Trade Policy

part 1

Import Tariff in a small country

Japanese rice and TPP

- One of the first executive orders by President Trump was to withdraw from Trans-Pacific Partnership
- 12-nation trade deal, covering 40% of global economy

March 2013, Japanese farmers rally against TPP negotiations

TPP and Japan

- TTP was ratified in Japan on 20 January 2017
- Tariff on beef: to decrease to 9% from 38.5%
  - USA exports $2 billion of beef to Japan
- Import quota on butter to be lifted

- BUT Japan will maintain a whopping 778% tariff on imported rice!
- Zero tariff for Australian and American imports of rice for a quota of 84,700 metric tons
  - Japan offsets this by purchasing 84,700 metric tons of domestic rice!
- Many other distortions: “set-aside” programme – a subsidy not to grow rice
- Japanese agriculture is mostly small-scale
- Japan Agriculture Group

Not just Japan. Australian bananas

- February 2011 - severe cyclone Yasi hit Northern Queensland
- The banana prices skyrocketed to about $15/kg
- The world prices didn’t change much at that time
- Why did AU consumers have to pay such high prices for bananas?
- Import ban!

Not just bananas, apples too

- August 2011: *"Australian apple growers say a decision to overturn a ban on New Zealand apple imports will threaten their livelihoods"*
- Reaction to approval of imports of apples from New Zealand
  - the first time in 90 years!

Sugar in the US

- About twice as expensive as sugar in Canada (country with no cane sugar at all!)
  - for the last 30 years!
- Why?
- Main reason: US protection of sugar industry.

Sugar in the US

- In-quota tariff of 1.46 cents/kg
- Out-quota tariff of 33.87 cents/kg
- World price of sugar: 41 cents/kg

Sugar in the US

- Another interesting observation: the giant corn-syrup industry.

Very important question

- Why does the government protect agricultural sector?

Two reasons

- *Terms-of-trade motive:*
  - To keep world prices down, hence to raise real incomes if country is a net importer of agriculture
  - Benefits country as a whole
- *Interest-group motive:*
  - Protection benefits some group which has a political influence
  - Even if it makes the whole country worse off

Some basics: tariffs and quotas

- A tariff is a tax on imports.
- A quota is a quantitative restriction on imports.

