Chapter 8
Intermediate International Trade
International Economics, 5th ed., by Krugman and Obstfeld
Basic tariff analysis

- Tariff is a tax levied when a good is imported:
  - **Specific tariff**: fixed charge per unit
  - **Ad valorem tariff**: percentage of the price

- **Two countries**: home and foreign

- **One good**: wheat

- If the pretrade price of wheat in home and foreign is different, then there is trade

- Assume that the price of wheat is lower at foreign, so that foreign exports wheat
• from the point of view of the exporter, a tariff is like a *cost of transportation*

• an exporter in foreign will have incentives to export only if:
  
  \[ \text{price in foreign + tariff} < \text{price at home} \]

• let \( P_W \) be the world price of wheat: the effect of a tariff is to drive a wedge between the prices in home and foreign:

  \[ \text{price home: } P_T > P_W \]

  \[ \text{price foreign: } P^*_T = P_T - t < P_W \]
• **notice:**

  (1) if home is a large country, then the increase in the price at home from $P_w$ to $P_T$ is less than the amount of the tariff, because *part of the tariff is reflected in a decline in foreign’s export price*

  (2) if home is a small country, then $P_T = P_w + t$ and *foreign’s export price is not affected*

• in the presence of a tariff, the total volume of wheat traded decreases

• **main purpose of a tariff:** protect domestic producers from import competition
computing the **effective rate of protection**

let PA = $8,000 be the world price of an assembled car, and PC = $6,000 be the world price of its components

**(1) policy in country # 1:** to develop an auto assembly industry, a 25% tariff is imposed on imported cars, so that the price of imported cars is $10,000:

- effective rate of protection: 100%, because while before the tariff, an auto assembly company would open if it could assemble cars for $2,000, after the tariff it would do so for $4,000
(2) **policy in country # 2:** to develop a domestic production of auto parts, a 10% tariff is imposed on imported parts, so that the price of imported parts is $6,600: this policy affects the assemblers of cars in country # 2

  effective rate of protection to assembly: - 30%, because while before the tariff, an auto assembly company could assemble cars for a cost of $2,000, after the tariff it could only survive with a cost of $1,400
Costs and benefits of tariffs

- **losers** from a tariff imposed at home: consumers at home and producers in foreign
- **winners** from a tariff imposed at home: producers at home, consumers in foreign, and government at home
- changes in the welfare of consumers and producers can be measured respectively by the **consumer surplus** and the **producer surplus**
some measures of costs and benefits

if home imposes a tariff on imports, then consumers lose and producers gain:

net cost of a tariff = consumer loss – producer gain – government revenue

net cost of a tariff = efficiency loss – terms of trade gain

efficiency loss: the tariff distorts incentives to consume and produce

terms of trade gain: if the country is large, then a tariff lowers foreign export prices, improving terms of trade
Other instruments of trade policy

- other trade policy instruments are: (1) export subsidies; (2) import quotas; (3) voluntary export restraints; (4) local content requirements

- **export subsidy** is a payment to a firm or individual that ships a good abroad

- shippers at home will have incentive to export the good up to the point where:

  \[ \text{domestic price} - \text{subsidy} = \text{foreign price} \]
• let $P_w$ be the world price: the effect of a subsidy at home is to drive a wedge between the prices in home and foreign:

price home: $P_s > P_w$

price foreign: $P^*_s = P_s - \text{subsidy} < P_w$

• losers from an export subsidy at home: consumers and government

• winners from an export subsidy at home: producers

• an export subsidy worsens terms of trade by lowering the exports price in the foreign market from $P_w$ to $P^*_s$
• an export subsidy will unambiguously have costs that exceed the benefits:

\textit{net cost of a subsidy} = \textit{consumer loss} + \textit{government payment} – \textit{producer gain}

\textit{cost of a subsidy} = \textit{efficiency loss} + \textit{terms of trade loss}

• \textbf{import quota} is a direct restriction on the quantity of some good that may be imported

• import quotas always rise the domestic price of the imported good

• main difference between tariff and quota: government does not receive income with quotas
• quota rents: profits received by the importing firm holding a license to import (since imports are restricted, the firm can buy imports and resell at a higher price in the domestic market)

• the cost of an import quota is highest when the licenses to import are assigned to the government of the exporting country: in this case the quota rents go to foreigners

• a voluntary export restraint (VER) is a quota on trade imposed from the exporting country’s side instead of the importer’s
• a VER is generally imposed at the request of the importer
• a VER is exactly like an import quota where the licenses are assigned to foreign governments
• therefore, a VER is very costly for the importing country
• a **local content requirement** is a regulation that requires that some specified fraction of a final good be produced domestically
• local content regulations protect the domestic producers of parts in the same way an import quota does
• example:
  
cost of imported auto parts is $6,000, and the cost of domestic auto parts is $10,000

with a local content requirement of 50%, the average cost of auto parts would be $8,000, and will be reflected in the final price of the car

• local content requirement:
  
does not create government revenue or quota rents
it affects consumers directly through the final price

Main conclusion: *All trade policies benefit producers and hurt consumers*