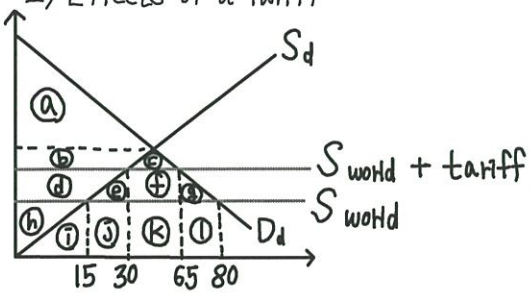
2) Effects of a Tariff



〈small country〉

▨ amount of imports before tariff : 65
▨ amount of imports after tariff : 35

Good.

▨ before tariff

CS : a+b+c+d+e+f+g
PS : h
government revenue : 0

▨ after tariff

CS : a+b+c
PS : h+d
government revenue : f

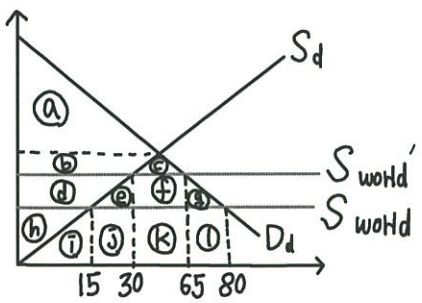
⇓

▨ Effect of tariff

ΔCS : −(d+e+f+g)
ΔPS : +d
Δ government revenue : +f
Deadweight Loss : (e+g)

ok.

3) Effect of Import quota



〈small country〉

▨ amount of import before Import quota : 65
▨ amount of import after Import quota : 35
(quota : 35)

Good

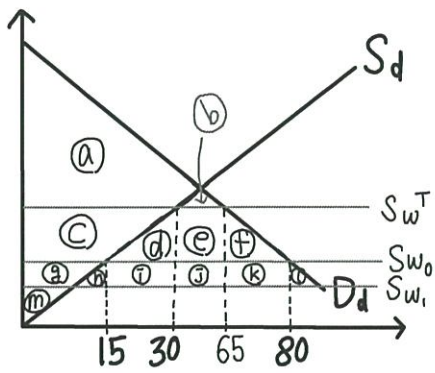
ΔCS : −(d+e+f+g)
ΔPS : + d
Quota Rents : f
Deadweight Loss : e+g

▨ What is Same with Tariff
① Increase PS , decrease CS
② Reduce Imports
③ Raise price of goods

▨ What is diffrent with Tariff
Tariff raise government revenue (Tax × Amount of Imports), but Import Quota do not raise government revenue.

Quota Rents (Quota × (P_{quota} − P_f)) is Economic rents.

4)



<Large Country>

▨ Amount of Import before tariff : 65
▨ Amount of Import after tariff : 35

▨ Before tariff
CS : a+b+c+d+e+f
PS : g+m
government revenue : 0

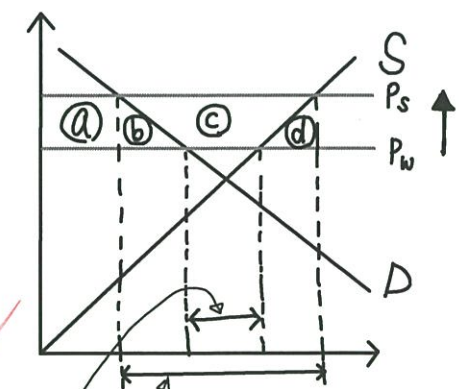
▨ After tariff
CS : a+b
PS : g+m+c
government revenue : e+j * ⓙ is extra terms of trade effect

⇓

▨ Effect of Tariff
ΔCS : −(c+d+e+f)
ΔPS : +c
Δ government revenue : +e
Deadweight Loss : d+f
trade effect : j

|d+f| > |j| so net loss in this case.

5) Export subsidy (Small Country)

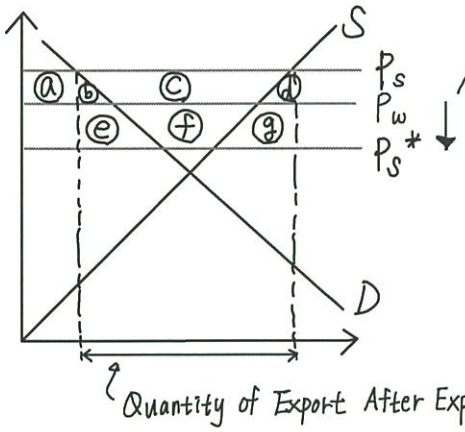


Domestic price of goods raise.
So, ΔCS = −(a+b)
ΔPS = +(a+b+c)
Δ government cost = −(b+c+d)
Deadweight Loss : b+d

Quantity of Export (After Export Subsidy)
Quantity of Export (Before Export Subsidy)

=> Quantity Produced Increased
Quantity Consumed decreased

6) Export Subsidy (Large country case)



World price ※ Domestic price of goods raise

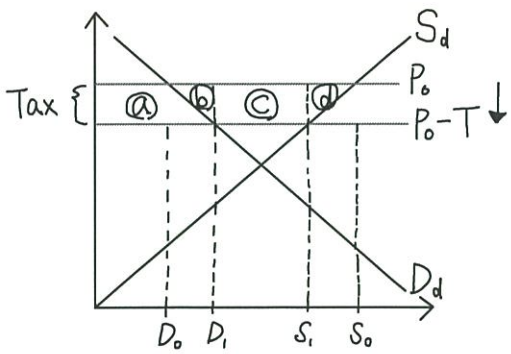
$\Delta CS = -(a+b)$
$\Delta PS = +(a+b+c)$
Δ Government Cost $= -(b+c+d+e+f+g)$
Deadweight Loss : $b+e+f+d+g$

It is "Net Loss" to Country. Because surplus loss is larger than surplus gain.

