EE211 : Assignment 1

Tuesday, 23 February 2021 9:40 PM

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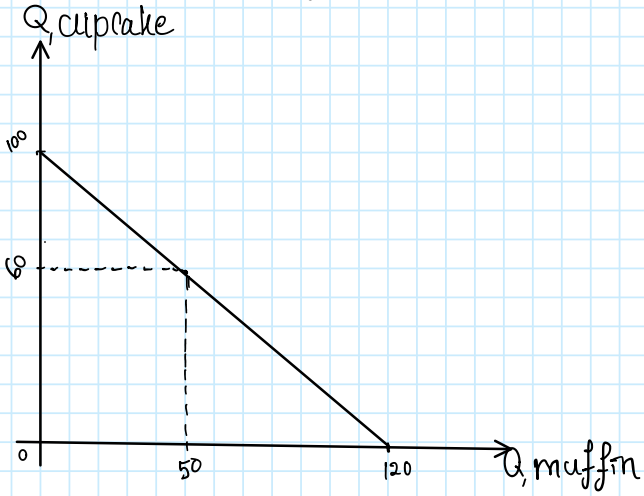
Solution

1. (a). Draw the PPC of this baker :



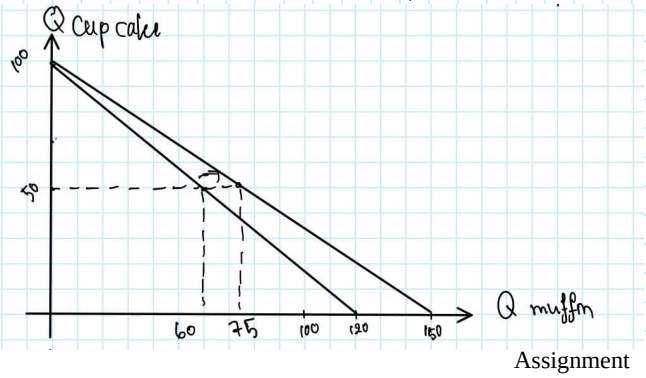
The opportunity cost of each cupcake is $\frac{120}{100} = 1.2$

(b). Yes, this baker can make 60 cupcakes and 50 muffin as we can see in the graph because PPC is a straight line.

(X). if the baker can produce 150 muffin, while the maximum quantity of the cupcakes is still 100 :

The OC of each cupcake is $\frac{150}{100} = 1.5$ => it is higher than before.

Thus, the OC of each cupcake increase by $1.5 - 1.2 = 0.3$



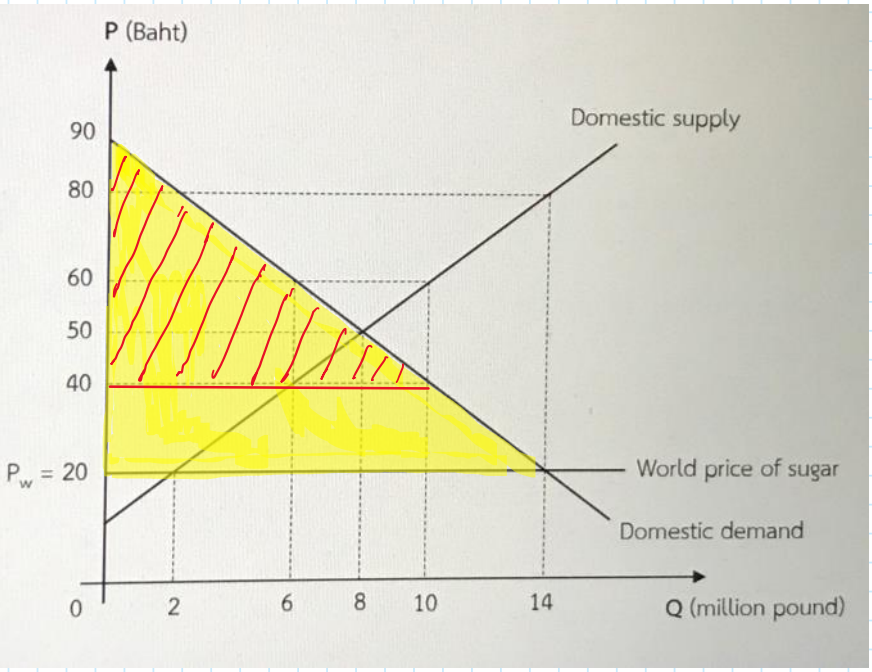
2. (a). How many pounds of sugar is imported at the world price level:

If Thailand takes world price; there will be 12 million pounds of sugar is imported because Domestic supply is 2 million pounds & Domestic demand is 14 million.

