9. Application: International Trade

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What this chapter is about

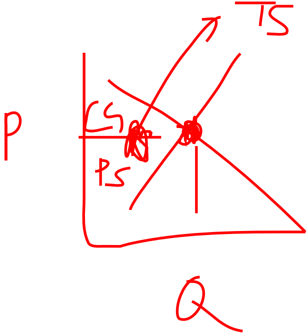
복지 자율적인 무역 수출

- Welfare analysis of free trade in a good that a country exports, relative to no trade.

수입

- Welfare analysis of free trade in a good that the country imports, relative to no trade. 관세
- Welfare analysis of a tariff, relative to free trade in a good the country imports. 수입이 관세 부과할 경우.
- The most common arguments for restricting imports.

The equilibrium without trade



- Only domestic buyers and sellers
- Equilibrium price and quantity
  - Determined on the domestic market
- Total benefits
  - Consumer surplus
  - Producer surplus

Allow for international trade?

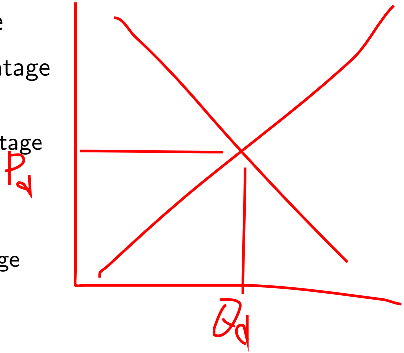
국제무역을 허용하는 경우?

- Price and quantity sold in the domestic market?
- Who will gain from free trade; who will lose, and will the gains exceed the losses?
- Should a tariff be part of the new trade policy?

The Determinants of Trade

- World price (P_W)
  - Price of a good that prevails in the world market for that good
- Domestic price (P_D)
  - Opportunity cost of the good on the domestic market
- Compare domestic price with world price
  - Determine who has comparative advantage
  - If $P_D < P_W$

    비교우위
    - The country has comparative advantage
    - Export the good
  - If $P_D > P_W$
    - The world has comparative advantage
    - Import the good



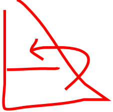
The Small Economy Assumption

수출이나 수입을 하게 되면 세계 가격이 바뀔 수도 있지만, 영향을 안받는다고 가정.

- A small economy is a price taker in world markets: Its actions have no effect on P_W.
- Not always true—especially for the U.S.—but simplifies the analysis without changing its lessons.
- When a small economy engages in free trade, P_W is the only relevant price:
  - No (domestic) seller would accept less than P_W, since she could sell the good for P_W in world markets.
  - No (domestic) buyer would pay more than P_W, since he could buy the good for P_W in world markets.

Exporting country

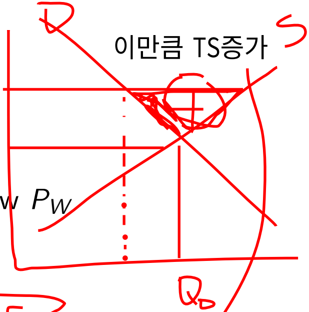
W
D



CS↓

Pw
Pd

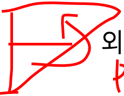
이만큼 TS증가



- Domestic equilibrium price before trade is below P_W

$$P_D < P_W$$

W
D



외국이 있어서 팔수있다.

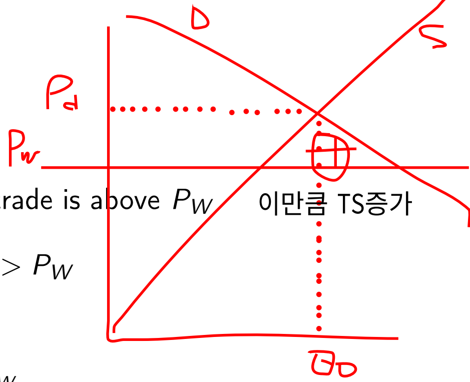
PS↑

- Once trade is allowed
  - Domestic price rises to equal P_W
  - Domestic quantity supplied is greater than domestic quantity demanded
  - The difference: exports
- With international trade
  - CS↓, PS↑, TS↑ (i.e. the economic well-being of a nation↑)
  - Gains of the winners exceed the losses of the losers

Pd<Pw이면 공급자가 없고, Pd>Pw이면 외국에서 엄청난 양의 물건이 들어온다.

