Chonchanok Keardjam
6304640235

EE211 Assignment #1 (2/2020)

Instructions:

- Assigned date is Thursday the 18th, Feb 2021. Due date is Thursday the 25th, Feb 2021 before class at 08.00 AM.
- Submission is only received through BE Moodle platform as PDF file.
- Name your file as StudentID_nickname, such as 1234567489_Bo.
- There is no need to rewrite the question into your answer sheets, however, indicate clearly question and item number.
- Write your nickname and student ID on top-right corner of the first page.
- For those who do not have a digital device to write on, you can write your answers in sheets of paper, take pictures, convert them to PDF and merge them into a single file.

---

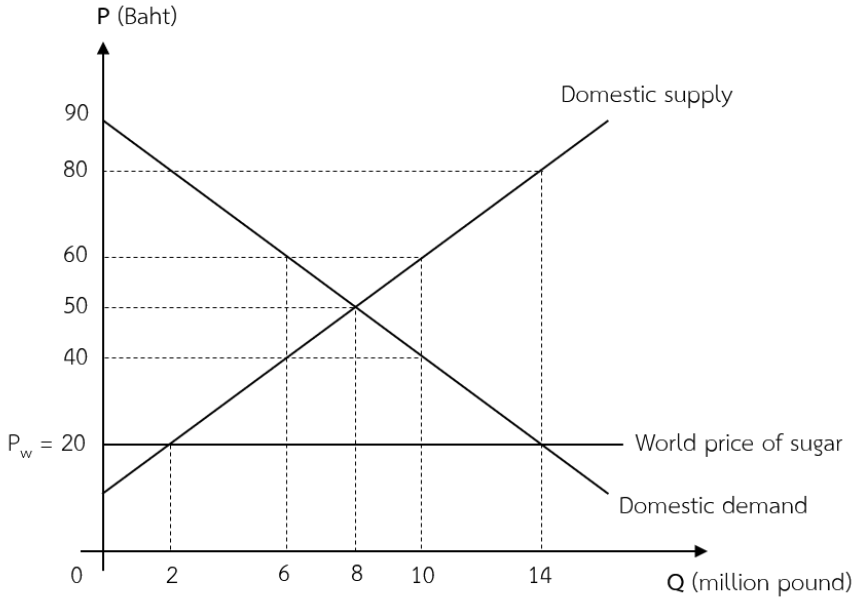
1. Suppose that a baker can produce muffins and cupcakes. If she uses all her resources on producing muffins, she can bake 120 muffins. If she produces only cupcakes, she can bake 100 cupcakes.

(a) Draw the Production Possibility Curve of this baker, where the x-axis represents the quantity of muffins and y-axis represents the quantity of cupcakes. Assume that the PPC is a straight line. What is the opportunity cost of each cupcake?

(b) With her available resources, can this baker make 60 cupcakes and 50 muffins? Justify your answer.

(X) If the baker learns a new technique and now the maximum quantity of muffins she can produce is 150 muffins, while the maximum quantity of cupcakes she can produce is still 100 cupcakes, *ceteris paribus*. Will the opportunity cost of each cupcake increase or decrease, and by what amount? Illustrate the change of the Production Possibility Curve of this baker.

2. Supposed that sugar is traded freely in the world market, Thai people consume domestically produced sugar while the rest is imported. Given that world market price is 20 baht per pound and the government decides to set domestic ceiling price equally to the world price, below graph shows domestic demand, supply and world price level. Answer the following questions.



(a) Supposed that Thailand takes world price, how many pounds of sugar is imported at the world price level?

(b) If the government further decides to collect an import unit tax of 20 baht per pound and the price after tax becomes 40 baht per pound,

(c) How much of the sugar is domestically produced in Thailand after tax?

(d) After the import tax is imposed, compute the change in consumer surplus. Also highlight the change in consumer surplus in the provided graph. Are the domestic consumers better off or worse off? Clearly explain your answer.

(e) Compute the government revenue from the import tax and identify its area in the provided graph. Clearly explain why the area identified above represents the government revenue from the import tax.

