International Trade
EC 201

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BSC

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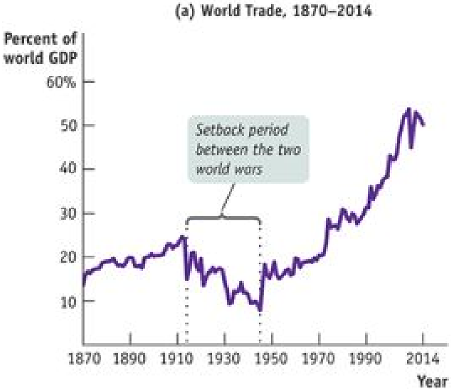
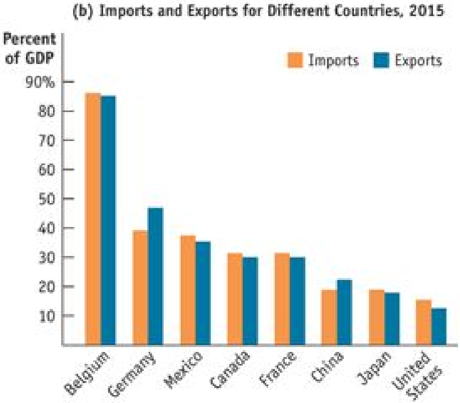
Context

1. Until now we have been talking about the markets within a country.
2. We said in Chapter 2 that comparative advantage is the basis of trade.
3. Countries trade with each other by importing or/and exporting.
4. Importing/exporting affect price, quantity, and economic surplus: either the consumer surplus or the producer surplus.
5. Here we will analyze the impact international trade has on the domestic market prices, quantities, and will see who benefits or who loses.
6. We will also learn how tariffs/quotas on import/export lead to economic inefficiencies.

International trade is becoming increasingly important



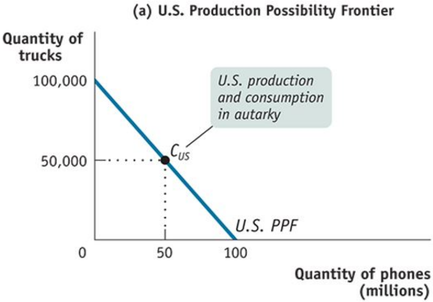


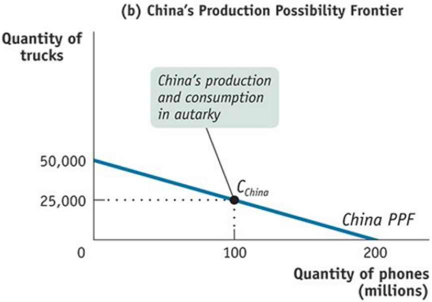
Trade follows the Ricardian Model

- Recall from chapter 2 that comparative advantage forms the basis of trade.
  - To refresh your memory, *a country has a comparative advantage in producing a good or service if the opportunity cost of producing the good or service is lower for that country than for other countries.*
- We assume that countries are able to identify their comparative advantage, specialize in producing it and trade with other countries. This is called the **Ricardian Model**, named after the famous British Economist David Ricardo (1772-1823)
  - We will assume straight line PPFs. *What does that mean for opportunity cost?*
- We will analyze how trade is better than autarky.
  - Autarky is a situation in which a country decides not to trade with other countries. For this to work well, the country would have to be self-sufficient.

Comparative advantage and gains from trade

Consider trade between the U.S. and China on trucks and smartphones. Here are the PPFs.





Exercise: Who has comparative advantage in what?

By the way, who has the absolute advantage on what?

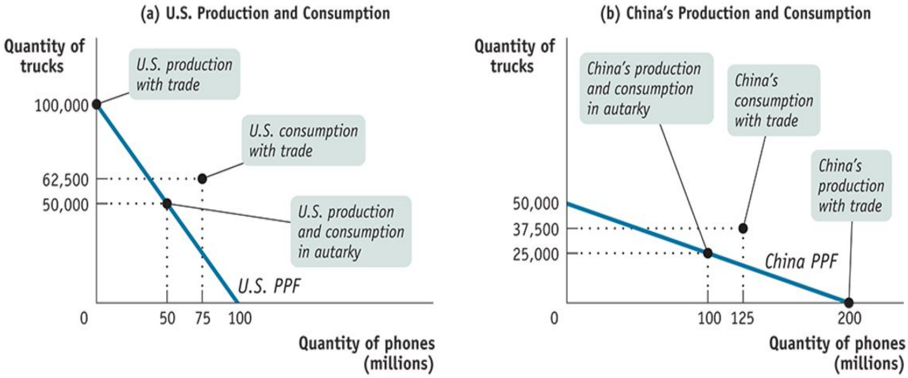
Comparative advantage and gains from trade

Now can you show how both countries could benefit from trade?