Tariffs: Two kinds

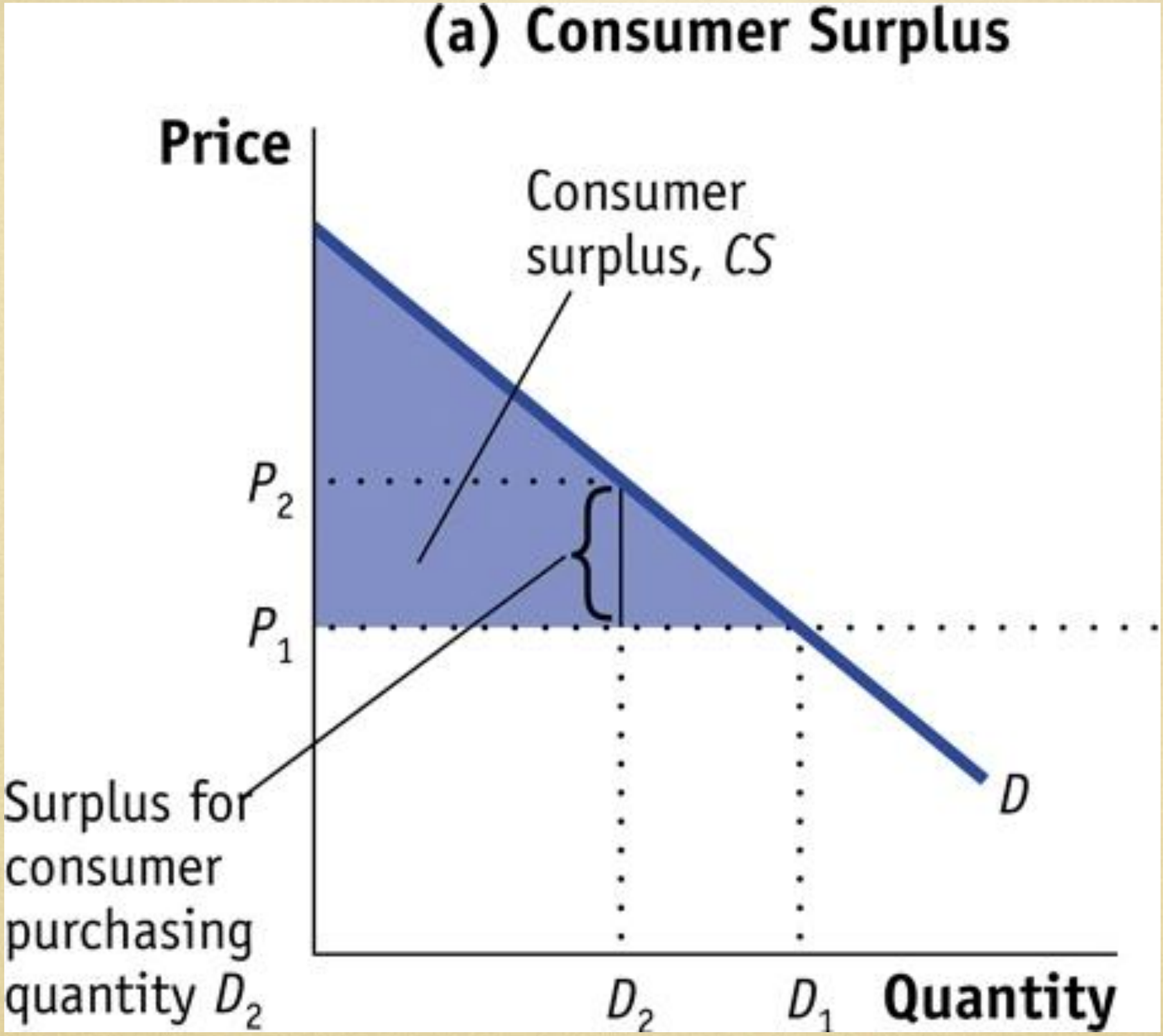
- *Specific* tariff: Charged per unit of quantity.
- E.g., 10¢ per kg of the product imported.