3. Suppose that the quantity demanded for sweetened green tea at Thammasat University is 5,000 bottles per month at the price 20 baht per bottle. Suppose further that the university imposes an excise tax of 5 baht per bottle so that the new price is 25 baht per bottle. At this new price, the quantity demanded drops to 3,000 bottles per month.

(a) Use POINT elasticity to calculate the price elasticity of demand at the NEW price.

(b) Without any calculation, would the total sale revenue from selling sweetened green tea at Thammasat University decrease or increase? Explain by using the concept of price elasticity of demand.

(c) Suppose that, as a result of imposing this tax on green tea, the quantity demanded for "Super Drink" increases from 2,500 to 3,000 bottles per month, all else constant. Calculate the cross-price elasticity of demand for "Super Drink", with respect to the price of sweetened green tea.

(d) From part (c), are sweetened green tea and Super Drink complements or substitutes? Explain.

4. Consider a liquor market in a country, answer the following questions. If you have any specific assumption, please state them clearly within each item.

(a) Supposed that a Health Foundation which is an independent organization decides to put up a campaign showing how bad can alcoholic beverages affect health condition in long-term through several big billboards, what do you think will happen to this market, equilibrium price and quantity. Support your claim with economic reasoning.

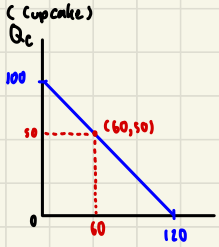
(b) If the government decides to collect unit tax on sellers, show that how would this affects equilibrium price and quantity. Provide a clear explanation with support of a diagram.

(c) There are two groups of liquor consumers: the alcoholic and the occasional drinkers. Does the unit tax affect both groups the same or differently. Provide a clear explanation with support of diagrams.

****

1. Suppose that a baker can produce muffins and cupcakes. If she uses all her resources on producing muffins, she can bake 120 muffins. If she produces only cupcakes, she can bake 100 cupcakes.

(A)



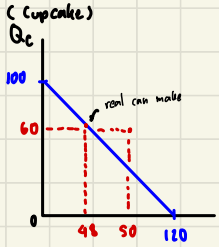
Opportunity cost = $-\frac{\Delta Y}{\Delta X}$

(0, 100) → (50, 60) make 50 cupcake will lost 60 muffin

∴ make 1 cupcake will lost 1.2 muffin

Ans Opportunity cost for each cupcake is 1.2 ✱

(B)



from (A)

cupcake ↑ 1 muffin ↓ 1.2

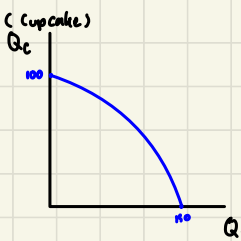
then cupcake ↑ 10 muffin ↓ 12

∴ Make cupcake 50 can make 60 muffin

Make cupcake 60 can make 48 muffin

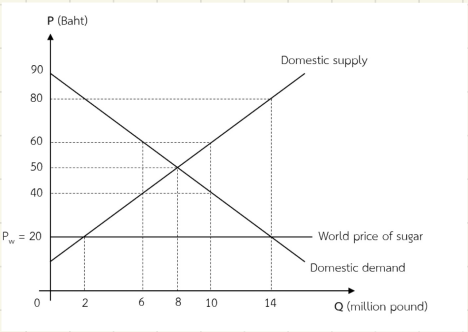
Ans She can't make 50 muffin if she make 60 cupcake ✱

(X)



Ans When the baker produce maximum amount of muffins to 150 the opportunity cost of each cupcake increasing from 1.2 → 1.5. Its means POP of muffin and cupcake is imperfect substitutes. ✱

2. Supposed that sugar is traded freely in the world market, Thai people consume domestically produced sugar while the rest is imported. Given that world market price is 20 baht per pound and the government decides to set domestic ceiling price equally to the world price, below graph shows domestic demand, supply and world price level. Answer the following questions.

