EC566 – Macroeconomics for Business

Week 22 – Lecture 2

International Trade

L&C – Ch.27

B&P – Ch. 18

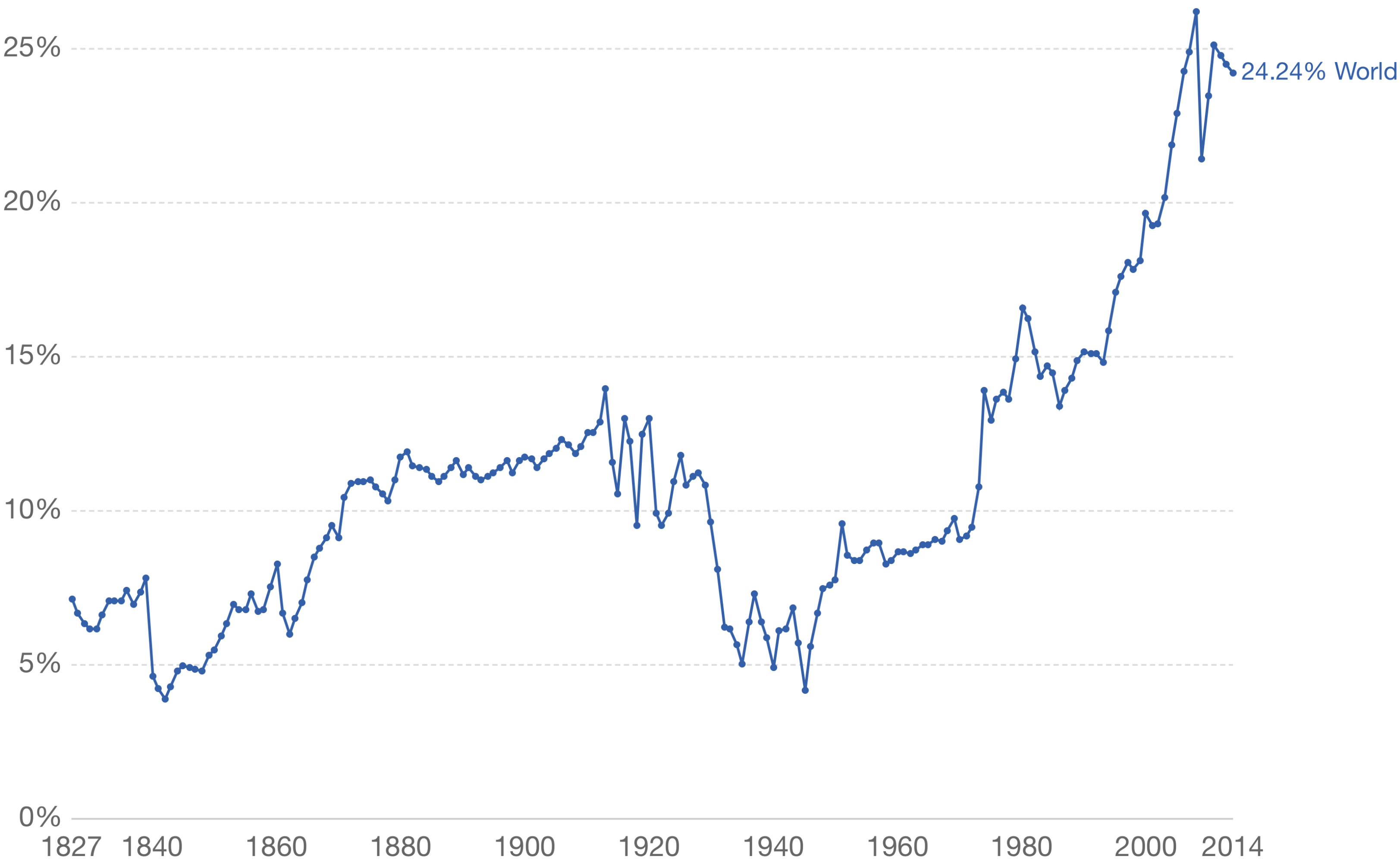
Objectives

  - Identify types of gains from trade
  - Learn how to measure welfare impact of trade

- Examine effects of trade restrictions
  - Who gains & who loses from trade restrictions
  - Highlight politics of trade restrictions
- Explore policies to compensate for losses