(b).

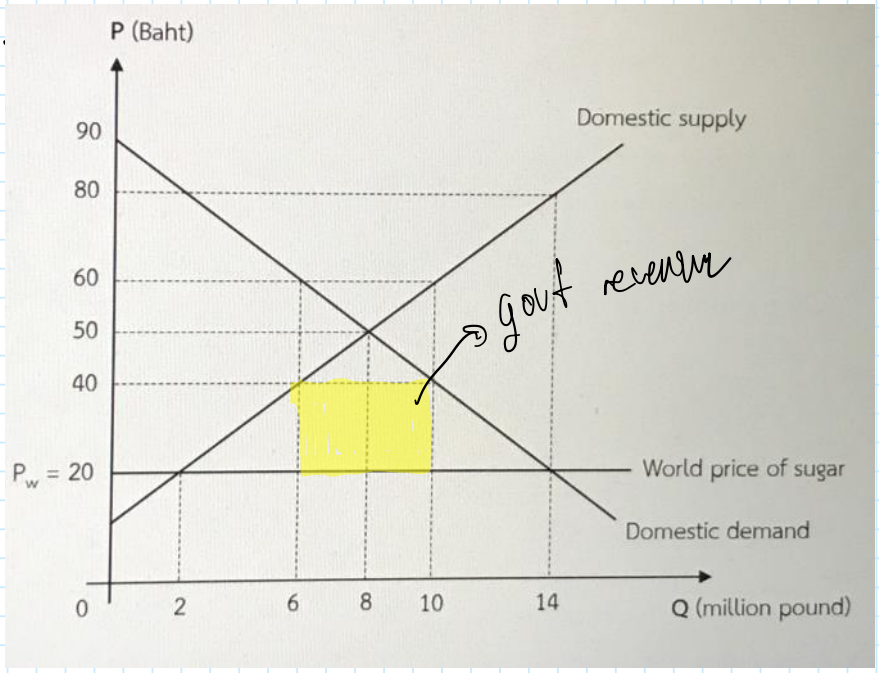
(c). There will be 6 million pounds of sugar is domestically produced in Thailand after tax

(d).



After the tax is imposed, the consumer surplus change from yellow to striped yellow. This illustrate that domestic are worse off, since the price now is high.

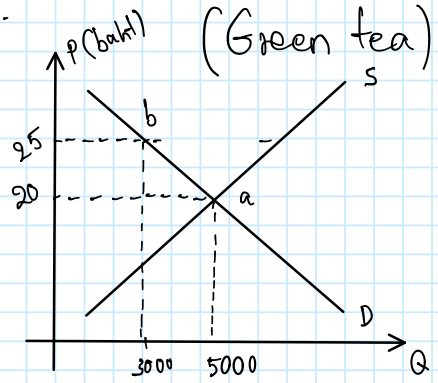
(e).



$Tx(Q_T - Q_S) = 20 \times (10 - 6) = 80$ million baht.

They have to import 4 millions pound since there are 6 million of domestic supply and quantity demand of 40 baht sugar is 10 million so they will have to imported.

3. (a).

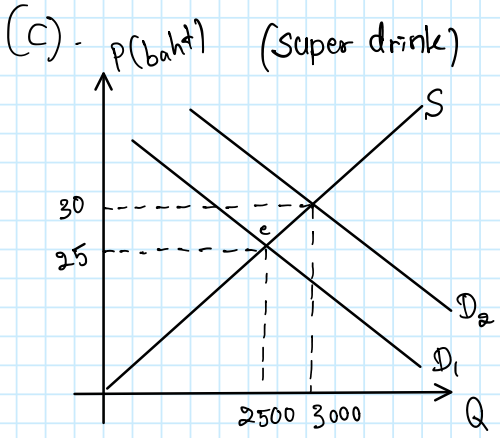


$$E_{d(b)} = \frac{P}{Q} \cdot \frac{Q_a - Q_b}{P_a - P_b} = \frac{25}{3000} \cdot \frac{5000-3000}{20-25} = \frac{1}{120}(-400) = -3.33$$

(b).

