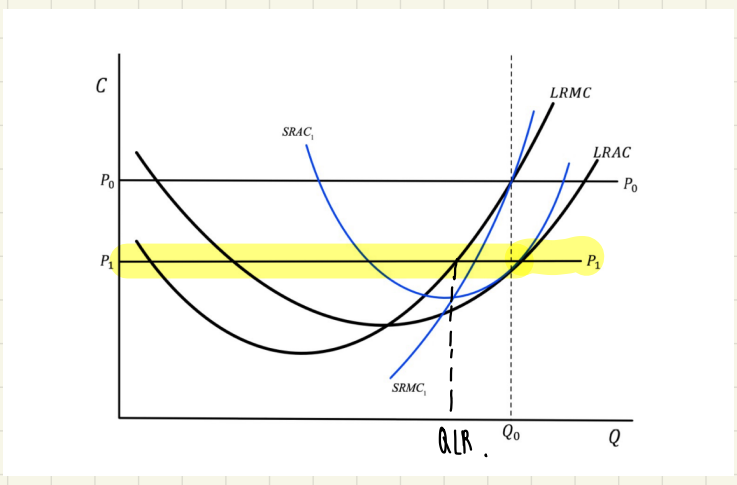
Max π: MR = MC $P_1 = SRMC_1$
$\pi_{SR} = (P_1 - SRA) \cdot Q_1^*$

2b.

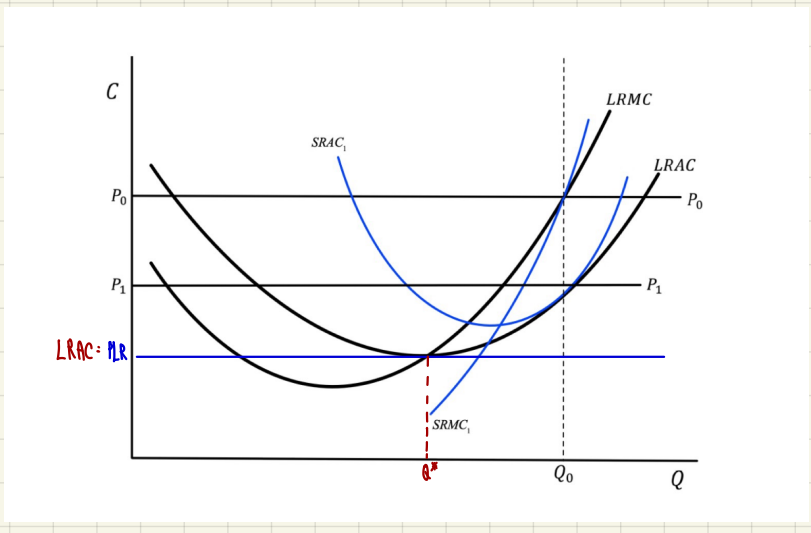


$\pi_{SR} = (P_1 - SRAC) \times Q_1$.
$\pi_{LR} = (P_1 - LRAC) \times Q_1$.
due to LRAC < SRAC
$\pi_{LR} > \pi_{SR}$ #

2c.)

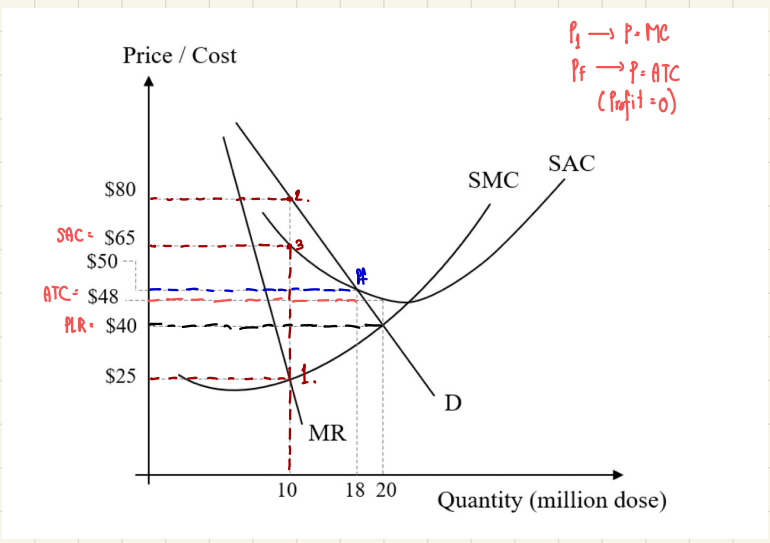


QLR is Q* at P_1
LR equilibrium at P_1
$P_1 = LRMC$.



Q* when there is no new sellers enters.
LR equilibrium
$P^*_{LR} = LRMC$
Min LRAC.

3.)



$P_1 \rightarrow P = MC$
$P_F \rightarrow P = ATC$ (Profit = 0)

3a.) Q^*_m = 10 million doses
P^*_m = 80$ per doses

3.b) π = (80 - 65) · 10 = 150 $ million

3.c) Q^*_m = 18 million doses
P^*_P = 50$ per dose

3d. When government need Q^* = 20 m. doses, monopoly faces loss in order to create incentive for monopoly
Subsidize (ATC - P) × Q* → (48 - 40) × 20 160 $ million #