Trade Policy: Part Two

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Date: Sept. 25, 2014

[1]I wish to acknowledge Battista Severgnini for providing last year's slides to me. His generosity saved me much time, and these slides are partially based on his. Any errors are of course my own.

Last time

Chapter 8:

- Trade costs and Firm Behavior
- Dumping
- Multinationals

Chapter 9 :

- Tariffs
- Consumer & Producer Surplus
- Export Subsidies and other instruments

Plan for Today

- Chapter 10 : Politics and Trade Policy
  - Some additional arguments for Free Trade
  - Arguments Against Free Trade
    - National Welfare reasons
    - Income Distribution and Trade Policy
  - International Negotiations
    - Some theory
    - A short history of International Trade Agreements
    - Preferential Trade Arrangements
- Chapter 11 : Developing Countries and Trade Policy
  - Rise and Fall of Import Substitution
  - Export Oriented Industrialization
- Chapter 12: Trade Policy Controversy
  - Arguments for an Activist Trade Policy
  - Trade & Labor
  - Trade & the Environment

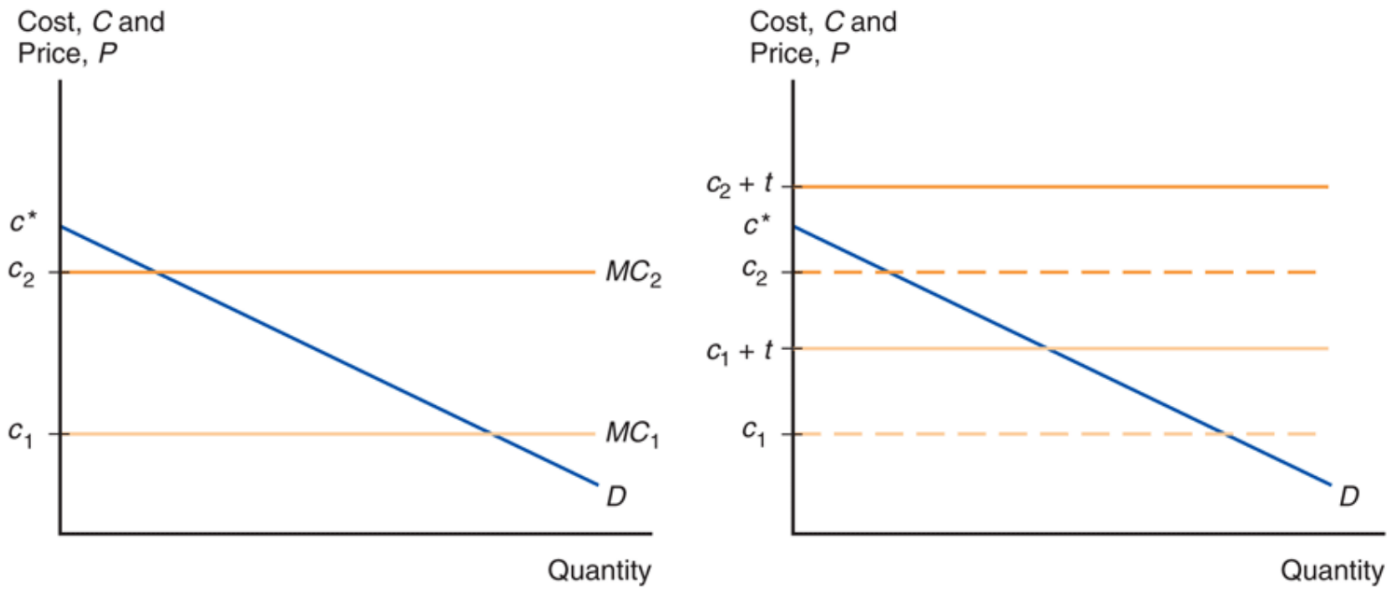
But first a Review

- Begin review

Trade Costs and Extensive Margin

- Suppose there is some cost to trade
- Equivalent to increasing marginal cost of production
- Recall firms with high marginal cost don't enter domestic market
- Even fewer firms will enter the export market
- *Extensive margin*: Number of firms exporting
- *Intensive margin*: How much each firms export
- Trade costs reduce both