- *Ad valorem* tariff: Charged as a fraction of value.
- E.g., 10% of invoice value.

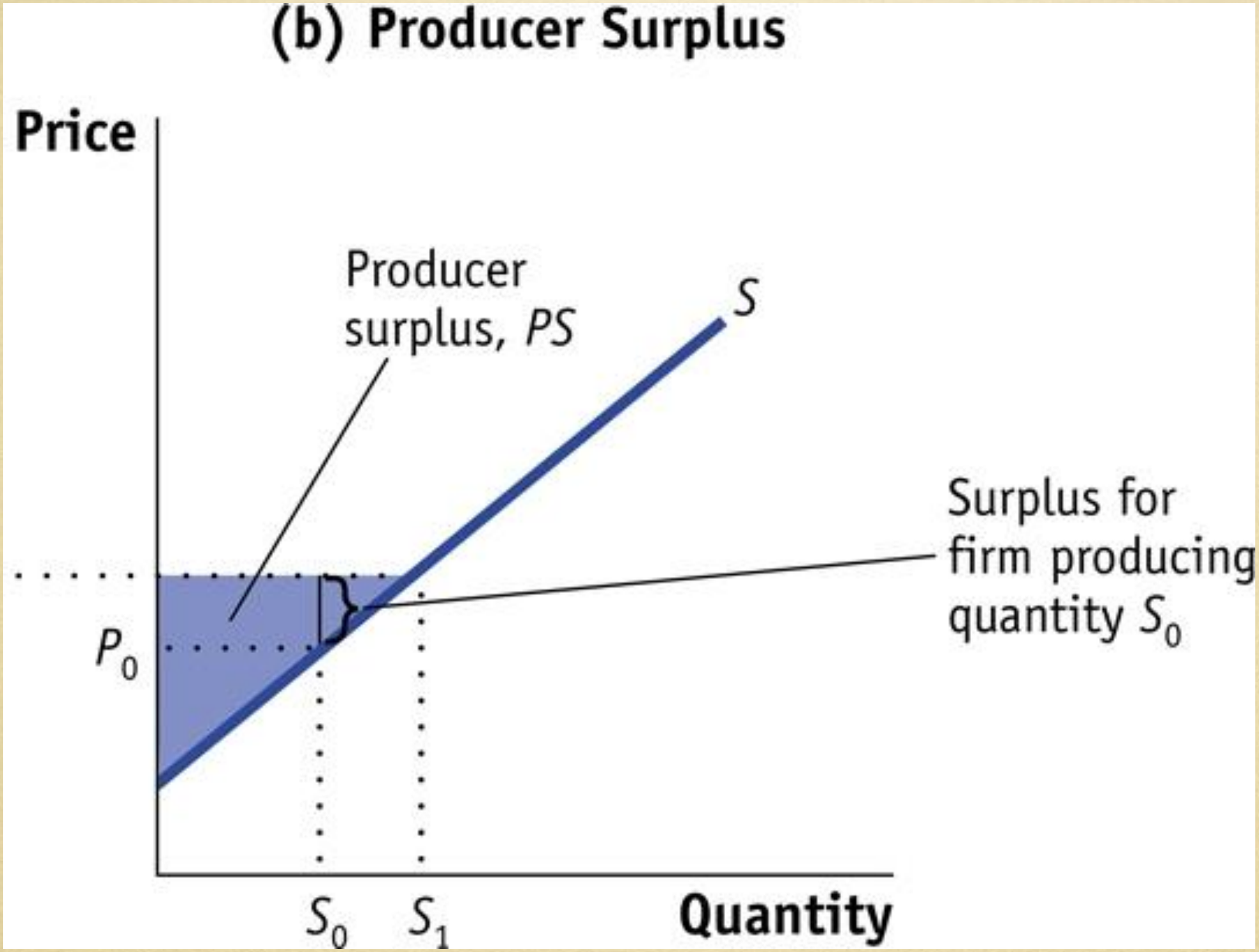
Quotas:

