

## Ch 5: International Trade

# We Talked A Little About Trade

We talked about the basis for trade, differences in opportunity costs, but we need to expand on that idea.

# Economics has Many Models of Trade

- ▶ They all have some limited support
- ▶ None really explains everything
  - ▶ Some are good at intra(inside)national trade
  - ▶ some are good at peer-to-peer international trade
  - ▶ Some are good at everything but final goods

# We are Sticking to Heckscher–Ohlin

- ▶ I won't show you the model, just the implications.
  - ▶ The model is a few classes past this one.
- ▶ Heckscher–Ohlin (H-O) uses the ideas from Chapter 2 about PPFs and comparative advantage
  - ▶ All countries use the same technology
  - ▶ But countries have different endowments – different amounts of labor and physical capital are most common.
  - ▶ Does not require mobility of labor or capital – but it helps speed up factor price equalization (wage rates and interest rates)

## Rough Outline of H-O Idea

- ▶ Countries have different endowments of labor and capital (or even timber and coal, etc.)
- ▶ Countries with high labor endowments have a comparative advantage in labor intensive goods (Bangladesh and Clothing)
- ▶ Countries with high capital endowments have a comparative advantage in capital intensive goods (US and airplanes)

H-O works well within a country but not necessarily between. It is like you need more than just a market to make it work.

# H-O is Static

- ▶ Does not endogenously (within the model) allow endowments to change.
- ▶ But, people, e.g., Paul Romer (Nobel 2018), have models that allow for endogenous technological change and factor changes.
  - ▶ Not all these models are strictly trade models.
  - ▶ Romer is more about growth

## But there are some Easy Extensions of H-O

Rybczynski Theorem – Increases in a factor of production, more than proportionally increase output of goods that use that factor intensively.

Huh?

- ▶ If you get more low skill immigrants, you increase output of goods that use low skill workers by a more than proportional amount.
- ▶ Upshot – low skill immigration probably allows lower skill people already in a country to have more employment possibilities.

## And Another

Stolper-Samuelson – Goods prices drive factor prices

Huh?

- ▶ If the price of forest products falls, then wages in the forest products industry falls.
- ▶ But, wait, can't I change jobs?



Yea, but

Factor Price Equalization Theorem: Even without factor mobility, factor prices will equalize.

Huh?

- ▶ Yes, you can change jobs but the changes echo
- ▶ Only seems to work with similar countries (US vs CA)

## Keep these ideas in mind

These are all ideas from classes that come after this, but keep them in mind when we are looking at supply and demand graphs.

- ▶ There are some odd implications in macro because “Principle #10: One person’s spending is another person’s income.”

# A Supply and Demand Model

- ▶ This is about perfect competition.
- ▶ All countries are “small”
  - ▶ No one country can manipulate world price by altering sales
  - ▶ No one country can manipulate world price by altering purchases.
- ▶ They can alter prices within their country.

# Key Intuition

- ▶ If the domestic price is lower than the world price – export
  - ▶ Sellers have the choice of selling domestically or internationally.
  - ▶ They pick the high price and don't sell at the domestic price.
- ▶ If the domestic price is higher than the world price – import.
  - ▶ Buyers have the choice of buying from domestic or international producer.
  - ▶ They pick the low price and don't pay the high price that domestic producers want.

Trade equalizes domestic and international prices.

# Exporting

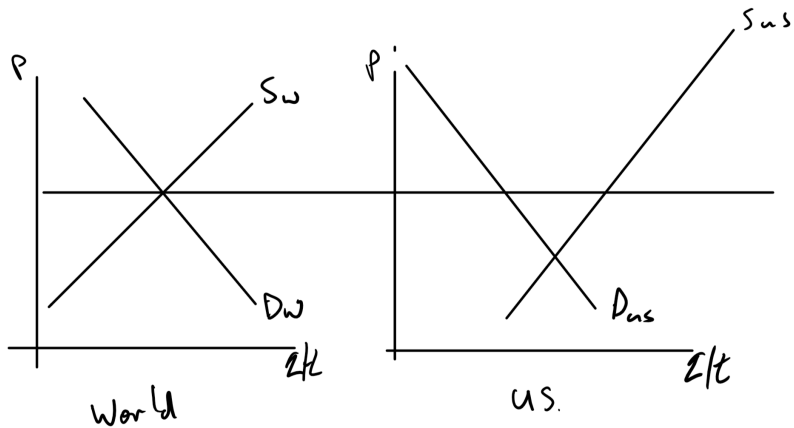


Figure 1:

## Keep in Mind

- ▶ Price of output is going *up* for sellers.
- ▶ Stolper-Samuelson says the prices of factors that are used intensively in creating the export good – increase.

See why there is political support for exporting when you work in an export industry?