Extensive Margin in a Picture

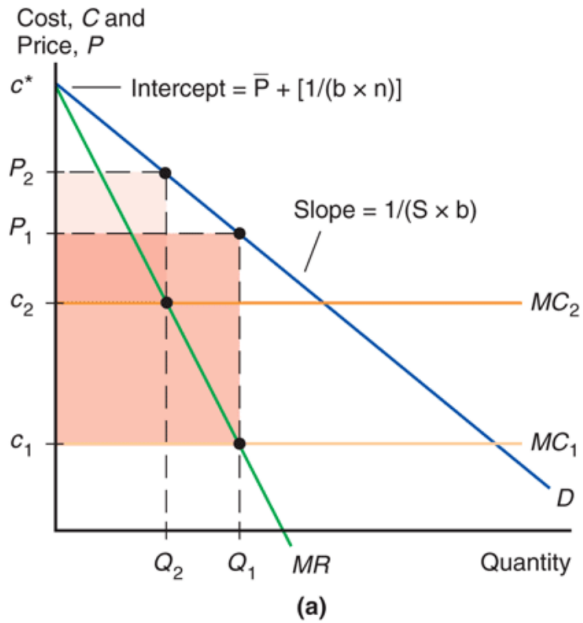


Dumping

- *Dumping* is when a firm sells a product too cheaply abroad
  1. Sometimes if foreign price below domestic price
  2. Sometimes if foreign price below domestic price plus tariff
  3. Sometimes if foreign price is below cost of production
- Considered an unfair trade practice, WTO allows 'antidumping duty' or tariff
- Monopolistic competitive firms naturally do No. 2 (but not No. 1 or No. 3)
- Why?
- Textbook: This is just natural firm behavior
- Me: Don't feel too bad – these firms are still monopolists!

Heterogenous firm equilibrium

- Firms still produce at point where marginal revenue equals marginal cost



Foreign Direct Investment

- Comes in two flavors
  1. *Vertical*: Do manufacturing where it is cheap
  2. *Horizontal*: Produce close to final market
- Vertical example: iPhones made in China, designed in California
- Horizontal example: Japanese cars produced in the United States

Motives for FDI

- Vertical FDI
  - ex: Take advantage of lower labor costs abroad
  - Capital can move: Factor price equalization all over again!
- Horizontal FDI
  - Proximity-Cost tradeoff
  - Language developed by my professor, Steven Yeaple (along with Melitz)
  - Low transport cost, export more
  - High transport cost, build factor abroad
  - Prediction consistent with data

Chapter 9: The Instruments of Trade Policy

Import Demand Curve

- Import demand curve
  - Y-axis price
  - X-axis The difference between the quantity that domestic consumers demand and the quantity domestic producers supply

Export Supply Curve

- Export Supply Curve
  - Y-axis price
  - X-axis The difference between the quantity that foreign produce supply and the quantity foreign supply

