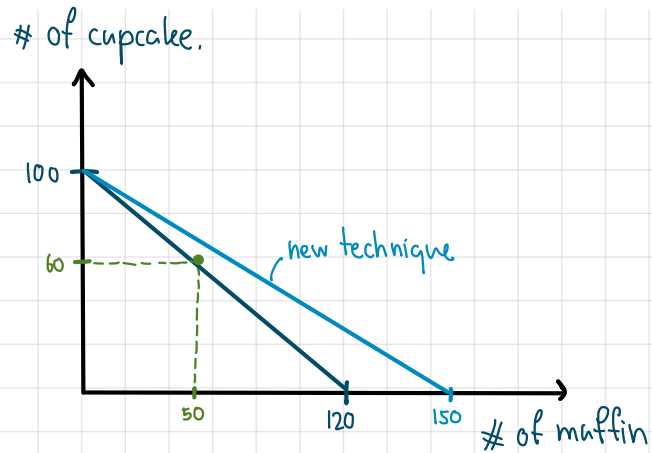


1. Suppose that a baker can produce muffins and cupcakes. If she uses all her resources on producing muffins, she can bake 120 muffins. If she produces only cupcakes, she can bake 100 cupcakes.

(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?



(a) As the PPC is a straight line, opportunity cost is the same for every unit at \therefore opportunity cost for each cupcake is 1.2 unit of muffins.
 $100 \text{ cupcake} = 120 \text{ muffin.}$
 $1 \text{ cupcake} = 1.2 \text{ muffin}$

(b) With available resources, if baker make 60 cupcakes the remain resources can make only 48 muffins.

$$y - y_0 = m(x - x_0)$$

$$y = \frac{\Delta Y}{\Delta X} (x - 120)$$

$$y = \frac{-100}{120} (x - 120)$$

$$60 = \frac{-100}{120} (x - 120)$$

$$x = 48$$

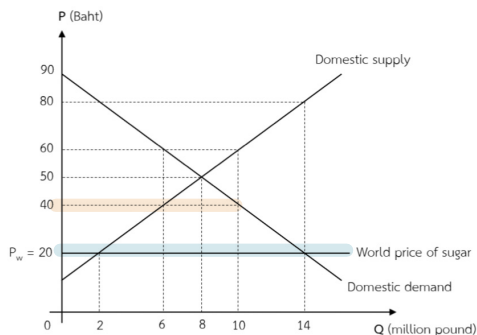
\therefore 60 cupcakes & 50 muffins is infeasible choice.

(c) If the baker learns new technique, the opportunity cost will be increase. because in every unit of cupcake produce, the more amount of muffin can't be produce. The opportunity cost for 1 cupcake with new technique is

$$100 \text{ cupcake} = 150 \text{ muffin}$$

$$1 \text{ cupcake} = 1.5 \text{ muffin.}$$

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?

(a) At world price, the quantity of domestic supply and quantity of domestic demand is not in equilibrium. The quantity of domestic supply is 2 million pounds but the quantity of domestic demand is much higher at 14 million pounds. So to have enough sugar for quantity demanded, 12 million pounds of sugar is imported.

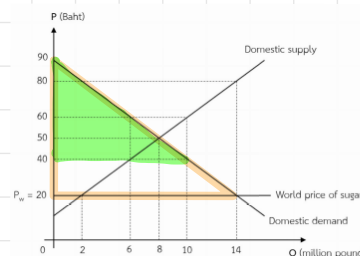
(b) If the government further decides to collect an import unit tax of 20 baht per pound and the price after tax becomes 40 baht per pound,

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

(c) Due to higher price of sugar at 40 baht per pound, seller will willing to sell in higher amount at 6 million pounds

(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.

(d)

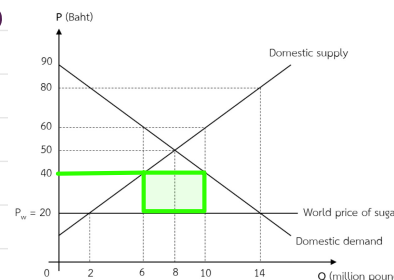


After the import tax is imposed, customer surplus is change in to the area above 40 baht that highlight in green that reduce from before tax is imposed in orange area.

After tax is imposed, the domestic customer are worse off because they have to pay more for same amount of sugar. That make some customer lose their willingness to pay at 40 baht per pound.

(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.

(e)



government revenue from import tax come from amount of import sugar multiple with tax per unit that's 20 baht per pound. By tax added price at 40 baht per pound, quantity of domestic supply is at 6 million pounds but quantity of domestic demand still higher at 10 million pounds. So the exceed amount of quantity of domestic demand is imported for 4 million pounds

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.

$$\begin{aligned} \epsilon_d &= \frac{\Delta Q}{\Delta P} \times \frac{P_1}{Q_1} \\ &= \frac{5000-3000}{20-25} \times \frac{25}{3000} \\ &= -3.33 \end{aligned}$$

(b) elastic product because $|\epsilon_d| > 1$
 ↓
 decreasing percentage of Q_d is more than increasing percentage in Price.