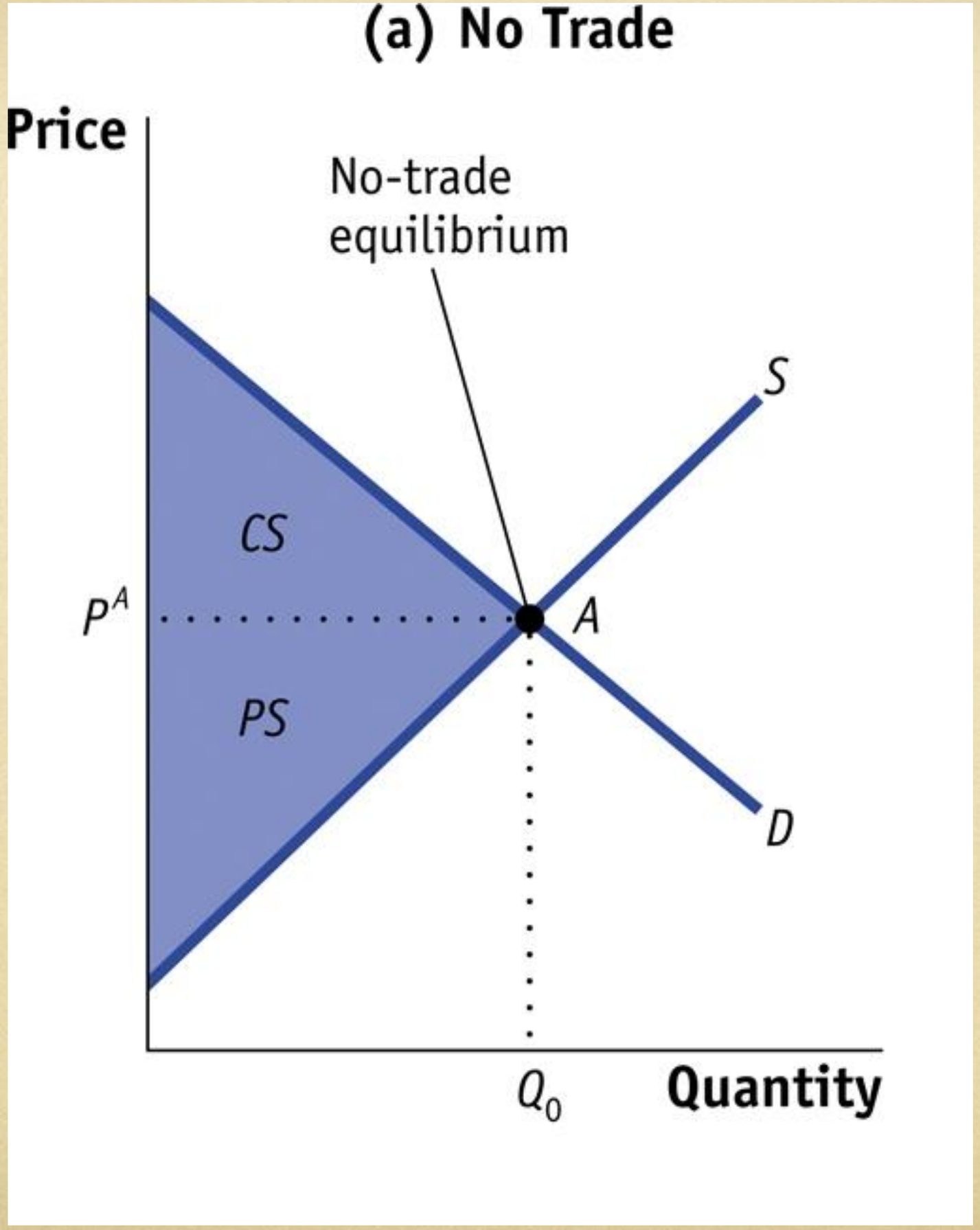
- Prohibition on imports beyond a specified quantity.
- Classical quota: Importing country would issue import licenses;
- you can’t import without a license, and each license limits you to a fixed quantity.