Import Demand Curve

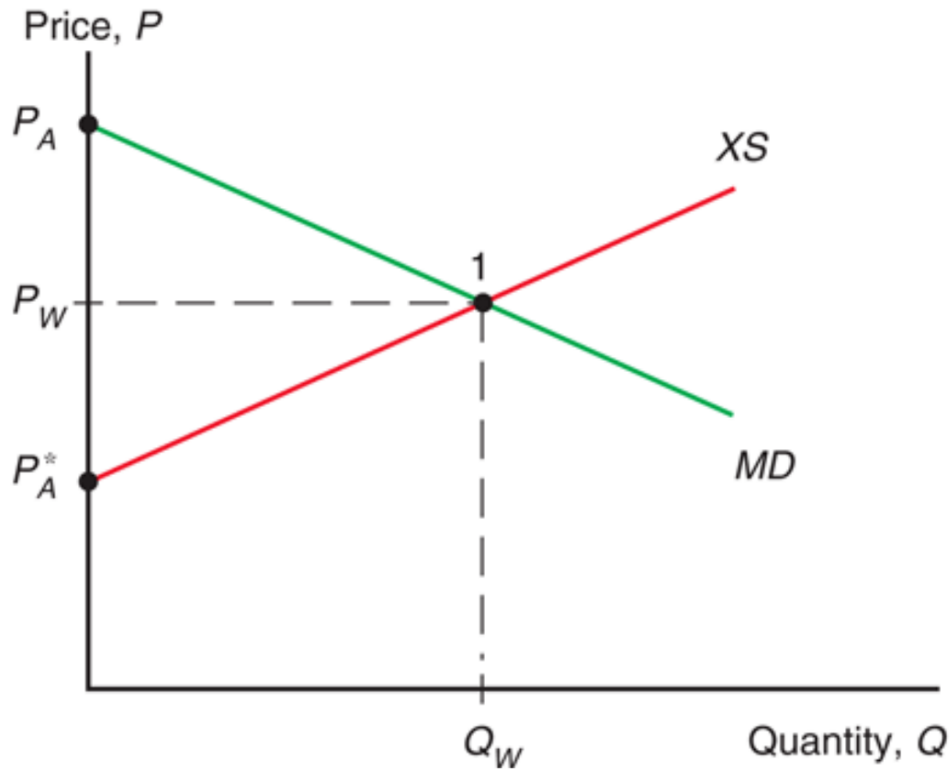
Export Supply Curve

World Market Equilibrium

Combine XS and MD curves: equilibrium price and quantity at the world market. In equilibrium

- import demand = export supply
- domestic demand - domestic supply =foreign supply - foreign demand ($D - S = S^* - D^*$)
- world demand = world supply ($D + D^* = S^* - S$)

World Equilibrium



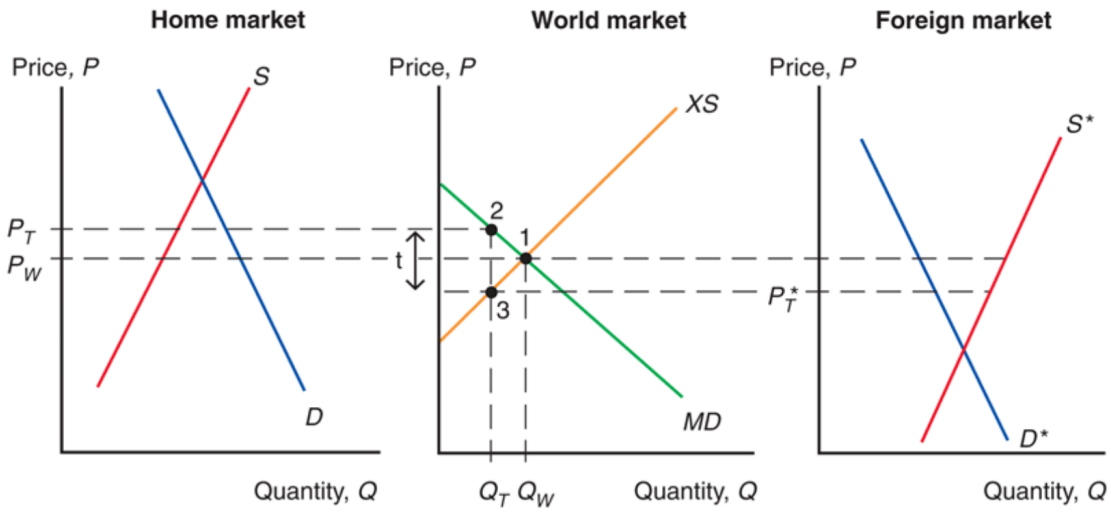
The Effects of a Tariff

- Sellers only sell abroad if the foreign price is greater than the domestic price plus the tariff. Why?
- Sellers only sell domestically if the foreign price is less than than the domestic price plus the tariff. Why?
- Equilibrium price difference is the tariff:

$$P_T - P_T^* = t$$

- Just after the tariff is set, there is excess demand at Home, and excess supply at Foreign
- Price adjusts up at Home, and down in Foreign
- Imports into Home and exports from Foreign are reduced
- Price changes depend on shape of import demand and export supply