Hint: who specializes in producing what?

Comparative advantage and gains from trade

The U.S. concentrates on producing trucks, and China concentrates on producing phones. Both could benefit from trade.



Total world production of both goods rises. It is possible for both countries to consume more of both goods.

Sources of comparative advantage

- Differences in climate
  - Bananas, rice grow better in tropical climates.
- Differences in factor endowments
  - Canada can produce paper more cheaply because it's heavily forested.
- Factor abundance: the supply of a factor of production relative to other factors
  - How much forest does a country have compared with machines or people?
- Factor intensity: a measure of the quantity of a factor used in comparison with other factors
  - How much labor is used compared with natural resources or machines?
- Differences in technology
  - Sometimes a country has developed a particular technology that explains its comparative advantage. Example: Swiss watches, Japanese cars.

Demand, supply and international trade

Next, let's use the demand and supply model we already learned to determine

- the effect of trade on
  - domestic equilibrium price and quantity.
  - imports
- the effects of trade barriers on:
  - domestic equilibrium price and quantity.
  - imports

The effect of imports

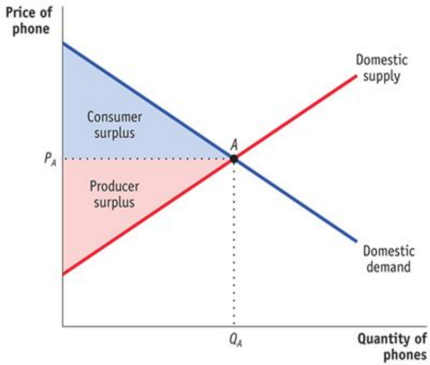
Let's note some terms before getting into the graphs.

- The **domestic demand curve** shows how the quantity of a good demanded by domestic consumers depends on the price of that good.
- The **domestic supply curve** shows how the quantity of a good supplied by domestic producers depends on the price of that good.
- The **world price** of a good is the price at which that good can be bought or sold abroad.

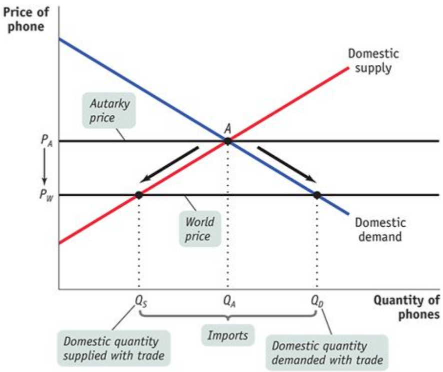
The effect of imports on domestic market

- When economy opens up for imports, huge quantities of foreign goods enter domestic market at a price lower than the domestic price
- Many importers now buy these goods abroad at a lower (world) price and resell domestically at a higher price.
- This practice continues until domestic prices decrease to the level of world price
- As a result quantity demanded by domestic buyers increases and quantity supplied by domestic sellers decreases.
- This shortage is fulfilled by imports

The effect of imports on domestic market



(d) CS and PS in autarky

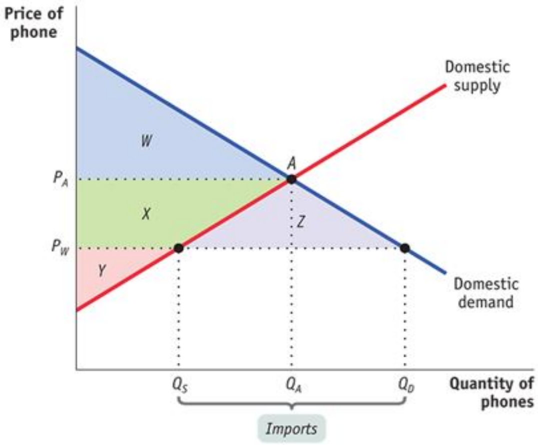


(e) Domestic market with imports

The effect of imports on domestic market

- When the economy is opened to international trade, imports enter the domestic market, and the domestic price falls from the autarky price, P_A, to the world price, P_W. As the price falls, the domestic quantity demanded rises from Q_A to Q_D and the domestic quantity supplied falls from Q_A to Q_S.
- The difference between domestic quantity demanded and domestic quantity supplied at P_W, the quantity $Q_D - Q_S$, is filled by imports.

Who gains and loses from imports?



	Changes in surplus	
	Gain	**Loss**
Consumer surplus	$X + Z$	
Producer surplus		$-X$
Change in total surplus	$+Z$	

(f) CS and PS with imports

Who gains and loses from imports?