How to measure gains from trade?

- We will analyze the effects of tariffs and quotas under perfect competition
- Will focus on a particular market
- Partial equilibrium analysis
- First, we will review the concepts of ***consumer*** and ***producer surplus***


(a) Consumer Surplus
Price
Consumer surplus, CS
P_2
P_1
Surplus for consumer purchasing quantity D_2
D
D_2
D_1
Quantity


(b) Producer Surplus
Price
Producer surplus, PS
S
Surplus for firm producing quantity S_0
P_0
S_0
S_1
Quantity


(a) No Trade
Price
No-trade
equilibrium
S
CS
P^A
A
PS
D
Q_0
Quantity

Free Trade for a Small Country

- How can we define whether a country is small or large?
- Is the US small?
- Is New Zealand small?
- Is Japan small?
- Is China small?

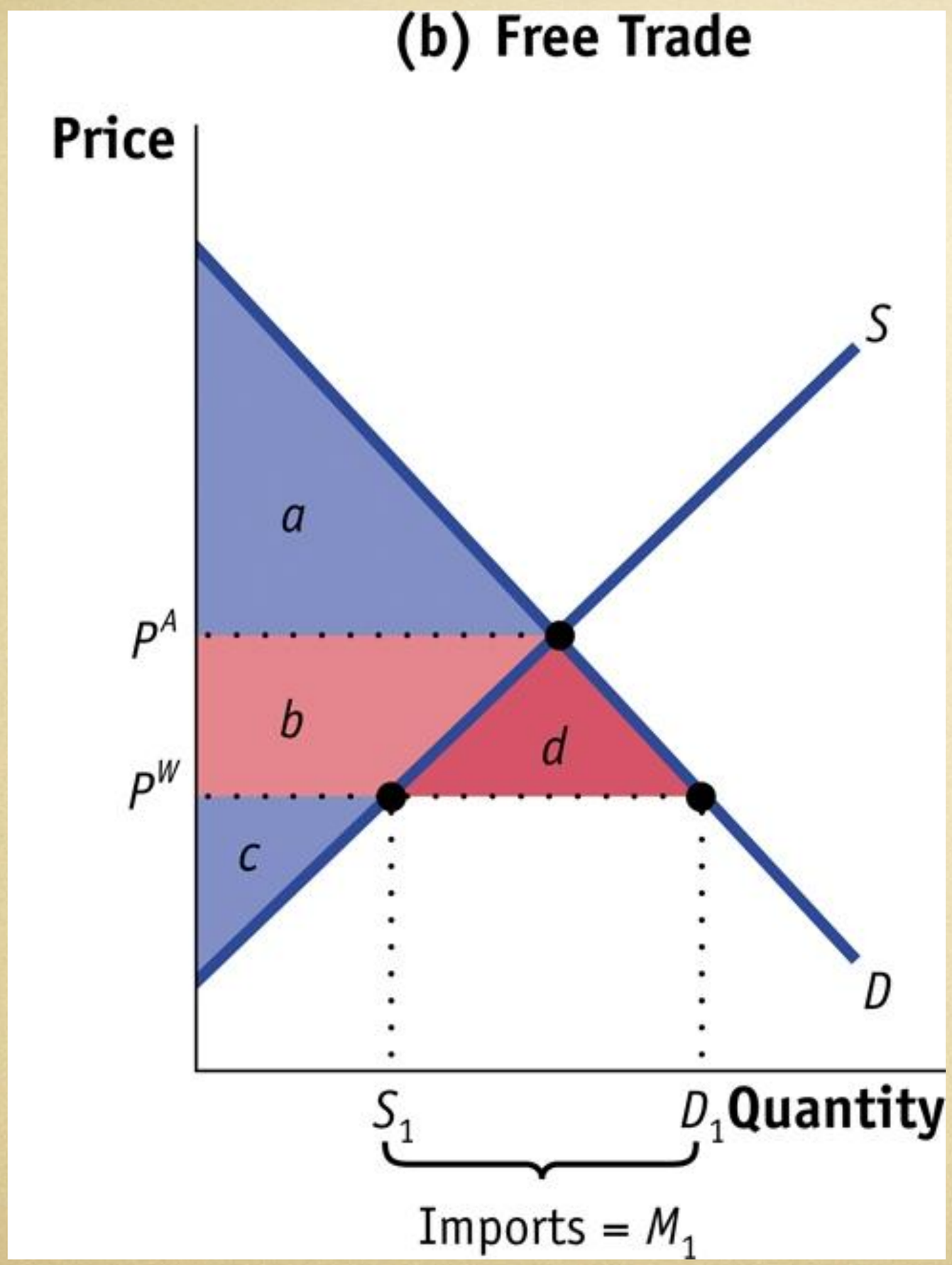
Free Trade for a Small Country

- Consider the world market
- World price P^W is determined by the supply and demand in the world market
- If Home country is small then
  - It's a price taker in the world market
  - The world prices P^W is fixed

- We want to analyze import tariff and quota

- Hence, P^W is below the Home autarky price P^A

- Home will be an ***importer*** of the product at the world price


(b) Free Trade
Price
S
a
P^A
b
d
P^W
c
D
S_1
D_1
Quantity
Imports = M_1

The Gains from Trade

- Consumer surplus:
  - Autarky: *a;* Trade: *a+b+d*
  - ***Gain:*** *b+d*
- Producer surplus:
  - Autarky: *c+b;* Trade: *c*
  - ***Loss***: *b*