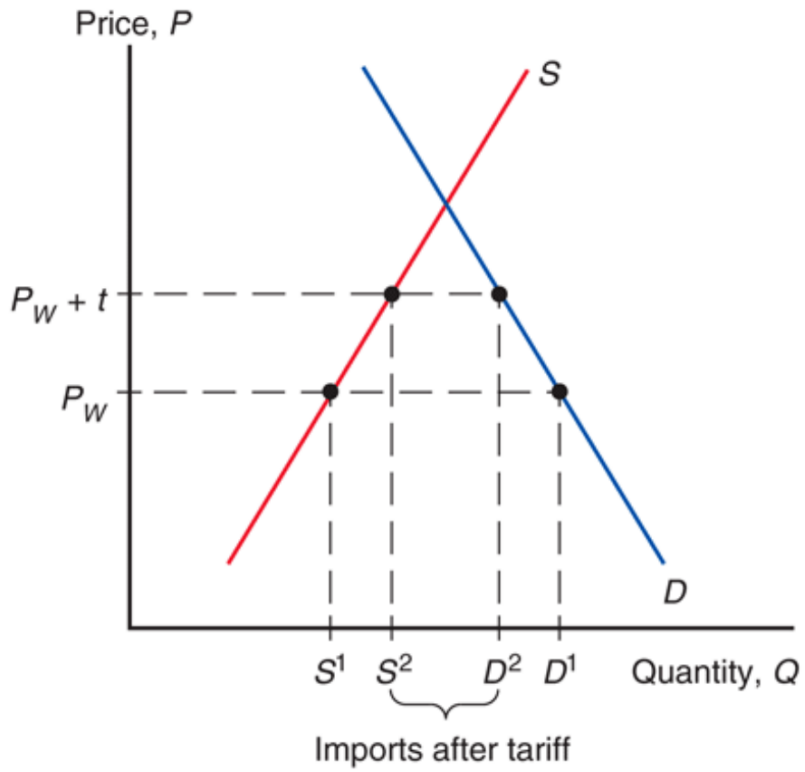
Tariff and Price



Price determination

- What would it mean if export supply were flatter?
  - Elastic supply or demand cause prices to move less
  - If Home is only a minor destination, supply and demand in Foreign very elastic
  - If Foreign drops price a small amount, a great deal more is demanded (relative to Home)
  - If Foreign drops price a small amount, a great less is supplied (relative to Home)
- If foreign supply perfectly elastic, Home prices rise the same amount as the tariff