Value of exported goods as share of GDP

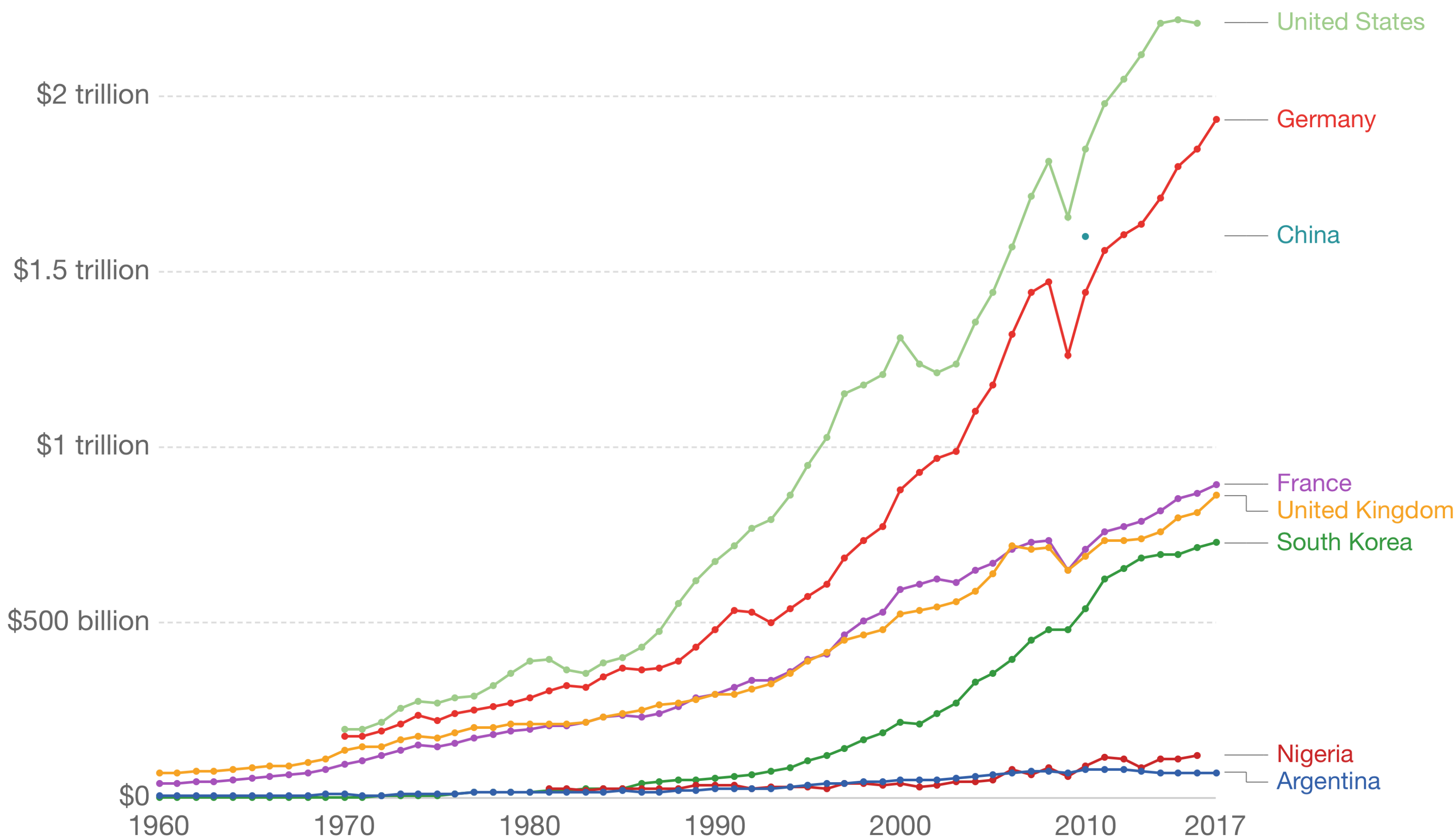
Estimates correspond to merchandise export-to-GDP ratios.



Source: Fouquin and Hugot (CEPII 2016)

Exports of goods and services (constant 2010 US $)