# Importing

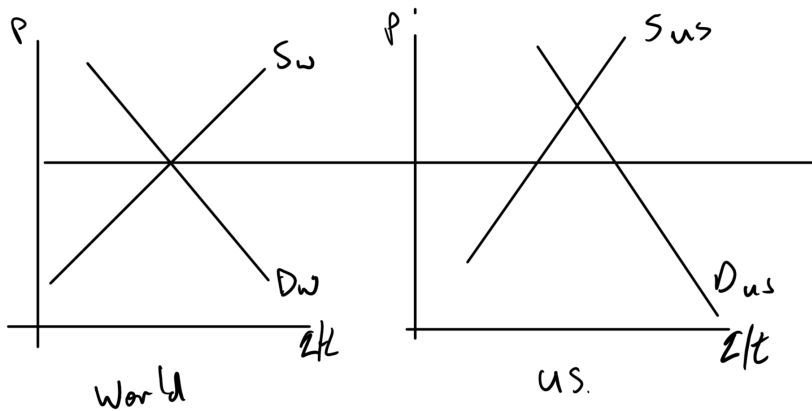


Figure 2:

## Keep in Mind

- ▶ Price of output is going *down* for sellers.
- ▶ Stolper-Samuelson says the prices of factors that are used intensively in creating the imported good – decrease.

See why there is political support to close off imports when you work in an import competing industry?



## But Are We Really Better Off?

- ▶ Can't tell by just looking but.
- ▶ We can do some welfare analysis (consumer and producer surplus) to see.
- ▶ Keep in mind that CS/PS is one form of welfare analysis (How well off we are) and that others are in use.
- ▶ CS/PS is great for one market at a time, when there are few linkages to other markets.

## CS Basics

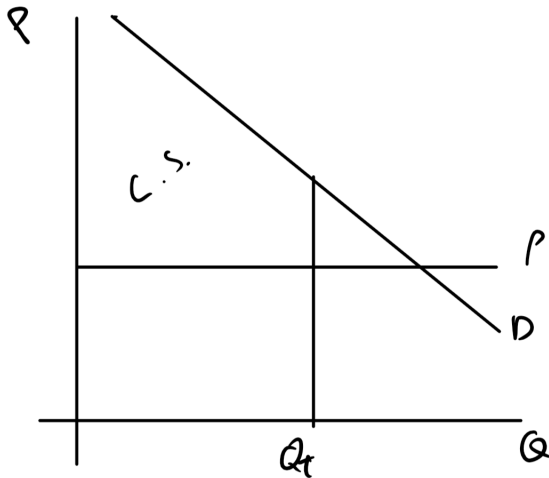


Figure 3:

## Focus on

- ▶ The area above price, below demand up to quantity transacted.
- ▶ The benefits that buyers receive beyond what they paid for the good.
- ▶ The difference between what they were willing to pay and what they actually paid.
- ▶ More is better.

# PS Basics

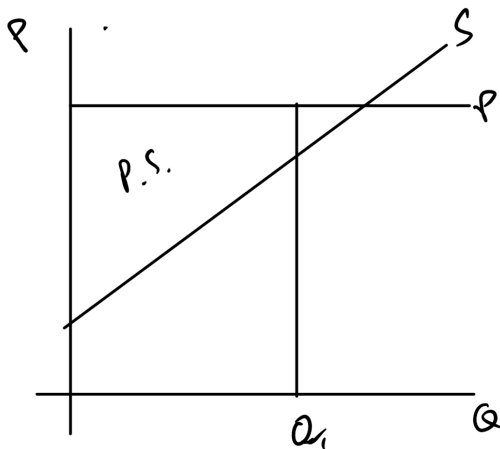


Figure 4:

## Focus on

- ▶ The area below price, above supply up to quantity transacted.
- ▶ The benefits that sellers receive beyond what they sold the good for.
- ▶ The difference between what they were willing to sell goods for and what they sold them for.
- ▶ It is economic profits plus fixed cost.
- ▶ More is better.

## Do export and imports make us better off?

- ▶ This CS/PS analysis does not look at the effect on factor markets, wages and rental rates (price of capital)
- ▶ Ignores effects on the rest of the world (ROW)

## Welfare Changes from Exports

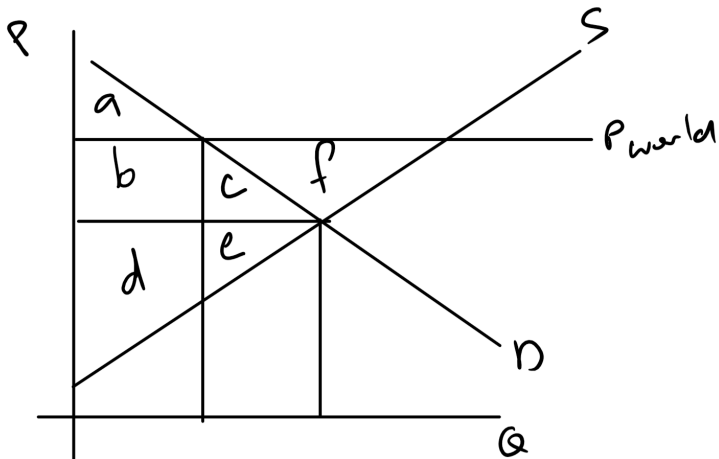


Figure 5:

