

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		20	
2 nd		60		20	
3 rd		40		20	
4 th		20		20	
5 th		0		20	

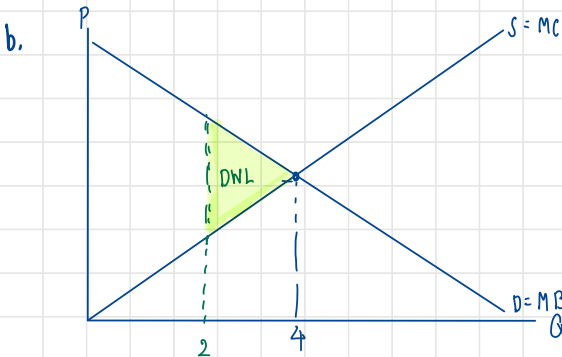
2. With diagrams, explain the differences between tariff and quota. Also, explain the impact on domestic stakeholders (consumers, producers, and government), i.e., who is better off and who is worse off? Why?
3. Consider an exporting country. Analyze welfare effect on all stakeholders when its government 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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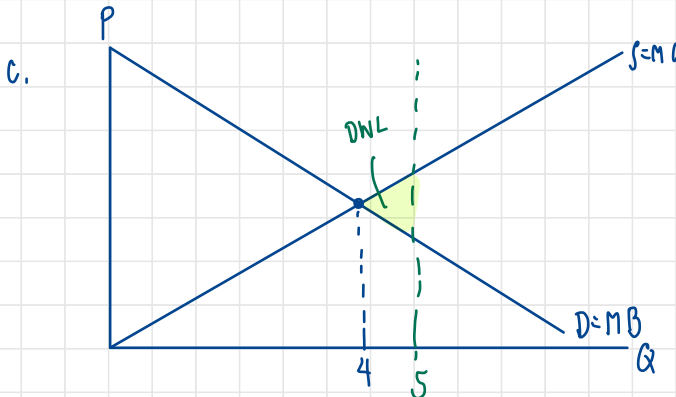
Quantity	Total Benefit	Marginal Benefit	Total Cost	Marginal Cost	Total Net Benefit
1 st	80	80	20	20	60
2 nd	140	60	40	20	100
3 rd	180	40	60	20	120
4 th	200	20	80	20	120
5 th	200	0	100	20	100

a. I should order 4 units of hamburgers because the marginal benefit of 1st, 2nd, 3rd is more than marginal cost and 4th marginal benefit equal to marginal cost. This mean extra cost for consume 1st to 3rd unit is more than extra benefit and the extra cost for consume 4th unit is equal extra benefit.



This is underallocation because to order 2 hamburgers is failing to achieve benefit from 3rd and 4th unit.

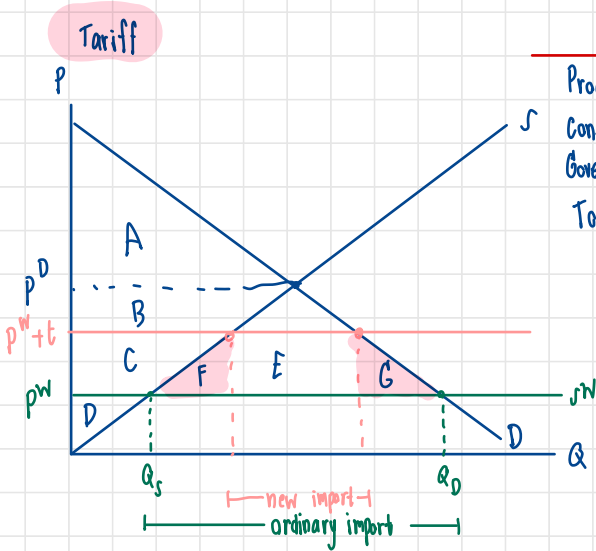
$$DNL = \frac{1}{2} \times 2 \times 80 = 80$$



This is overallocation because to order 5 hamburgers the marginal benefit is less than the marginal cost for 5th.

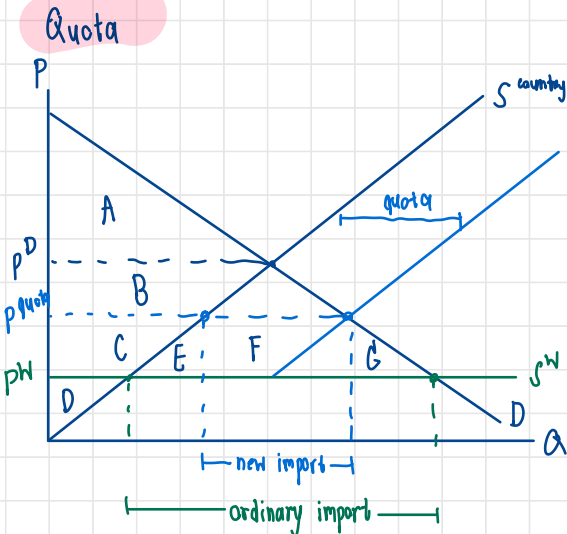
$$DNL = \frac{1}{2} \times 80 \times 1 = 40$$

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?