- When the domestic price falls to P_W as a result of international trade, consumers gain additional surplus (areas $X + Z$) and producers lose surplus (area X).
- Because the gains to consumers outweigh the losses to producers, there is an increase in the total surplus in the economy as a whole (area Z).

What happens with exports ?

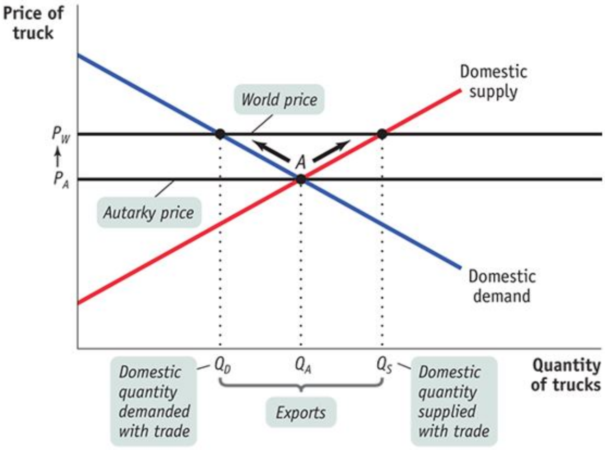
Exercise: Can you determine what happens with exports?

What happens with exports ?

- When economy opens up for international trade, some of the domestic supply is now exported, pushing domestic price up.
- Finding higher price attractive, many domestic sellers purchase trucks domestically at lower price and sell abroad at higher price
- This practice drives the domestic price up until it equals the world price
- As a result quantity demanded by domestic buyers decreases and quantity supplied by domestic sellers increases.
- This surplus is exported

Effect of exports on domestic market

Step 1: Draw the *world* price line with exports



(g) Domestic market with export

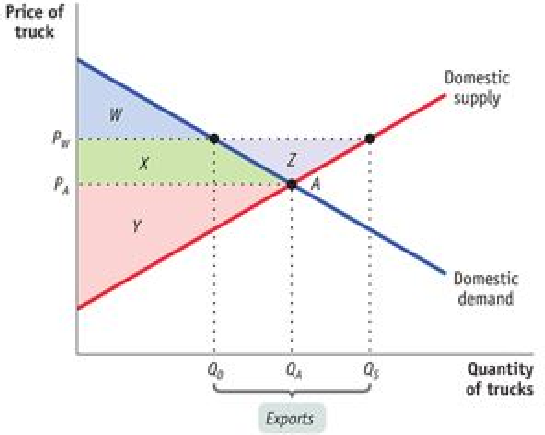
Effect of exports on domestic market

Step 2: Explain in words what you see in the graph

- When the economy is opened to international trade, some of the domestic supply is now exported. The domestic price rises from the autarky price, P_A, to the world price, P_W. As the price rises, the domestic quantity demanded falls from Q_A to Q_D and the domestic quantity supplied rises from Q_A to Q_S.
- The portion of domestic production that is not consumed domestically, $Q_S - Q_D$, is exported.

Effect of exports on domestic market

Step 3: Graph the effect on consumer and producer surplus



	Changes in surplus	
	Gain	Loss
Consumer surplus		$-X$
Producer surplus	$X + Z$	
Change in total surplus	**$+Z$**	

(h) CS and PS with export

Effect of exports on domestic market

Step 4: Briefly explain in words what you see in the graph

- When the domestic price rises to P_W as a result of trade, producers gain additional surplus (area $X + Z$) but consumers lose surplus (area X).
- Because the gains to producers outweigh the losses to consumers, there is an increase in the total surplus in the economy as a whole (area Z).

How does international trade affect income distribution?

- Does the combination of
  - growing imports of labor-intensive products from newly industrializing economies, and
  - the export of high-technology goods
- cause a widening wage gap between highly educated and less well educated U.S. workers?

Many economists think so. Why is that?

International trade tends to increase demand for factors that are abundant in a country and reduce the demand for factors that are relatively scarce. U.S. exports tend to be capital-intensive, imports tend to be labor-intensive.

Trade protection

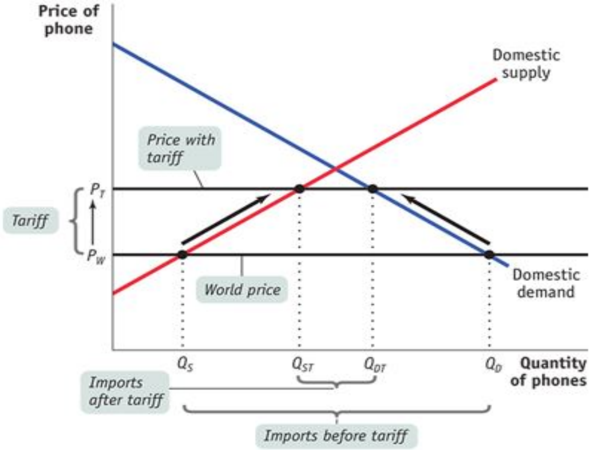
- An economy has **free trade** when the government does not attempt either to reduce or to increase the levels of exports and imports that occur naturally as a result of supply and demand.
- Policies that limit imports are known as trade protection or simply as protection.
- Tariff is famous examples of trade protection
  - *A tariff is a tax levied on imports.*

The effect of a tariff

- A tariff has two effects:
  - Increase in domestic production, reduction in domestic consumption because the good is now produced by the higher-cost country.
  - Less is consumed, leading to lower gains from trade.