Since Ed= 3.33>1 which mean green tea demand is elastic.
*Price elasticity : Price goes up, Total revenue goes down.

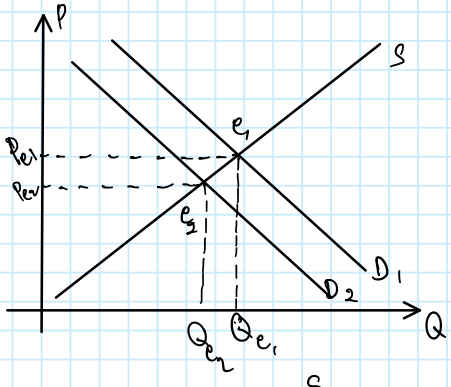
Therefore, TR from selling green tea will decreases.

(c). 

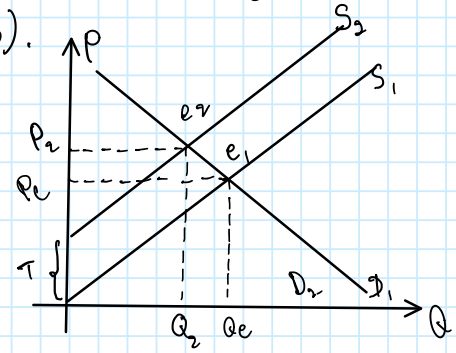
$$\varepsilon_c = \frac{P^b}{Q^a} \cdot \frac{Q_2^a - Q_1^a}{P_2^b - P_1^b} = \frac{20}{2500} \cdot \frac{3600 - 2500}{25 - 20} = 0.8$$

Thus, CPD for "super drink", with respect to the price of "sweetened Green tea" is 0.8.

(d). from part (c), sweetened green tea and Super drink are substitutes because green tea & Super drink are the beverage and when price of green tea goes up the quantity demand of super drink goes up.

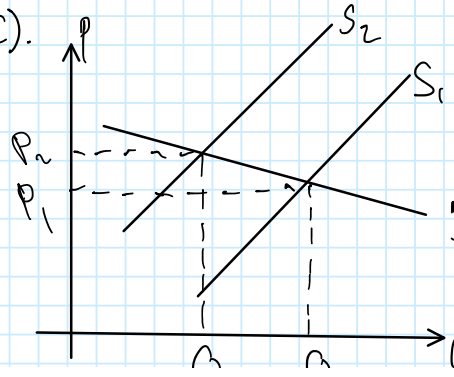
4. (a). 

Personally, I think the demand of the liquor will be slightly drop due to a campaign and equilibrium price & demand will fall down. from P_{e_1} to P_{e_2} and Q_{e_1} to Q_{e_2} and have new equilibrium price and quantity at e_2.

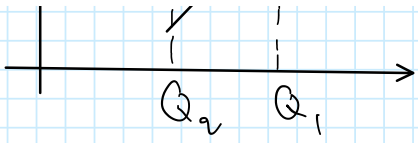
(b). 

I think the demand will goes down & price will goes up due to the tax. As you can observed on the diagram, the price goes up from P_e to P_2 and decrease from Q_e to Q_2

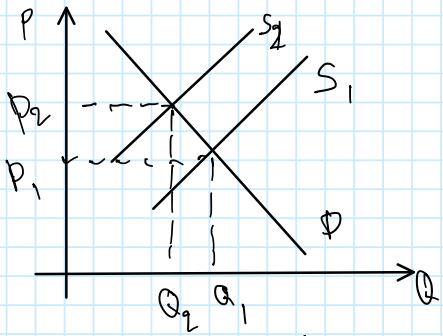
Thus, the new equilibrium price and quantity is at e_2.

(c). 

Occasional drinkers: It will be elastic demand because it is not really needed for them and they can find the substitude goods when the price goes up due to



Elastic demand
(Occasional drinkers)



Inelastic demand
(Alcoholic drinkers)

they can find the substitude goods when the price goes up due to the tax so they will not affect too much on them.

Alcoholic drinkers: It will be inelastic demand for them because they are addicted. And even though the price goes up, they still willing to buy. Thus, when the price goes up due to the tax so they will affect. The buyers hold larger tax burden compared to the sellers.