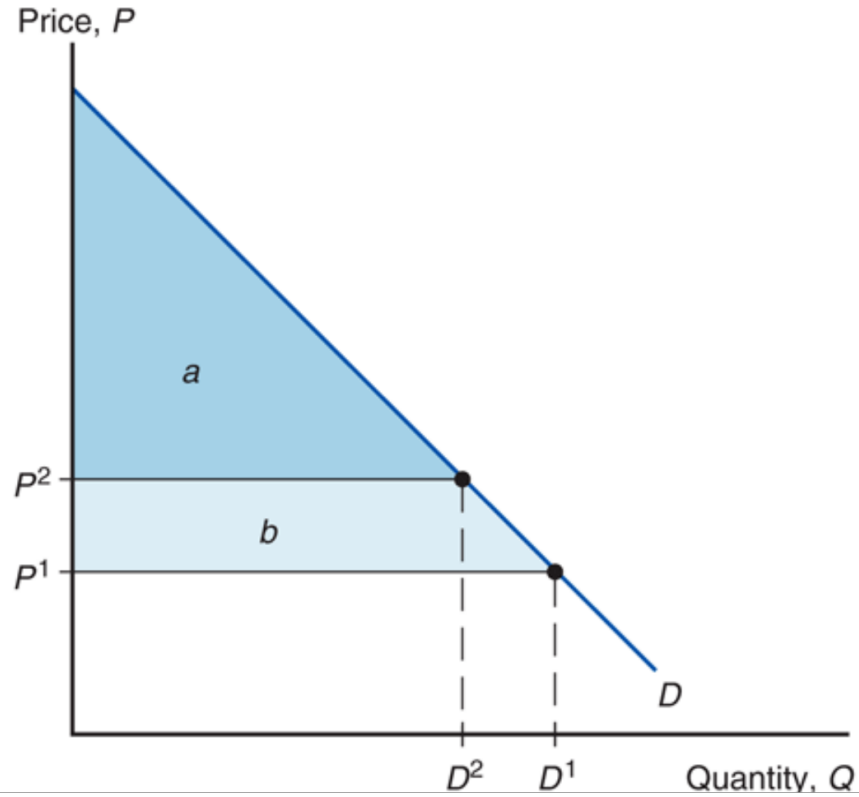
Small Home, Flat Export Supply



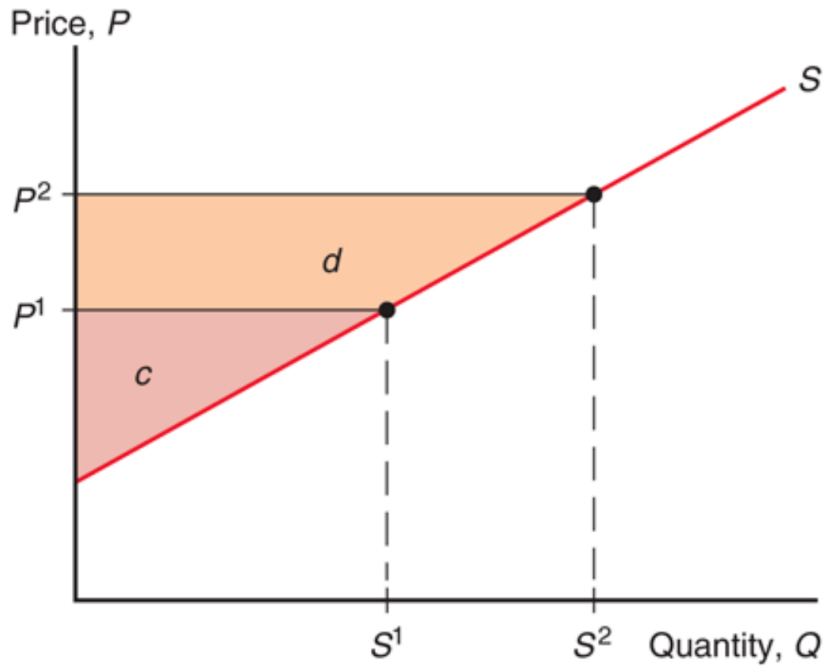
Evaluating the Costs and Benefits of Tariffs

- A tariff raises the price of a good at Home
- This hurts Home consumers and helps Home producers
- Home government also gets revenue