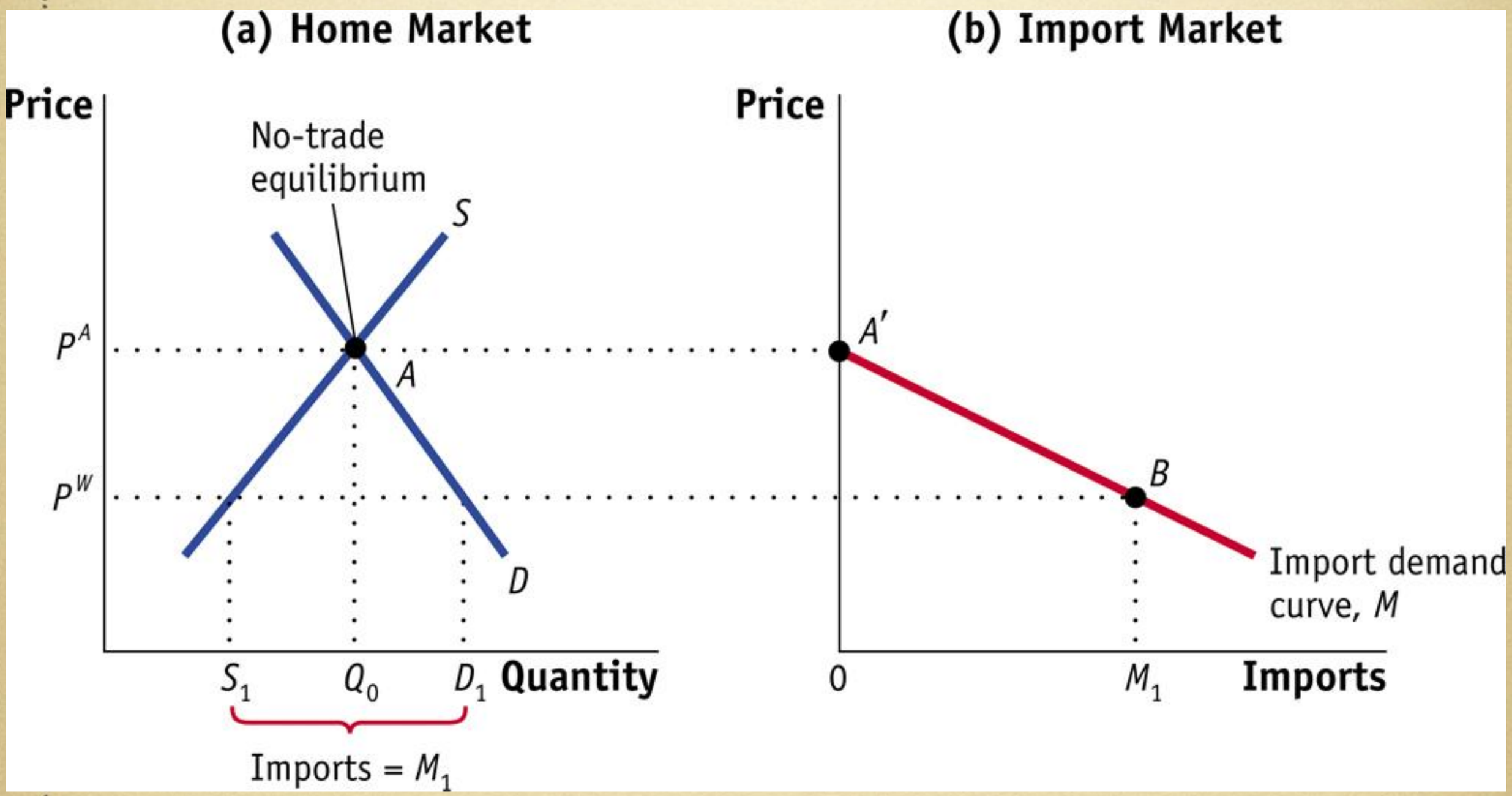
The Gains from Trade

- Consumers gain more than the producers lose indicating total Home welfare increased

- *d* is a measure of the ***gains from trade*** for the importing country due to free trade