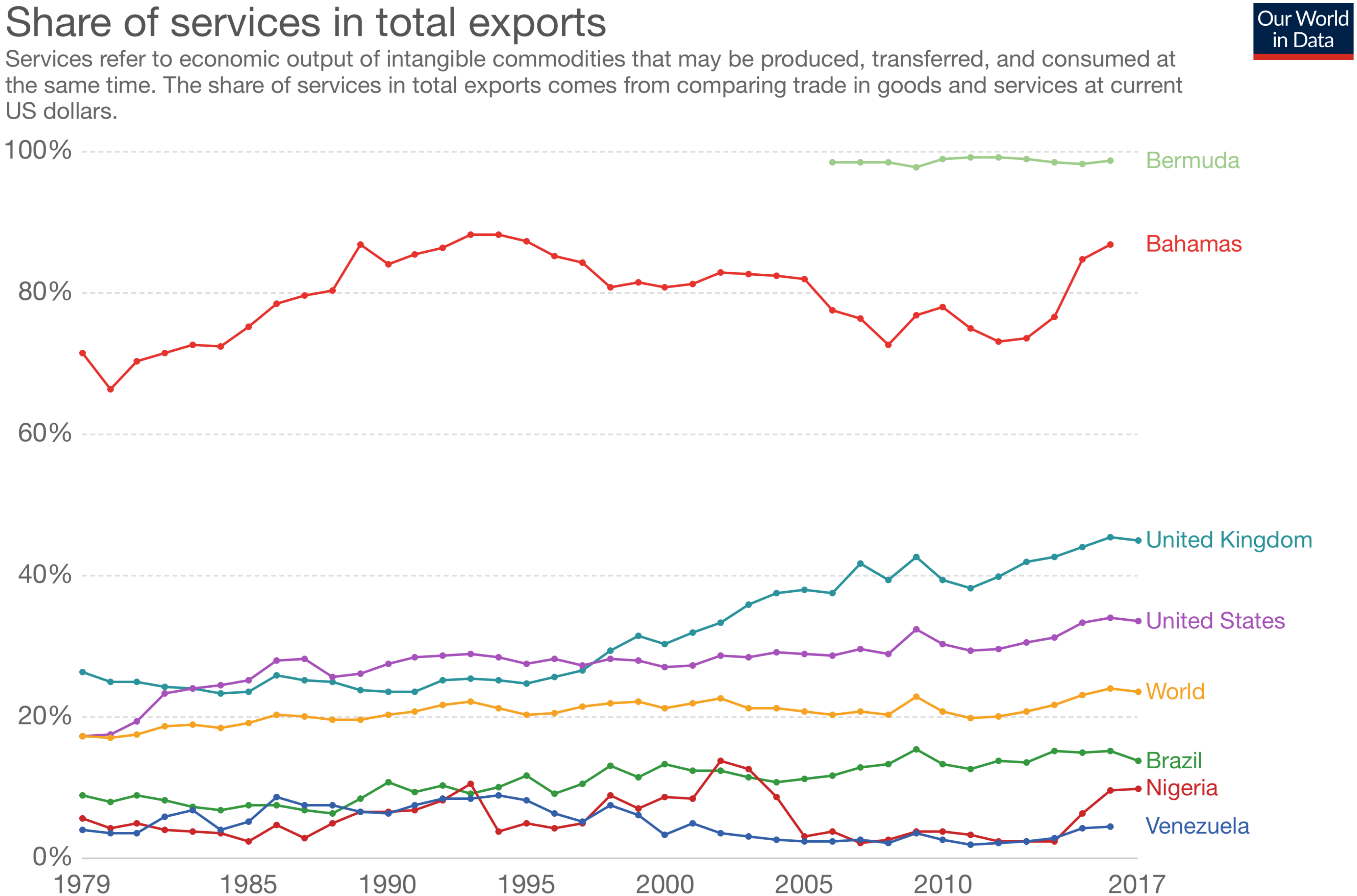
Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. Data are in constant 2010 U.S. dollars. This means values are corrected for inflation.



Source: World Bank

Share of services in total exports

Services refer to economic output of intangible commodities that may be produced, transferred, and consumed at the same time. The share of services in total exports comes from comparing trade in goods and services at current US dollars.



Source: World Bank

International Trade

- 2012 - International trade (global exports and imports) were about $23 trillion – 31% of the value of global production
- US - accounts for 10 percent of world exports and 12 percent of world imports.
- Germany and China - rank second
- In 2012, total U.S. exports - $2.2 trillion, about 14 percent of the value of U.S. production; $.6 trillion (30% of total exports) export of services
- In 2012, total U.S. imports were $2.8 trillion, about 17 percent of the value of total U.S. expenditure –
- UK exports of goods/services – £547.5 billion ; exports to EU £235.8 bn and rest of the world £284.1 bn

What are gains from trade?

- Gains from trade refer to the benefits gained by a group of people from exchanging goods and services with other groups of people

- Trade – allows people, groups, regions and countries to specialize in products in which they can do really well and buy from others that they cannot produce

- Interregional and international

- The term “gains from trade” does not mean that everyone in the group gains…
  - It means that **benefits > losses**
  - With trade - specialization in areas in which there is some strength and satisfy other needs by trade
  - Without trade – everyone must be self-sufficient

Why are there gains from trade?

Four types of gains from trade:

1. Comparative advantage (Absolute vs. Comparative advantage)
2. Competition
3. Economies of scale
4. Dynamic gains from trade

Absolute vs. Comparative Advantage

Absolute Advantage:

- One region/country said to have absolute advantage over another in the production of any good when an equal quantity of resources can produce more of that good in the first region than the other
- World production can be increased if each specialized in producing the commodity in which it has an absolute advantage and trade with each other, all countries will be able to consume more of the commodities

Comparative Advantage

- David Ricardo – presented theory of Comparative Advantage

- Definition: Each country can produce some goods at *relatively* lower cost than other goods

- A country will export goods it can produce at relatively lower cost and import goods that cost relatively more to produce

Cont…

- US and EU – producing two goods wheat and cloth
- The opportunity cost of producing these two products differ between the two
- How much of one good to give up in order to produce one more unit of the other
- Opportunity cost of producing 1kg of wheat is .60 metre of cloth in US
- While in EU it is 2 m of cloth

	Wheat	**Cloth**
US	.60m cloth	1.67kg wheat
EU	2.00m cloth	.50 kg wheat

Cont…

- Sacrifice of cloth in producing wheat – lower in US than in EU
- Loss of wheat in producing one unit of cloth – lower in EU than in US
- ➢World wheat production can be increased if US produces it
- ➢World cloth production can be increased if EU produces it

Comparative Advantage

Gains from specialization arise from differing opportunity costs in different countries . Gains from trade are realised when countries export goods in which they have comparative advantage and import goods for which other countries have a comparative advantage.