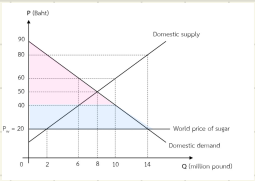


(A) At this price, Thailand supplier are willing to supply sugar at 2 million pound. However, at this price Thai consumer demand for sugar at 14 million pound. So the cost of sugar need to be imports for 12 million pound. #

(B) After the tax policy is implement. Price after tax is at 40 baht per pounds. Its will make a higher price # encourage supplier to supply more.

(C) The sugar is domestically produced increas the quantity supply from 2 million pound to 6 million pound. #

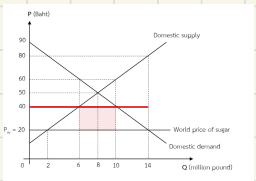
(D)



Before the tax imposed
After the tax imposed

It's a worse off in domestic consumers bc: consumer are forced to pay more when purchasing sugar from abroad. some might not be able to purchased. If willingness to pay is lower than 40 b/p. #

(E)



The price after tax of sugar is 40 b/p. The graph will show that the domestic supply of sugar is 6 million pound. However, the quantity demand for 40 baht is 10 million pound It show that apart from 6 million pound from domestic supplier. The rest 4 million need to be import from abroad. If the govt import tax is 20 b/p the govt revenue would be

4 x 20 = 80 million baht #

3. Suppose that the quantity demanded for sweetened green tea at Thammasat University is 5,000 bottles per month at the price 20 baht per bottle. Suppose further that the university imposes an excise tax of 5 baht per bottle so that the new price is 25 baht per bottle. At this new price, the quantity demanded drops to 3,000 bottles per month.

(A) point elasticity of demand $= \frac{P}{Q} \cdot \frac{\Delta Q}{\Delta P}$

$= \frac{25}{3000} \cdot \frac{5000 - 3000}{20 - 25}$ (Q_2, Q_1, P_2, P_1)

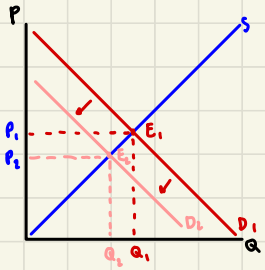
$= \frac{-10}{3}$ ✱

(B) The total revenue from selling sweetened green tea will decrease.
BC: The new price elasticity of demand is >1 It is an elastic demand so when price↑ the total revenue↓. ✱

(D) Sweetend green tea and Super drink are considered as substitude goods because when Sweetened green tea price↑ people would buy Super drink. ✱

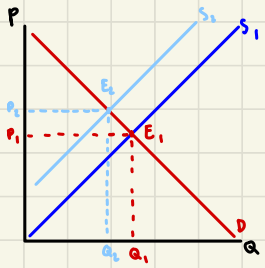
4. Consider a liquor market in a country, answer the following questions. If you have any specific assumption, please state them clearly within each item.

(A)



The campaign showing how bad can alcoholic beverages affect health. Then some people might drink less or stop drink the alcohol which will shift demand left. Price ↓ from P_1 to P_2. Qd ↓ from Q_1 to Q_2. Then the new equilibrium market is E_2. ✱

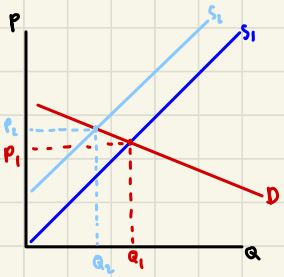
(B)



The gout decides to collect unit tax on sellers. The cost of production will increase. Supplier can supply less so It will shift the supply curve to left. The prices ↑ from P_1 to P_2 higher prices reduces the Qd from Q_1 to Q_2. The market equilibirum price and Qd is now at E_2

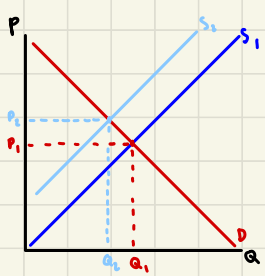
(C)

Elastic demand



Ocansional drinkers: The demand is will be elastic because they don't to consider acholic beverages as necessity goods. Even when the price are increase it doesn't effect on them because they can stop drinking.

Inelastic demand



Alcoholic drinkers: The demand is will be inelastic because they consider alcoholic as necessity goods. So when the price of alcohol is increases they still buy its.