

Exercise 1

1. You are considering the number of hamburgers that you plan to order. Based on the following table, complete the table and answer the following questions.
 - a. How many units of hamburgers should you order? Why?
 - b. Suppose you decide to order 2 hamburgers. Is this underallocation or overallocation? Explain. How much is your deadweight loss?
 - c. Suppose you decide to order 5 hamburgers. Is this underallocation or overallocation? Explain. How much is your deadweight loss?

Quantity	Total Benefit	Marginal Benefit	Total Cost	Marginal Cost	Total Net Benefit
1 st	80	80	20	20	60
2 nd	140	60	40	20	100
3 rd	180	40	60	20	120
4 th	200	20	80	20	120
5 th	200	0	100	20	100

2. With diagrams, explain the differences between tariff and quota. Also, explain the impact on domestic stakeholders (consumers, producers, and government), i.e., who is better off and who is worse off? Why?
3. Consider an exporting country. Analyze welfare effect on all stakeholders when its government impose "Export Tax", i.e., per-unit tax imposed on the exported good. Draw a diagram(s) and provide complete analysis on who gain(s) and who lose(s).
4. A "small", open economy is engaging in international trade. Its domestic demand curve is given by $P = 100 - Q$ and its domestic supply curve is given by $P = Q$. The world price of the good is 20\$. Answer the following questions.
 - a. What does it mean for a country to be "small"? What implication of being "small" has on the world supply curve?
 - b. Is this economy either an exporting or important country? Why? How many units of the goods is the country is currently importing or exporting?
 - c. Now suppose the government decides to intervene. If the country is importing, the government will impose import tariff of 10\$ per unit. If the country is exporting, the government will impose export subsidy of 10\$ per unit. Calculate
 - i. Domestic consumer and producer surplus after the intervention
 - ii. Either subsidy cost or tariff revenue
 - iii. Deadweight loss from the intervention.

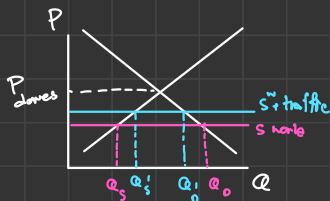
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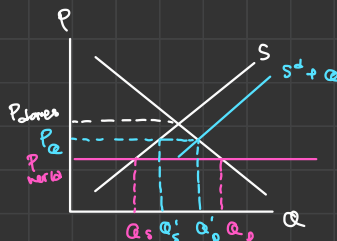
Quantity	Total Benefit	Marginal Benefit	Total Cost	Marginal Cost	Total Net Benefit
1 st	80	80	20	20	60
2 nd	140	60	40	20	100
3 rd	190	40	60	20	130
4 th	200	20	80	20	120
5 th	200	0	100	20	100

- 4 unit since it is max total net benefit
- underallocation because can receive higher net benefit $DWL = 120 - 100$
- Overallocation, $DWL = 120 - 100 = 20$

2. With diagrams, explain the differences between tariff and quota. Also, explain the impact on domestic stakeholders (consumers, producers, and government), i.e., who is better off and who is worse off? Why?



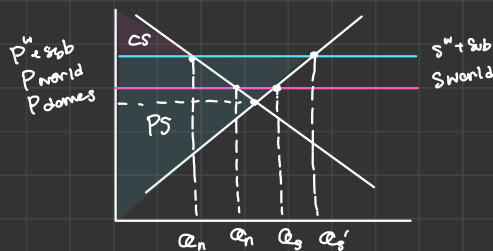
Consumer pay more, thus buy less
 producer sell at high price, produce more (PS ↑ from no tariff)
 Gov get tariff revenue.



the different is tariff shift in supply of the world line.
 Government impose tax to import goods, quota shift domestic supply curve to the right

- gov sets a limit of how much can be imported
- gov issues "import licenses" to firm, usually be foreign firm
- these licenses allow the holders to buy goods abroad at P^w , sell in domestic market a higher price.

3. Consider an exporting country. Analyze welfare effect on all stakeholders when its government impose "Export Tax", i.e., per-unit tax imposed on the exported good. Draw a diagram(s) and provide complete analysis on who gain(s) and who lose(s).



4. A "small", open economy is engaging in international trade. Its domestic demand curve is given by $P = 100 - Q$ and its domestic supply curve is given by $P = Q$. The world price of the good is 20\$. Answer the following questions.

- What does it mean for a country to be "small"? What implication of being "small" has on the world supply curve?
- Is this economy either an exporting or importing country? Why? How many units of the goods is the country is currently importing or exporting?
- Now suppose the government decides to intervene. If the country is importing, the government will impose import tariff of 10\$ per unit. If the country is exporting, the government will impose export subsidy of 10\$ per unit. Calculate
 - Domestic consumer and producer surplus after the intervention
 - Either subsidy cost or tariff revenue
 - Deadweight loss from the intervention.

a) Small countries need to buy or sell goods at market price, so supply = world supply.

b) domestic price ; $100 - Q = Q$

$Q = 50, P = 50$ because $P > \text{world price}$, so import.

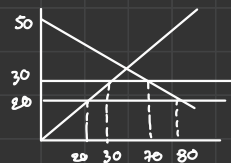
if $P = 20$; $Q_D = 80, Q_S = 20$, so import = 60

$$\begin{aligned} \text{c) i) } CS &= \frac{1}{2} \times 70 \times 70 = 2450 \\ PS &= \frac{1}{2} \times 30 \times 30 = 450 \end{aligned}$$

$$\text{ii) import} = 70 - 30 = 40$$

$$\text{revenue} = 40 \times 10 = 400$$

iii)



$$\begin{aligned} \text{DNL} &= \left(\frac{1}{2} \times 10 \times 10 \right) + \left(\frac{1}{2} \times 10 \times 10 \right) \\ &= 100 \end{aligned}$$