Increased competition

- Without trade, some companies dominate their industry, so they can act as monopolists and charge higher prices
- With trade, companies have to compete with imports and offer prices close to costs
- Often applies to manufacturing, particularly in countries with a small market
- Allows more product and process innovation
- Consumers benefit from technological change as a result of openness
- Reduces inefficiencies of domestic production

Economies of scale

- Many goods have "economies of scale" in production

- If the domestic market is small and there is no trade, the costs of production will be high
- In this case, trade allows a larger market, higher production, and lower costs
- Small countries – having small markets which cannot exploit the products of scale economies – can benefit if they specialize in products in which they have comparative advantage; export the surplus and import other products in which they do not have comparative advantage
- Learning by doing – experience accumulates with economies of scale and specialization
- **Product Differentiation** – Intra-industry trade offering range of choice to consumers

(*imperfect competition and product differentiation – individual product lines ; greater scale economies by expansion of markets for the firms dealing with specific product range; modern trade in intra-industry trade due to taste preferences, preference for variety and choice)*

Dynamic gains from trade

- Static gains mean that trade gives a one-time increase in income (GDP)
- Dynamic gains means that trade increases *the rate of growth* in income (GDP)
- Why does trade create dynamic gains?
  - Competition spurs innovation and investment
  - Trade introduces new technology and inputs
  - Open trade policy increases investment, particularly foreign investment
    - Open trade policy is a signal of a good investment climate
    - Allows foreign companies to invest while catering to home consumers

Dynamic gains from trade - examples

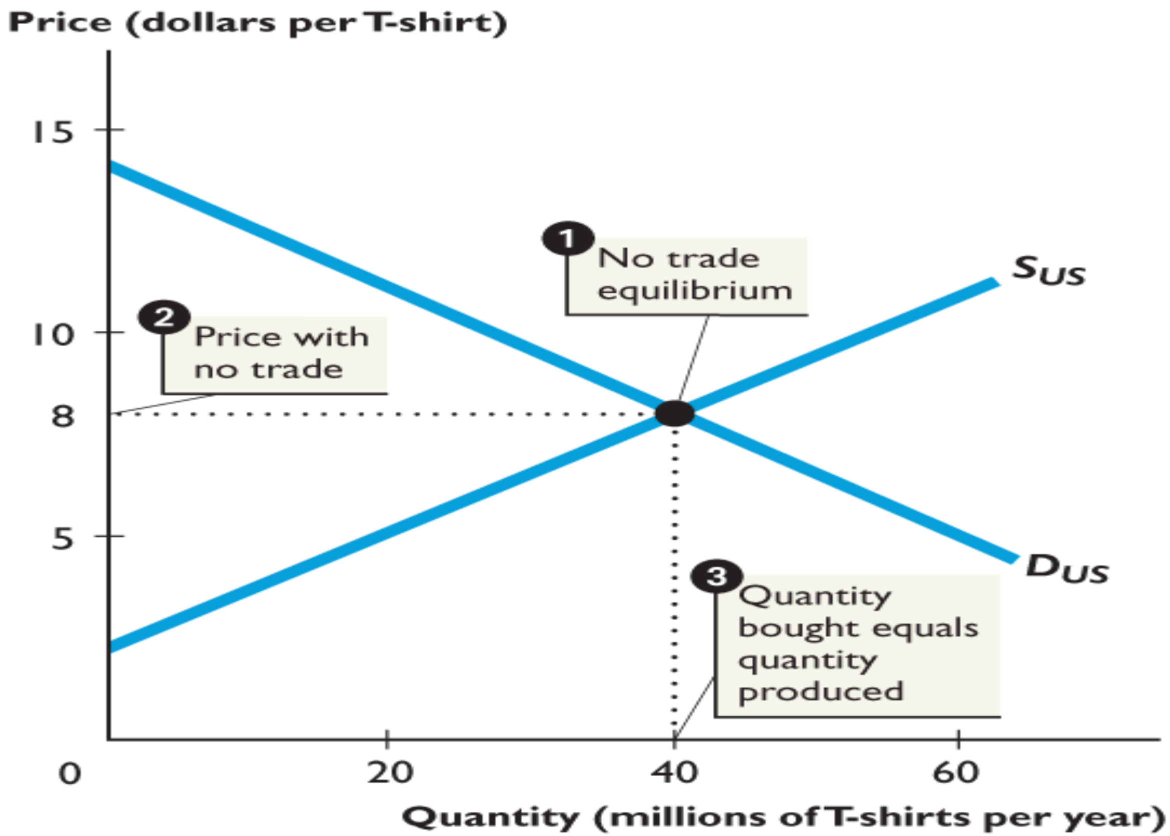
- North Korea vs South Korea
  - North Korea has followed extreme self-sufficiency policy but economic growth is stagnant
  - South Korea has followed more open trade policy and has been one of the Asian Tigers, with rapid growth

- Studies of determinants of economic growth show:
  - Landlocked countries have less trade and slower growth than countries with coast
  - Countries with open trade policies have higher growth rates on average

Who gains and who loses from trade?

- An example – US has comparative advantage in producing aeroplanes and China has comparative advantage in making shirts.
- **Why US imports T-shirts?**
  - U.S. demand and U.S. supply determine:
    - the U.S. price at $8 a T-shirt
    - U.S. firms produce at 40 million T-shirts a year and U.S. consumers buy 40 million T-shirts a year

How global markets work?