# Summary

- ▶ Consumers:
  - ▶ No trade:  $A + B + C$
  - ▶ With trade :  $A$
  - ▶ Ouch!
- ▶ Producers:
  - ▶ No trade:  $D + E$
  - ▶ With trade:  $D + E + B + C + F$
  - ▶ Woot!

Note that trade added  $F$ . That means in this market, society as a whole is better off, but domestic consumers are worse off.



## Welfare Changes from Imports

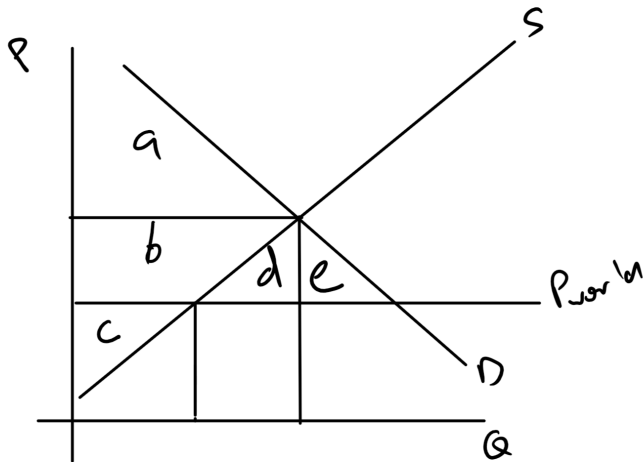


Figure 6:

# Summary

- ▶ Consumers:
  - ▶ No trade:  $A$
  - ▶ With trade :  $A + B + D + E$
  - ▶ Woot!
- ▶ Producers:
  - ▶ No trade:  $B + C$
  - ▶ With trade:  $C$
  - ▶ Ouch!

Note that trade added  $D + E$ . That means in this market, society as a whole is better off, but domestic producers are worse off.

# Politics Check-in

If  $ROW > Domestic$

- ▶ Sellers want to export
- ▶ People that work in export industry want to export
- ▶ Consumers want to keep the low domestic prices and don't want to export.

If  $ROW < Domestic$

- ▶ Buyers want to import
- ▶ People that work in the import competing industry don't want imports.
- ▶ Sellers want to keep the high domestic prices and don't want to compete with exports.

Principle 4: People usually respond to incentives, exploiting opportunities to make themselves better off.

# What Can You Do

- ▶ Non-Tariff Barriers – Lots of things
- ▶ Tariffs – Tax on Imports or Exports
- ▶ Quotas – Limitations on Imports or Exports

# Non-Tariff Barriers

This is the most diverse category it includes things like:

- ▶ Health and safety standards (Generally resolved by setting joint standards)
- ▶ Bureaucratic delays
- ▶ Packaging and labeling standards
  - ▶ NAFTA required French, English and Spanish for some goods.
  - ▶ Notice the stuck on nutritional labels
- ▶ Local content requirements (WTO goes after this if it gets out of hand. There are exceptions.)
- ▶ ...

## Generally

WTO is a huge body of international law negotiated, starting in 1947, by more than 100 countries that cover trade. There are a few key ideas:

- ▶ MFN Rule: Treat everyone the same. You give a concession to one member, you give it to all.
- ▶ Treat foreign the same as domestic.
- ▶ Binding and transparent agreements
- ▶ Safety valves. There are exceptions and ways to trigger them.

There is a reason that international trade is a specialty area for economists. There are at least 60 treaties.

# Why Impose a Tariff

- ▶ Originally, it was one of the few really effective ways to collect tax revenue.
  - ▶ Ports were limited.
  - ▶ Charge people for stuff coming off boats or as they crossed one of few roads
- ▶ Modern use is either more manipulative or aimed at 'level playing fields'

# Import Tariff

- ▶  $ROW < Domestic$
- ▶ This is a tax on imports
- ▶ Intended to protect high cost domestic producers.