The effect of a tariff on domestic market

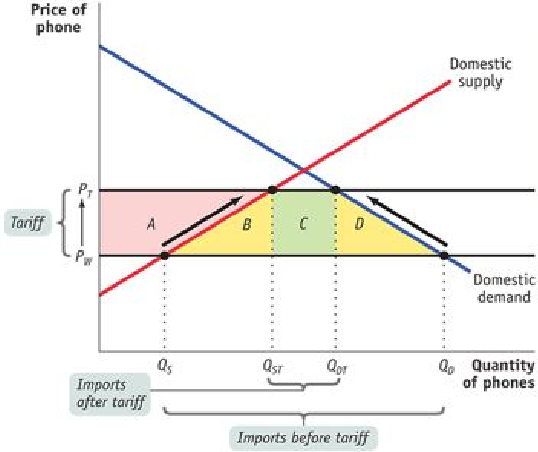
The tariff pushes up the price, which reduces quantity demanded and increases domestic quantity supplied.



(i) How a tariff affects domestic market

Tariff creates deadweight loss (reduces welfare)

The tariff reduces consumer surplus, increases producer surplus, creates new government revenue, and *creates deadweight loss*.



	Changes in surplus	
	Gain	Loss
Consumer surplus		$-(A + B + C + D)$
Producer surplus	A	
Government revenue	C	
Change in total surplus		$-(B + D)$

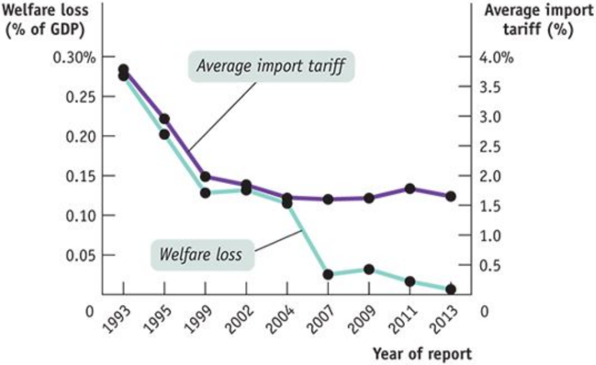
Area C is government revenue. Area $B + D$ is total deadweight loss.

Effect of an import quota

- Import quota is the legal limit on the quantity of a good that can be imported. Effect? Same as a tariff, except instead of government revenue, "quota rents" will go to quota license holders (usually foreigners).

Trade protection in the United States

- Until recently, clothing and textiles were strongly protected from import competition.



Now the United States has very low tariffs, which has increased the benefit of trade (or, as in the graph, reduced the lost "welfare").

Arguments for trade protection

Here are a few points *for* trade protection

- Trade and domestic employment
  - Globalization will force some firms to lay off workers
    - Even so, increased trade usually increases jobs in other industries (exporters).
    - But for workers who lose their jobs, switching industries can be difficult and time-consuming.
- National security
  - In times of national crisis or war, the United States must be able to rely on key domestic industries such as oil, steel, defense, food.
  - Protection is required even during peacetime to ensure their availability.

Arguments for trade protection

- The infant industry argument
  - New industries need a temporary period of protection to develop
  - But there are many critiques to this argument. For example, it might be difficult to be competitive when protected from competition. There is politics involved in which industry gets preference.
- We should not trade with countries following illegal practices
  - Example: child labor.

Arguments for trade protection

Which argument (*for* trade protection) do you think is the strongest?

- Trade reduces the number of jobs in the United States and should therefore be limited.
- It's wrong to trade with countries that use child labor.
- We need to keep some industries for reasons of national security.
- We need to protect certain industries while they develop.

Famous international trade agreements

- NAFTA (North American Free Trade Agreement) : The U.S., Canada and Mexico
- EU (European Union): A group of 28 European countries

The WTO (World Trade Organization) oversees the international trade agreements and rules on trade disputes.

Challenges to globalization

- Inequality: the wage gap in the U.S.
- Offshore outsourcing: hiring people in another country to perform various tasks.