(a) Equilibrium with no international trade

Cont…

- The demand for and supply of T-shirts in the world determine the world price at $5.
- The world price *is less* than $8, so the rest of the world has a comparative advantage in producing T-shirts.
- With opening to international trade, the price in the US falls to $5 a T-shirt.

➢ with international trade, Americans increase the quantity they buy to 60 million T-shirts a year.

- U.S. garment makers decrease the quantity they produce to 20 million T-shirts a year.
- The United States imports 40 million T-shirts a year

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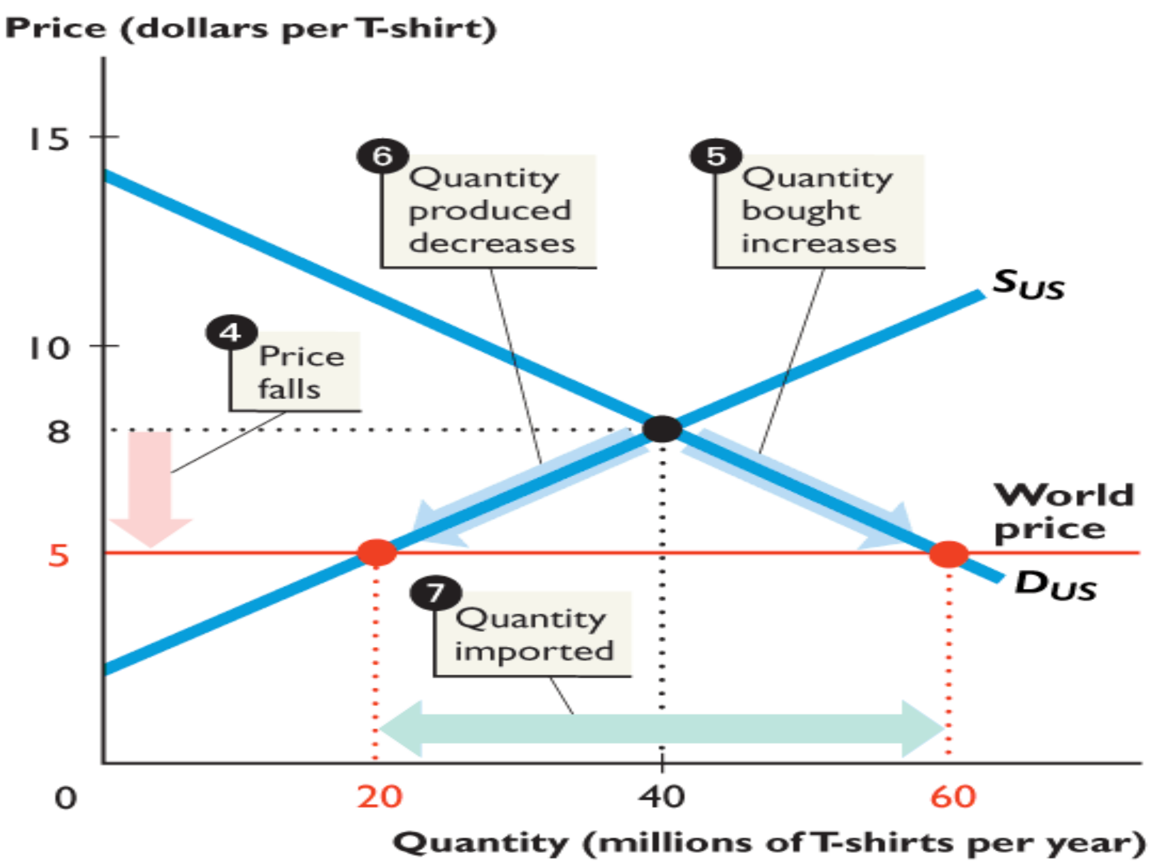
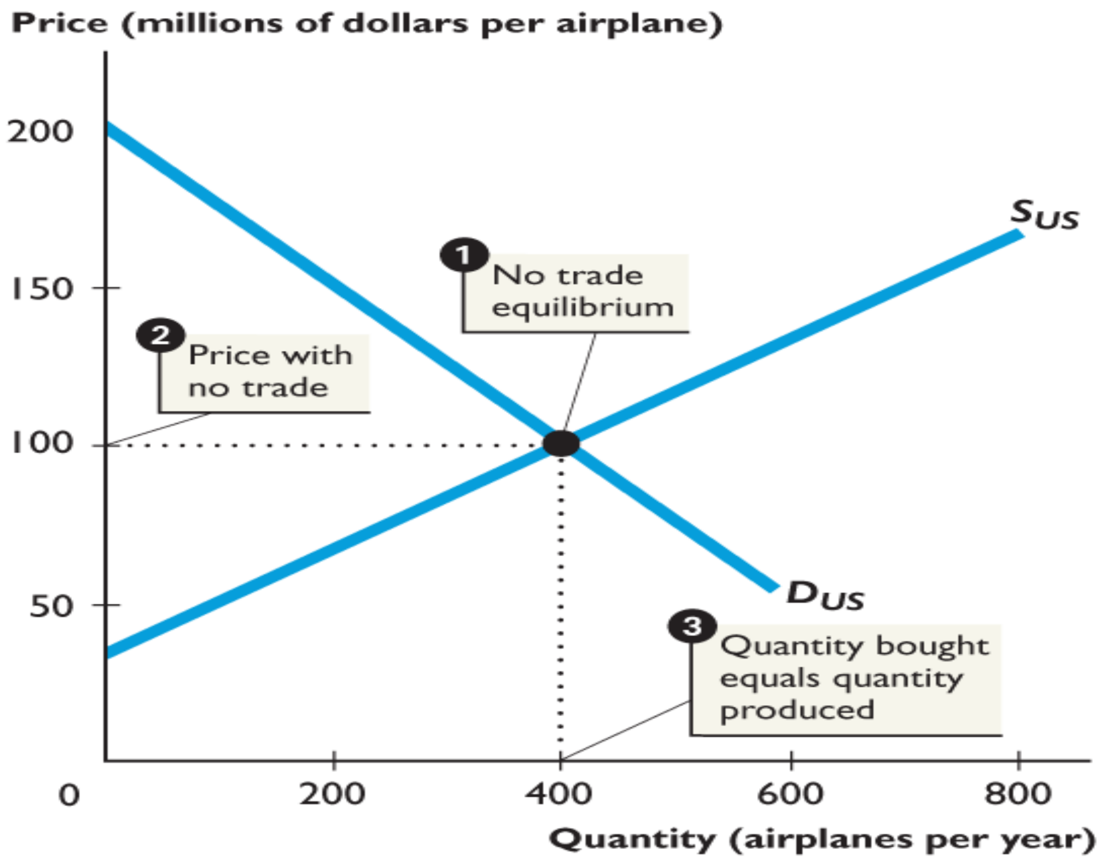