따라서 Pd' = Pw가 된다.

Importing country



- Domestic equilibrium price before trade is above P_W

$$P_D > P_W$$

- Once trade is allowed
  - Domestic price drops to equal P_W
  - Domestic quantity supplied is less than domestic quantity demanded
  - The difference: imports
- With international trade
  - CS↑, PS↓, TS↑ (i.e. the economic well-being of a nation↑)
  - Gains of the winners exceed the losses of the losers

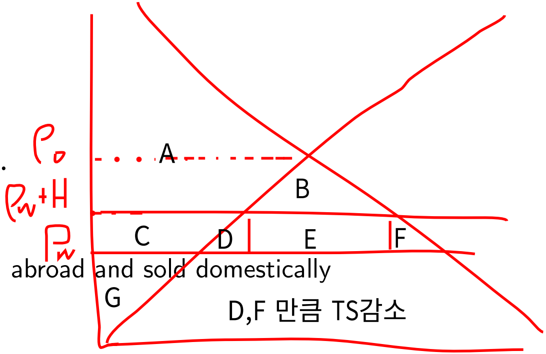
수출과 비슷한 논리로 Pd' = Pw가 된다.

Tariff 관세

세금과 비슷한 원리로

가격은 결국 관세만큼 증가한다.

H는 관세



- Tariff
  - Tax on goods produced abroad and sold domestically
- Free trade
  - $P_{D'} = P_W$
- Tariff on imports
  - Raises domestic price above world price
    - By the amount of the tariff

	관세 X	관세O
CS	A,B,C,D,E,F	A,B
PS	G	C,G
국가	0	E

Pw+H <= Pd 이다.

국내 소비자들은 가격이 비싸져 피해를 받는다.

국제시장에서는 경쟁력이 없는 생산자들이 생산을 하게 된다.

The effects of a tariff

- Price rises by the amount of the tariff
- Domestic quantity demanded decreases
- Domestic quantity supplied increases
- Reduces the quantity of imports
- Moves the domestic market closer to its equilibrium without trade
- Domestic sellers are better off
- Domestic buyers are worse off

The effects of a tariff

- Before the tariff
  - Consumer surplus
  - Producer surplus
  - Government tax revenue $= 0$
- After the tariff
  - Consumer surplus is smaller
  - Producer surplus is bigger
  - Government tax revenue > 0
  - Total surplus is smaller

Other benefits of international trade

이 뒤는 썰푸는 것.

- Consumers enjoy increased variety of goods.
- Producers sell to a larger market, may achieve lower costs by producing on a larger scale.
- Competition from abroad may reduce market power of domestic firms, which would increase total welfare.
- Trade enhances the flow of ideas, facilitates the spread of technology around the world.

Trade agreements and the WTO

- World Trade Organization, WTO, est. 1995
- Unilateral approach to achieve free trade
- Multilateral approach to free trade
  - North American Free Trade Agreement (NAFTA)
  - General Agreement on Tariffs and Trade (GATT)
    - 대공황
      During the Great Depression, tariff↑
    - Successfully reduced the average tariff among member countries from about 40% to 5%
    - 2009: 153 countries; 97 % of world trade

Arguments For Restricting Trade

- Recall one of the Ten Principles from Chapter 1:
  - *Trade can make everyone better off.*
- The winners from trade could compensate the losers and still be better off. 이득본 사람들이 손해본 사람들을 보상해야한다!
  - Yet, such compensation sometimes does not occur.
- The losses are often highly concentrated among a small group of people, who feel them acutely.
- The gains are often spread thinly over many people, who may not see how trade benefits them.
- Hence, the losers have more incentive to organize and lobby for restrictions on trade.

Arguments For Restricting Trade

- The domestic producers
  - Oppose free trade
  - Believe that the government should protect the domestic industry from foreign competition

성장할 때까지는 보호해 주어야 한다!

Arguments For Restricting Trade

- The jobs argument: "Trade with other countries destroys domestic jobs"
- The national-security argument: "The industry is vital for national security"
- The infant-industry argument: "New industries need temporary trade restriction to help them get started"
- The unfair-competition argument: "Free trade is desirable only if all countries play by the same rules"
- The protection-as-a-bargaining-chip argument: "Trade restrictions can be useful when we bargain with our trading partners"