# Import Tariff

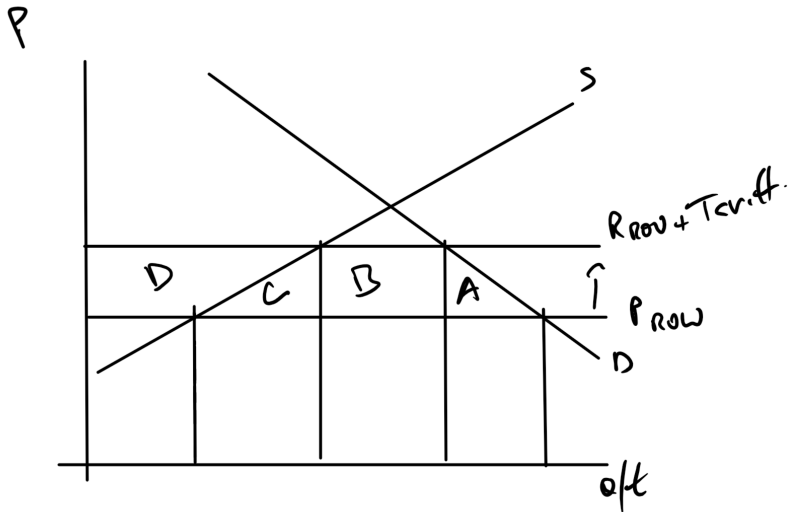


Figure 7:

# Summary Tariff

- ▶ Imports decrease and domestic price increases
- ▶ All welfare losses come from consumers
- ▶ Consumers
  - ▶ Before Tariff:  $A + B + C + D$
  - ▶ After Tariff: ALL GONE
- ▶ Domestic Producers:
  - ▶ After Tariff:  $D$
- ▶ The losses (or not depending on viewpoint)
  - ▶ Revenue from Tariff:  $B$
  - ▶ Higher payments to domestic factors of production:  $C$
  - ▶ Loss to consumers that can no longer afford the good:  $A$

Clearly, domestic producers and those that work in the industry are in favor, but there is a social cost ( $C$  and  $A$ ).

## How About a Quota

- ▶ I will model a quota that only allows the same amount of exports as the tariff allows.
- ▶ Why? So I can use the same diagram.

# Import Tariff

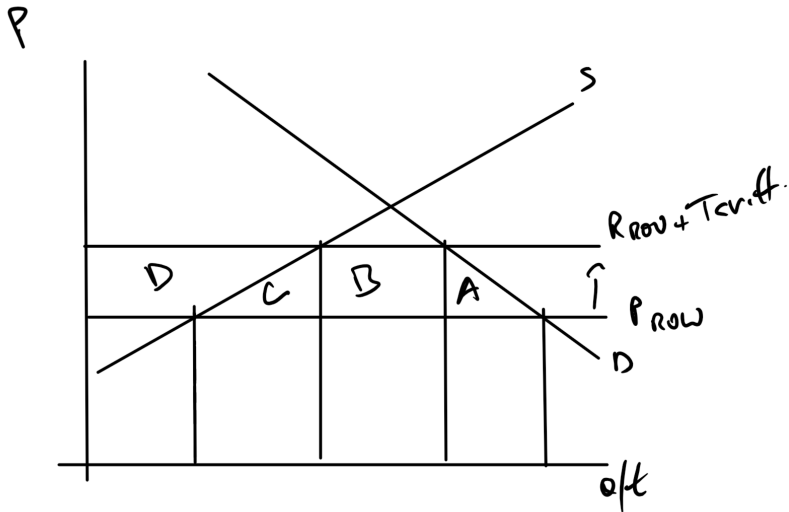


Figure 8:

# Summary Quota

- ▶ Imports decrease and domestic price increases
- ▶ All welfare losses come from consumers
- ▶ Consumers
  - ▶ Before Tariff:  $A + B + C + D$
  - ▶ After Tariff: ALL GONE
- ▶ Domestic Producers:
  - ▶ After Tariff: D
- ▶ The losses (or not depending on viewpoint)
  - ▶ *Quota Rent*: B
  - ▶ Higher payments to domestic factors of production: C
  - ▶ Loss to consumers that can no longer afford the good: A

The quota rent goes to somebody. Sometimes it is an import firm, sometimes a foreign firm, sometimes a foreign government.

## A few Things to Note

- ▶ Imposing a tariff or a quota, does help an industry and the workers in that industry.
- ▶ Probably hurts consumers.
- ▶ Having a tariff imposed on you will hurt your industry. Check soybeans recently?

# Story of A Tariff

- ▶ Great Depression was just getting started. . . . October 1929
- ▶ Senators Smoot (Utah) and Hawley (Oregon) say we have an idea:
  - ▶ Lets increase agricultural tariffs and decrease industrial tariffs.
  - ▶ Others say, “Better idea. Lets increase all tariffs”
  - ▶ March 1930
- ▶ Then May 1930
  - ▶ 1000+ economists sign letter asking to please veto
  - ▶ Bankers and others beg for it not to be done.
  - ▶ Signed into law June 1930
- ▶ Retaliatory tariffs the world over

The Smoot-Hawley Tariff is what made the Great Depression  
“Great”