(b) Equilibrium in a market with imports

Cont…

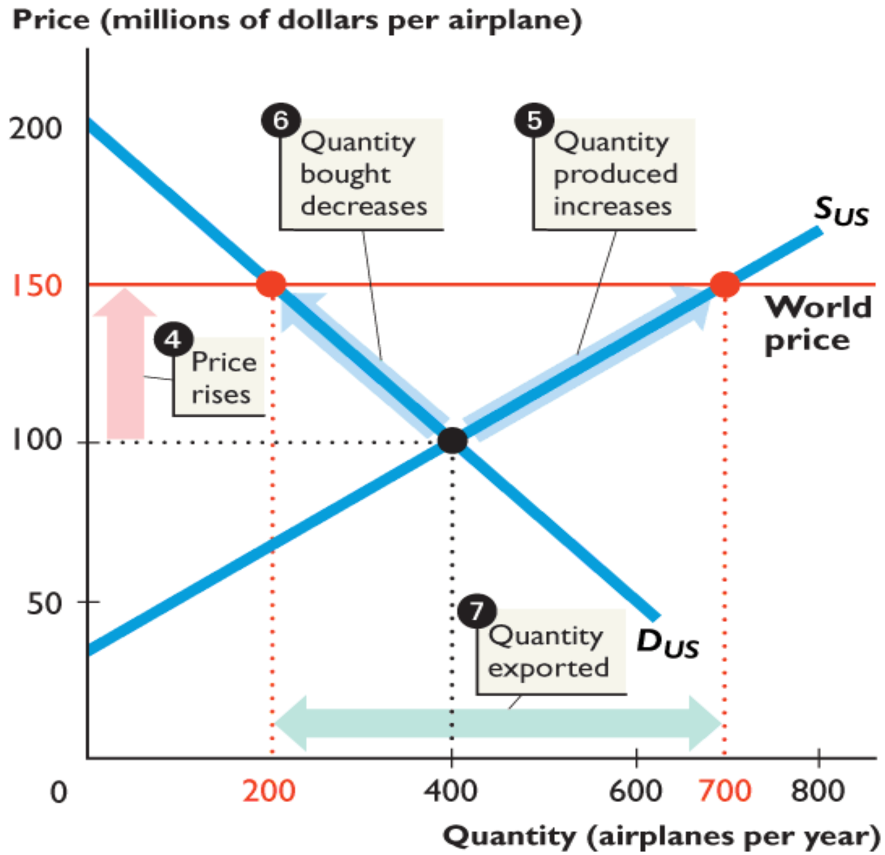
- The world market for airplanes determines the world price at $150 million an airplane.
- The world price *is higher* than $100 million, so the United States has a comparative advantage in producing airplanes.
- The price of an airplane in the United States rises to $150 million.

without international trade



(a) Equilibrium without international trade

With International Trade



(b) Equilibrium in a market with exports

With international trade

- With Internationl trade:
- U.S. aircraft makers increase the quantity they produce to 700 airplanes a year.
- U.S. airlines decrease the quantity they buy to 200 airplanes a year.
- The United States exports 500 airplanes a year.

Winners, losers and net gains from trade?

- International trade lowers the price of an imported good and raises the price of an exported good.
- Buyers of imported goods benefit from lower prices and sellers of exported goods benefit from higher prices.