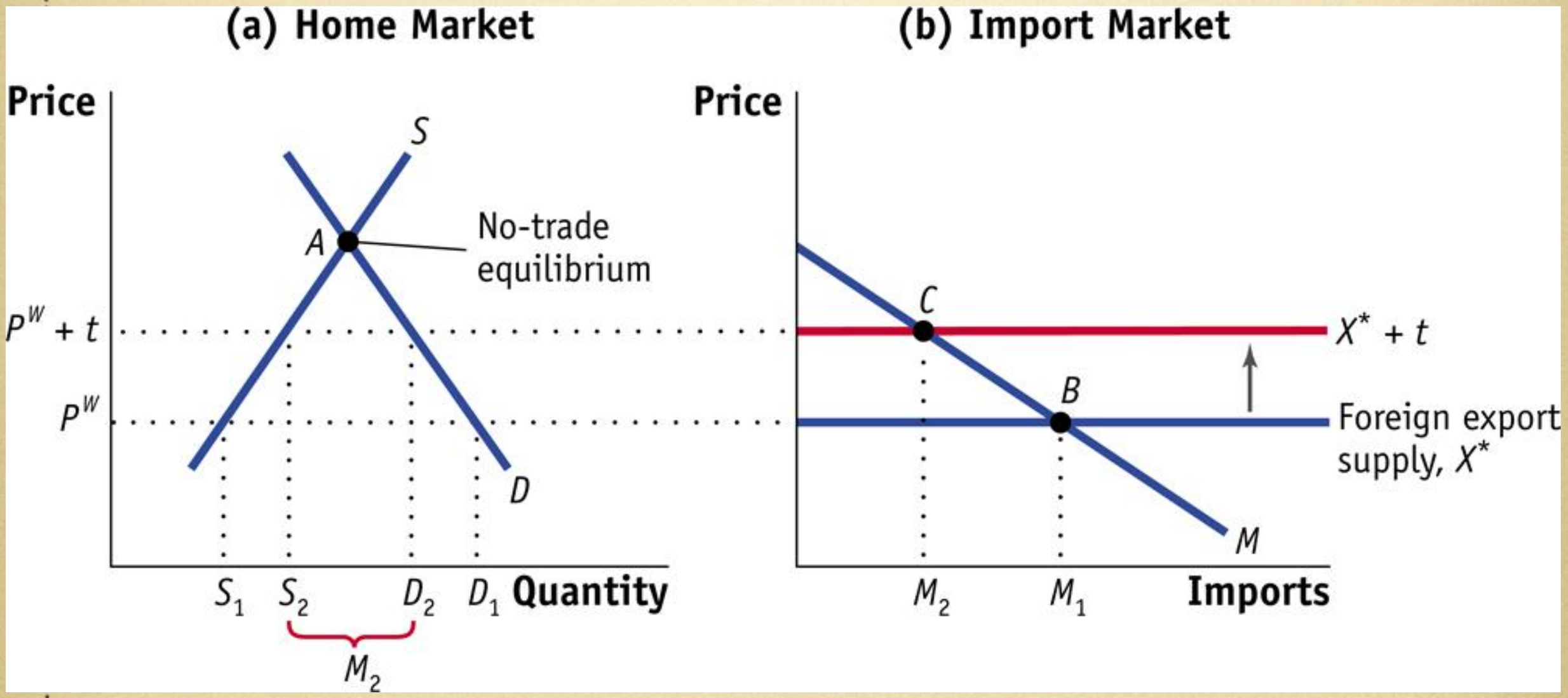
Home Import Demand Curve

- We can now derive the ***import demand curve***
  - The relationship between the world price of a good and the quantity of imports demanded
- At the autarky equilibrium, there are zero imports
- At the world price $P^W < P^A$ the quantity demanded is greater than quantity supplied, and imports are M_1