	Before tax	After tax	DWL
Producer	D	D+C	G
Consumer	A+B+C+E+F+G	A+B	-(C+E+F+G)
Government	-	E	E
Total	A+B+C+D+E+F+G	A+B+C+D+E	-(F+G)

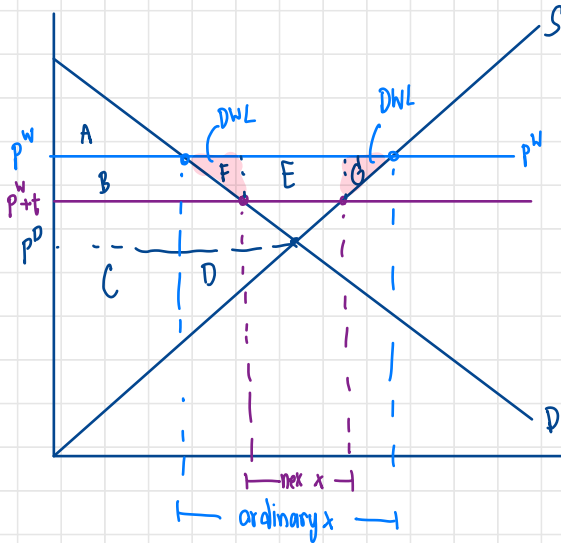
The government increase import tax so the price is increase from p^W to $p^W + t$. This cause makes consumer surplus reducing from $A+B+C+E+F+G$ to $A+B$ but the producer and government receive more benefit which is $D+C$ and E respectively. However, the negative effect from the policy to social welfare is $DWL (F+G)$.



	Before quota	After quota	DWL
Producer	D	D+G	G
Consumer	A+B+C+E+F+G	A+B	-(C+E+F+G)
Importer	-	F	F
Total	A+B+C+D+E+F+G	A+B+C+D+F	-(E+G)

The government limit quota for the licence company to import product. This make number of import goods reducing from ordinary import to new import ($Q_s \rightarrow Q_s' + \text{quota}$) and the price also increase ($p^W + p^W + \text{quota}$) which benefit to the importer at F and producer at $D+G$. However, producer and the society lose the benefit ($E+G$).

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).



	Before tax	After tax	DWL
PS	$B+C+D+E+FG$	$C+D$	$-(B+E+G)$
CS	A	$A+B$	B
GS	$-$	E	E
Total	$A+B+C+D+E+FG$	$A+B+C+D+E$	$-(G+F)$

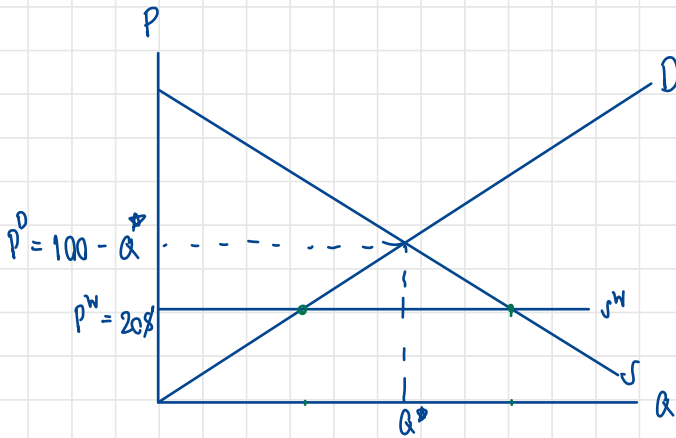
Before tax, the producer gets $B+C+D+E+FG$ and the consumer gets A . Due to export tax policy cost for exporting is increasing so amount of export product is decreasing that make producer gets lower benefit remaining $C+D$. On the other hand, the consumer get benefit from this policy which is lower price so the consumer receives $A+B$. Moreover, the government has revenue at E . DWL from the policy is $G+F$

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?

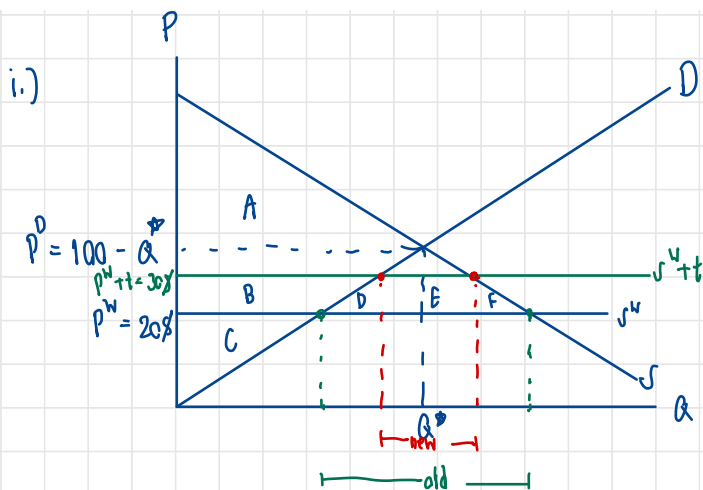
The small country mean that domestic price is not effect on world price. the small country has to buy product at world price.

- 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?



This economy is importing country. At price = \$20 this country import $20 = 100 - Q^*$
 $Q^S = 80$ unit which make demand equal supply or equilibrium point.

- 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
- Domestic consumer and producer surplus after the intervention
 - Either subsidy cost or tariff revenue
 - Deadweight loss from the intervention.



- Domestic consumer surplus after intervention is A
Domestic producer surplus after intervention is $B + C$
- tariff revenue is E
- Deadweight loss from the intervention is $D + F$.