➢ Who wins and who loses from free international trade?

- **Domestic consumers gain from imports -** the price paid by domestic consumers falls and the quantity consumed increases.
- The greater the price fall and the increase in quantity bought, the greater is the consumers' gain.

- **Domestic producers of the imported goods lose from trade-** the price received by the domestic producer of the imported good falls.

The quantity sold by domestic producers of the imported good decreases.

Gains and losses from exports

- **The domestic consumers lose.**
- the price paid by domestic consumers rises and the quantity bought decreases.
- The greater the price rise and the decrease in quantity bought, the greater is the consumers' loss.

- **Domestic producers gain from exports:**
- The price received by the domestic producer of the exported good rises.
- The quantity sold by domestic producers of the exported good increases.
- Domestic producers of the exported good gain from international trade.

Trade restrictions and the effects

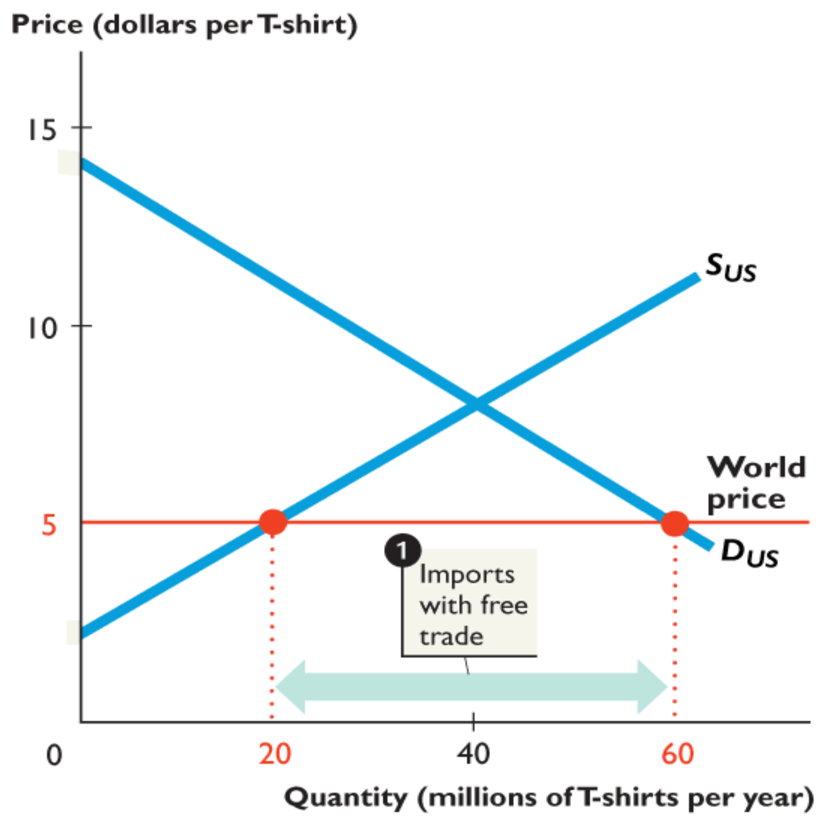
- Governments restrict international trade to protect domestic producers from competition.

- Various tools used for trade protection:
  - Tariffs
  - Import quotas
  - Other import restrictions
  - Export subsidies

Tariff and its effect

- A **tariff** is a tax on a good that is imposed by the importing country when an imported good crosses its international boundary.

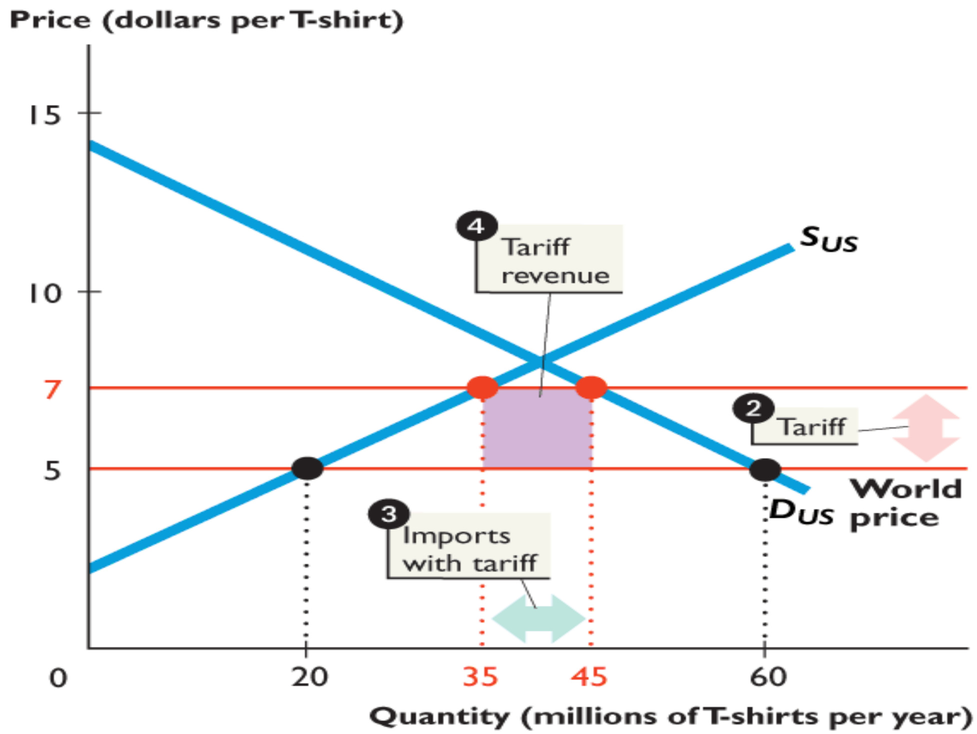
- With free trade, price is $5
Per shirt
- US imports 20 million shirts
- Domestic producers
Produce 20 million shirts &
Domestic consumers consume
60 million.