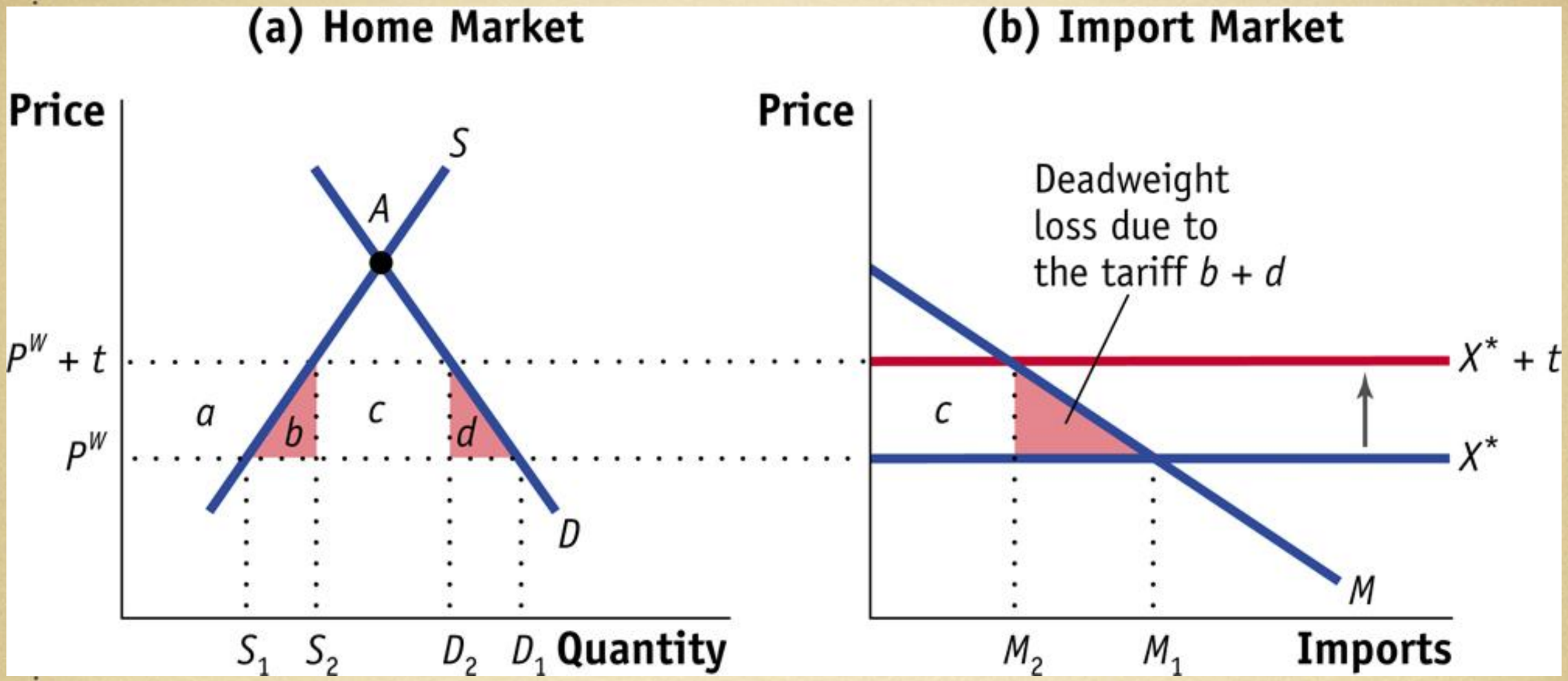

(a) Home Market
Price
No-trade equilibrium
S
P^A
A
P^W
D
S_1
Q_0
D_1
Quantity
Imports = M_1
(b) Import Market
Price
A′
B
Import demand curve, M
0
M_1
Imports

- Home is small and can import any amount at price P^W without having an impact on that price

- Hence, the Foreign export supply curve X* is horizontal at the world price P^W


(a) Home Market
Price
S
A
No-trade equilibrium
$P^W + t$
P^W
D
S_1
S_2
D_2
D_1
Quantity
M_2
(b) Import Market
Price
C
$X^* + t$
B
Foreign export supply, X^*
M
M_2
M_1
Imports

- Suppose that now Home imposed import tariff
- How does Home domestic price change?
- The tariff introduces a wedge between the world price and the domestic Home price.
- This means the price charged to Home consumers will increase by the amount of the tariff
- These changes affect producer and consumer surplus, and overall Home welfare


(a) Home Market
Price
S
A
$P^W + t$
P^W
a
b
c
d
D
S_1
S_2
D_2
D_1
Quantity
(b) Import Market
Price
Deadweight
loss due to
the tariff $b + d$
$X^* + t$
X^*
c
M
M_2
M_1
Imports

Home Welfare

- The higher Home price makes consumers worse off by lowering consumer surplus:

  - (a+b+c+d)

- Home firms are better off with the higher price and increased surplus: *+a*

- Revenue collected from the tariff equals the amount of the tariff times the new amount of imports

  +c

Effect of the Tariff on Welfare

Fall in consumer surplus $-(a+b+c+d)$

Rise in producer surplus $+a$

Rise in government revenue $+c$

Net effect on Home welfare $-(b+d)$

- The area *a* is effectively a transfer from consumers to producers via the higher domestic prices induced by the tariff

- The area *c*, the gain in government revenue, is a transfer from consumers to the government

- The areas b and d is the net welfare loss

  - ***deadweight loss*** - it is not offset by a gain elsewhere in the economy

Production Loss

- The area of b is the ***production loss*** or ***efficiency loss***
- The base of b is the net increase in Home supply due to the tariff
- The height of this triangle is the increase in marginal costs
- The fact that marginal costs are greater than world price means that this country is producing the extra supply inefficiently
- It would be cheaper to import rather than produce at home

Consumption Loss

- The price increase reduces quantity consumed at Home from D_1 to D_2
- The area of the triangle can be interpreted as the drop in consumer surplus for those individuals who are no longer able to consume the units from D_1 to D_2 because of the higher price
- ***consumption loss*** for the economy

Next: Large Country

- If we consider a large enough importing country, then we might expect that its tariff will change the world price
- Then the Foreign export supply curve X* is no longer horizontal at the world price P^W