(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.

$$\begin{aligned} \epsilon_c &= \frac{\% \text{ change in quantity demand}}{\% \text{ change in another commodity price}} = \frac{\% \Delta Q_d^a}{\% \Delta P^b} \\ &= \frac{3000-2500}{25-20} \times \frac{20}{2500} = 0.8 \end{aligned}$$

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

Sweetened green tea and Super Drink is substitutes goods because when price of green tea increase, quantity demanded for super drink increase. It means that if customer don't want to buy sweetened - green tea, they can buy Super Drink instead.

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.

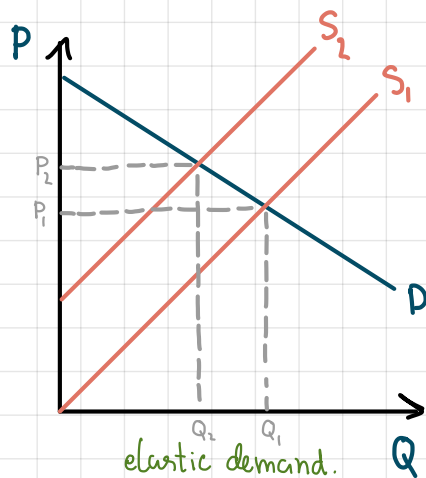
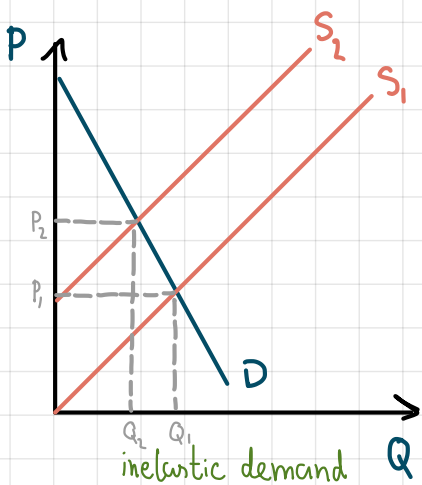
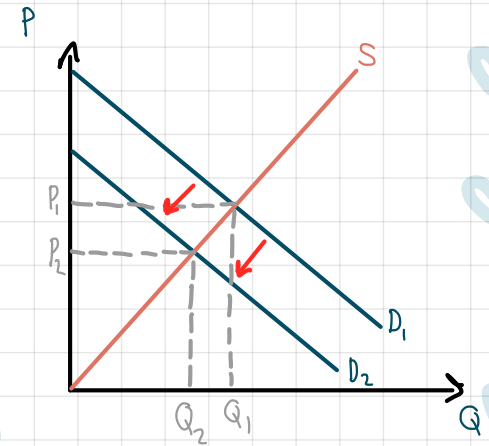
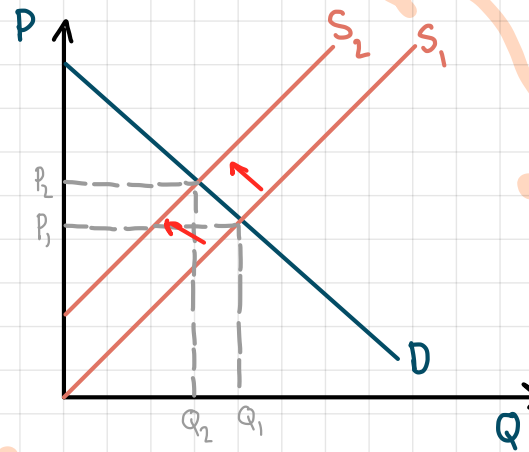
(a) Supposed that a Health Foundation which is an independent organization decides to put up a campaign showing how bad can alcoholic beverages affect health condition in long-term through several big billboards, what do you think will happen to this market, equilibrium price and quantity. Support your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

(b) Collecting tax on seller will increase cost of production more. So it will reduce quantity of supply into S_2 . To reach equilibrium, the price need to be higher due to new supply curve and decrease quantity of demand.

(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.

(a) Despite of the campaign, people who concern about their health will decrease consuming alcoholic beverages. That make quantity of demand also decrease. To make alcoholic beverages being in equilibrium, the price need to adjust by decrease to reach equilibrium point in lower demand.



- For the alcoholic, alcoholic beverages is necessary product so liquor will be inelastic product for them. If there are tax policy, it would not affect this group a lot.
- For the occasional drinker, alcoholic beverages is not necessary product so liquor will be elastic product. If there are tax policy, it will cause this group to consume a lot lower.