7) Specific Tariff is levied as fixed charge for each unit of goods imported.
Ad valorem Tariff is levied as a fraction of the value of the imported goods.

8) NTB (Non Tariff Barrier)
examples : ① SPS (Sanitary and Phytosanitary Measures)
② TBT (Technical Barriers to Trade)

9) Export Tax (Small Country)



Domestic price of goods fall

Amount of Export Before Tax : $S_0 - D_0$
Amount of Export After Tax : $S_1 - D_1$

government
ΔCS : $+a$
ΔPS : $-(a+b+c+d)$
↳ Δ Tax revenue : $+c$
Deadweight Loss : $b+d$

It is "Net Loss" to Country.

10)

a) U.S. have an absolute advantage in the production both wheat and beef.
Because U.S.'s "Amount of Production per unit of labor" of wheat and beef are larger than Argentina's.

b) & c)

Opportunities cost

	U.S.	Argentina
wheat	$\frac{1}{3}$	1
Beef	3	1

b) U.S. : $\frac{1}{3}$, Argentina : 1
c) U.S. : 3, Argentina : 1

d) U.S. have comparative advantage in wheat.
Because opportunities cost of wheat production is smaller than Argentina.
(U.S.'s)
Argentina have comparative advantage in Beef.
Because Argentina's opportunities cost of Beef production is smaller than U.S..

11)

a) U.S. have absolute advantage in production both wheat and beef

↓ Amount of labor to produce a unit of good

	U.S.	Argentina
Wheat	$\frac{1}{200}$	$\frac{1}{20}$
Beef	$\frac{1}{100}$	$\frac{1}{80}$

wheat : $\frac{1}{200} < \frac{1}{20}$

beef : $\frac{1}{100} < \frac{1}{80}$

b) & c)

Opportunities cost

	U.S.	Argentina
wheat	$\frac{1}{2}$	4
Beef	2	$\frac{1}{4}$

b) U.S. : $\frac{1}{2}$, Argentina : 4
c) U.S. : 2, Argentina : $\frac{1}{4}$

d) U.S. have comparative advantage in wheat production.
U.S.'s oppurtunity cost of wheat is smaller then Argentina's.
Argentina have comparative advantage in beef production.
Because Argentina's oppurtunity cost of beef is smaller then U.S.'s.

12) opportunity cost

	Cloth	Widgets
Home	$\frac{1}{2}$	2
foreign	2	$\frac{1}{2}$

a) X
b) O
c) X
d) X
e) X

answer is (b) ✓

Home country have comparative advantage in cloth production.
Foreign country have comparative advantage in widgets production.

13) wages were to double

example] Home country's wage (per hour) ⇒ \$1 ⇒ ×2 ⇒ \$2
cloth 1 unit = 10 labor = \$10 ⟹ (wage×2) \$20
widget 1 unit = 20 labor = \$20 ⟹ (wage×2) \$40

Rising wages have raised costs for production, but there is no change in the number of labor required. So opportunity cost is same. yes.
Home country should export cloth.

answer is (a) — yes (A).

(* But if Home's wages were 6x as much, there would be no trade.)

14)

$$\frac{\$20}{\square} < \frac{\$10}{\square}$$

□ is production per 1 hour

so, $\frac{\$20}{\square}$ means production cost of 1 unit of goods.

a) O
b) X
c) X
d) X
e) X

answer is (a)

✓ yes

US: $\frac{\$20}{40 \text{ units}}$ < Japan: $\frac{\$10}{15 \text{ unit}}$

$\$.50$/unit vs. $\$.67$/unit

15) Local content requirement is regulation that requires some specified fraction of a final good to be produced domestically. For example, a certain percentage of the value of the final good is regulated to be produced domestically.
Local content has a similar effect with import quota. So it benefits domestic producers.
In the short term, the price difference between imported and local inputs is passed on to consumers. (domestic input is more expensive) (at final price of goods)
In the long and short run, Local content is inefficient, It may hurt employment and industrial competiveness. And It may reduce trade.
It is more efficient to import products produced abroad than domestically, local content harms many areas because it forces them to use domestically produced products. Considering opportunity costs, it would be better to focus on goods that can be produced at a lower production cost at home.

<example>

① Norway offshore industry (1970s)
If overseas company wants to obtain permission to explore or develop oil or gas in Norway, It is requires the signing of an R&D partnership with a local Norweigian Company.

② Brazil's National Agency of Petroleum, Natural Gas and Biofuels (2007.11)
'Regulation ANP no.6'
It is mandatory to use domestic products and services by 25 to 84% by step in the oil or gas equipment and service industry.