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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
1st	80	80	20	20	60
2nd	140	60	40	20	100
3rd	180	40	60	20	120
4th	200	20	80	20	120
5th	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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(a) 4 units it max total net benefit

(b) Underallocation, have been achieved and at the end → fail to achieve
Deadweight loss is 120 − 100 = 20

(c) Overallocation, produce (MB < MC)
Deadweight loss is 120 − 100 = 20

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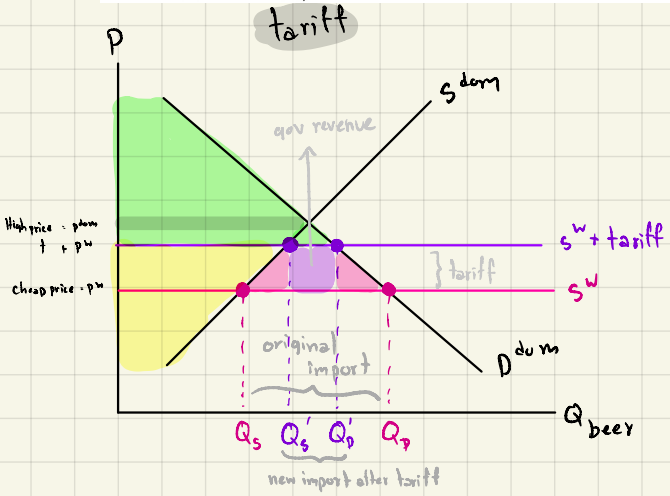
tariff



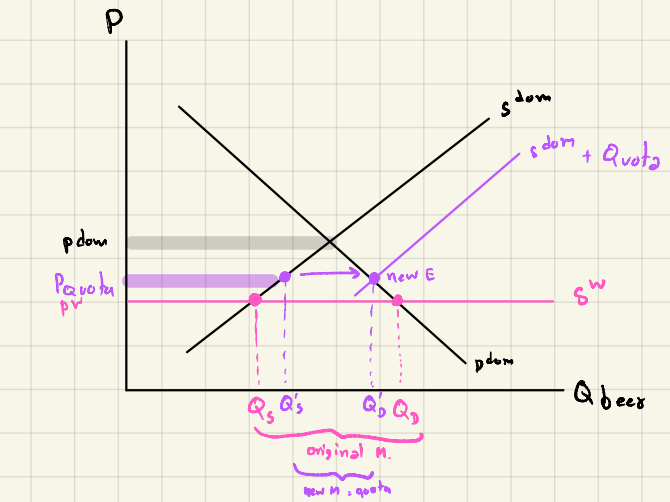
consumer pay more and buy less (CS↓)

producers sell at high price, producers produce more (PS↑)

goverment get tariff revenue (new import × tariff/unit)

deadweight loss : loss in efficiency
CS : worse off
PS : better off
S : deadweight loss

Quota



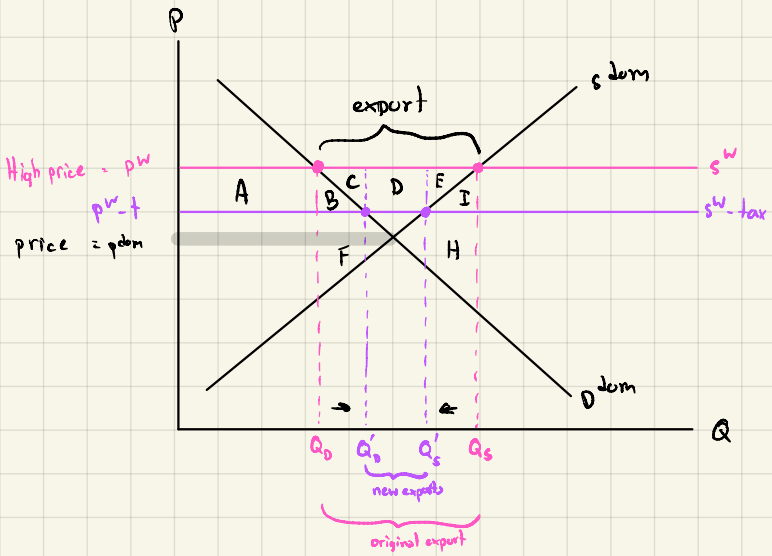
shift only upper part
Quota : - foreign firms increase supply
allows - domestic producer
like p_{dom} but cheaper ($S^d \to S^d$ + Quota) → P↓
more supply as S^{dom} + Quota
CS : worse off
PS : better off
Quota Revenue - earn by : licence holder who buy goods at p^w and sell at P_{quota}
Deadweight loss - gov intervention

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).

policy objective - reducing domestic price
- revenue

policy downside - efficiency
- damaging producers

	Gain	Loss
Consumer	AB	
Produces		ABCDE
Government	D	
total net		CE



Original export revenue of $Q'_D - Q_D$: CBF
Total domestic consumer benefits of $Q'_D - Q_D$: BF
C

Export revenue of $Q_S - Q'_S$: EIH
T. production cost of saving : IH
E

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.
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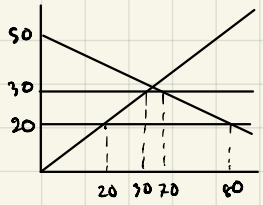
(a) small countries have to buy/sell goods at market price : world supply

(b) domestic price : 100 - Q = Q
Q : 50
∴ P = 50 b/c p > world price ⇒ import

(c) i.) CS : $\frac{1}{2} \times 70 \times 70$ = 2450
PS = $\frac{1}{2} \times 30 \times 30$ = 450

ii) import (M) = 70 - 30 = 40
revenue = 40 × 10 = 400

iii)



Deadweight loss = $\left[\frac{1}{2} \times 10 \times 10\right] + \left[\frac{1}{2} \times 10 \times 10\right]$
= 100