(a) Free trade

With Tariffs

- The tariff of $2 raises the price in the U.S. market to $7.
- U.S. imports decrease to 10 million a year.
- U.S. government collects the tax revenue of $20 million a year.



(b) Market with tariff

Who gains and loses from tariffs?

- **Consumers of T-shirts Lose**

- buyers of T-shirts now pay a higher price (the world price plus the tariff), so they buy fewer T-shirts.
- The combination of a higher price and a smaller quantity bought makes consumers worse off.
- Consumers also pay tariff revenue to the government.

  - **Consumers lose from the tariff.**

- U.S. producers receive a higher price (the world price plus the tariff), so produce more T-shirts.

- **Producers gain from the tariff.**

Consumers lose more than producers gain!

- Consumers lose from a tariff.

- The tariff revenue is a loss to consumers of T-shirts but a gain to consumers of public services paid for by the tariff revenue.
- Consumers lose doubly – on account of higher price, reduced quantity and higher price they have to pay for any imports they purchase
- no one gains from decreased quantity of T-shirts produced.

Other import barriers

- Other Import Barriers

- Two sets of policies that influence imports are:
  - Health, safety, and regulation barriers
  - Voluntary export restraints

- Thousands of detailed health, safety, and other regulations restrict international trade.

Why do governments impose trade restrictions?

- Political influence of producers
  - Producers are usually larger, better informed and better organized than consumers
  - Rent-seeking activities; lobbying
- Non-economic objectives ; national defence considerations; policy to promote diversification

- Infant industry argument

  - Learning by doing
  - To protect against the competition in early stages
  - Picking the Winners
  - Problem of infants who never grow up

Cont…

- Strategic trade advantage – Jet aeroplane, computer chips , software
- Protection against dumping - to protect against predatory practices and dumping
- Favourable terms of trade
- Concern about impact on poverty
- Dependence on tariff revenue

Three common trade myths

1. "When two countries trade, one country wins and the other loses."

2. "Some countries are so inefficient, they don't have a comparative advantage in anything"

3. "The country should promote exports and reduce imports"

“When two countries trade - one country wins and the other loses”

- Trade is not a zero-sum game
- Both countries generally benefit from trade, though the benefits may not be equal, and there are winners and losers in each country

- Example: If Uganda exports maize to Kenya, both countries gain overall, but:
  - Some Ugandan maize producers and Kenyan maize consumers gain
  - Some Ugandan maize consumers and some Kenyan maize producers lose

“Some countries are so inefficient, they don’t have a comparative advantage in anything”

- Some countries may not have an absolute advantage in anything

- Every country has a comparative advantage in something

- **Learning by doing;** costs of producing new goods fall over time with accumulation of experience and skills
- ***Policy implication***: through such means as training and tax incentives and right business policies , new comparative advantages may be created

“The country should promote exports and reduce imports”

- Mercantilist philosophy (1500s): Maximize exports and minimize imports

- The only reason to export is to be able to pay for imports, either now or later
- Exports help the economy via job creation
- Imports help the economy by lowering cost and increasing variety of inputs for producers and goods for consumers
- Spillover effects
- If every country starts following this philosophy – we will have no trade – standards of living and welfare will suffer

Ameliorating negative effects of trade

- Who is hurt by removing trade barriers
  - Removing export restrictions raises domestic price, benefiting producers but hurting consumers
  - Removing import restrictions lowers domestic price, benefiting consumers but hurting producers

- Compensation - Some governments try to compensate or assist those hurt by removing trade barriers
  - Tax relief
  - Retraining
  - Assistance to regions hard-hit by trade reform
  - Safety-net programs (for poor in general)

Conclusions

- Every country can benefit from trade through
  - Comparative advantage
  - Increased competition
  - Economies of scale
  - Dynamic gains from trade

- Trade creates a net benefit over autarky
  - Consumers win if imports reduce the price of goods
  - Producers win if exports increase the price of their produce

Conclusions

- However, not everyone gains from trade
  - Producers of import-competing goods lose from trade
  - Consumers of exportable goods lose from trade
- Gains and losses can be estimated
  - Requires information on production, consumption, trade, prices, and price elasticities
- Potential negative effects of trade can be moderated by
  - Training programs for displaced workers
  - Safety net programs that help poor households
  - Regional development programs that assist regions adversely affected.