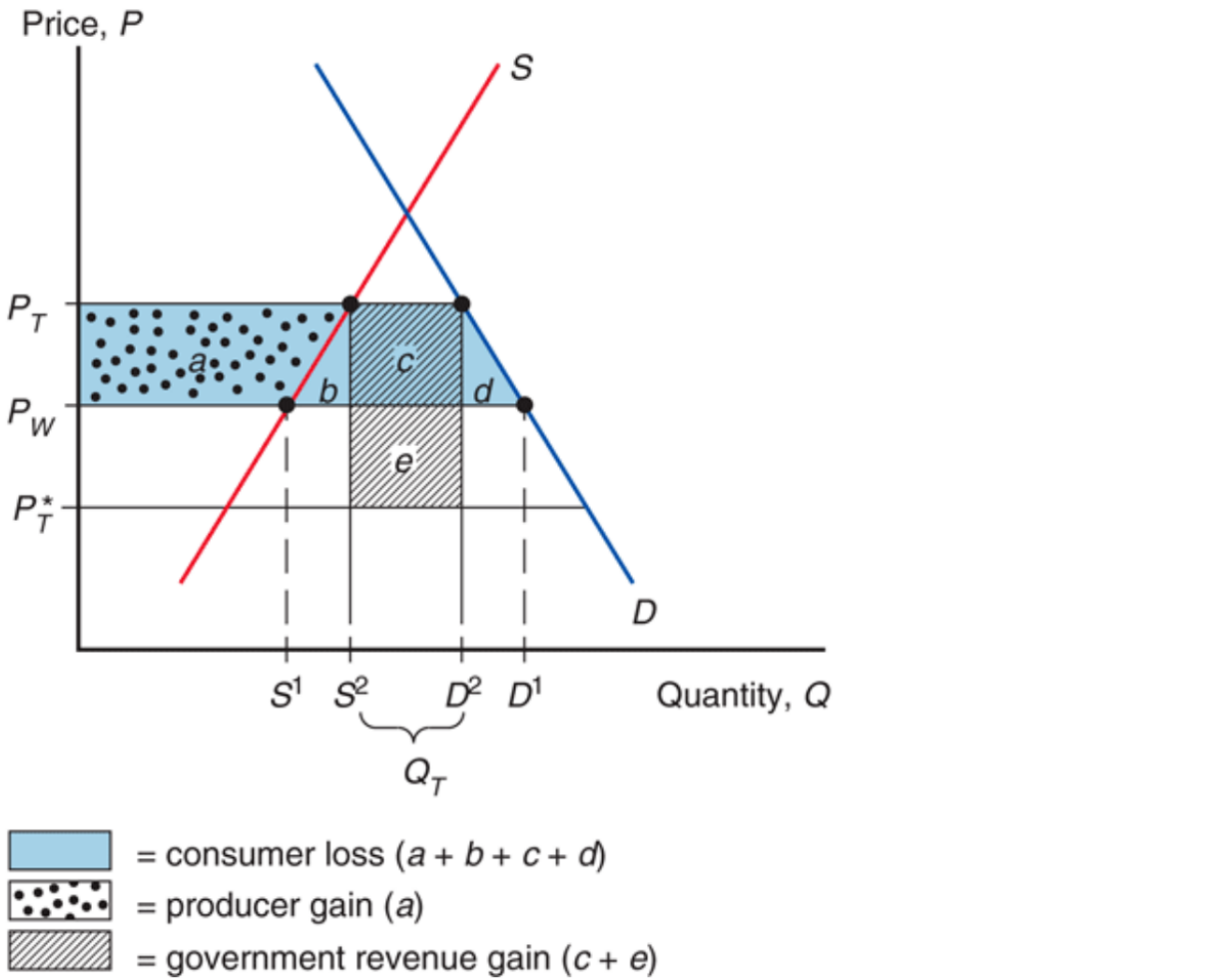
Consumer Surplus



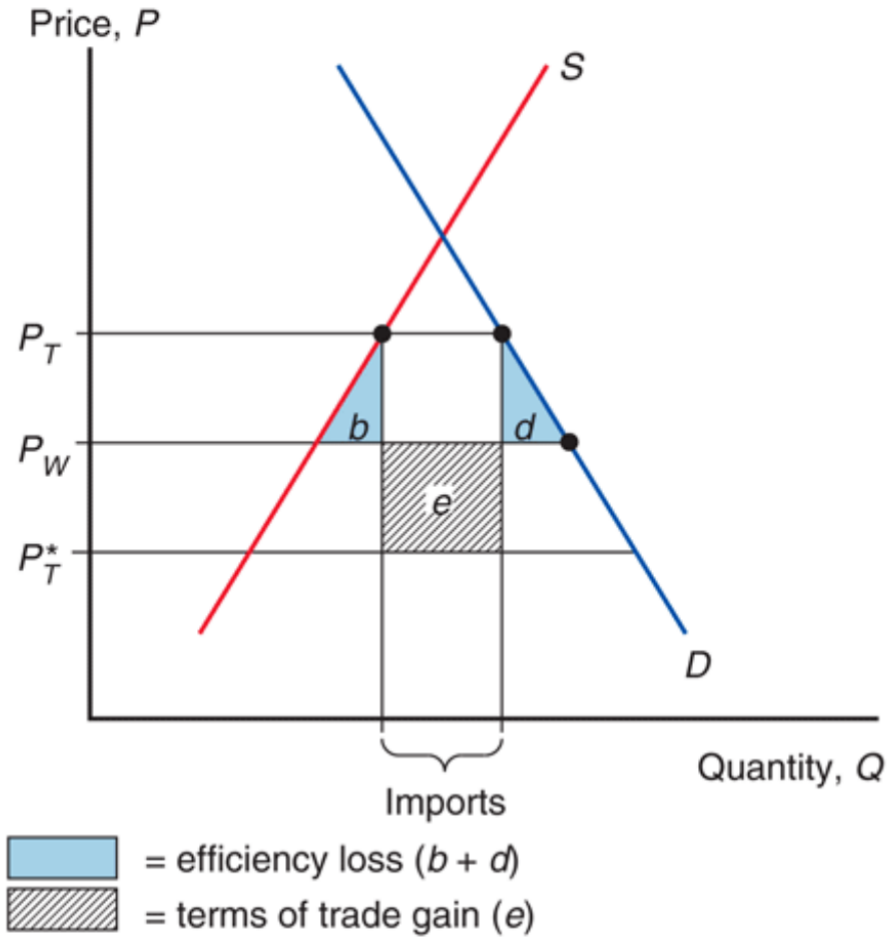
Producer Surplus



Costs and Benefits of a Tariff for the Importing Country



Net gains vs losses



Effect of tariff

- Punchline
  - Gains from government revenue
  - Losses from consumer surplus
- What happens if Home is small?

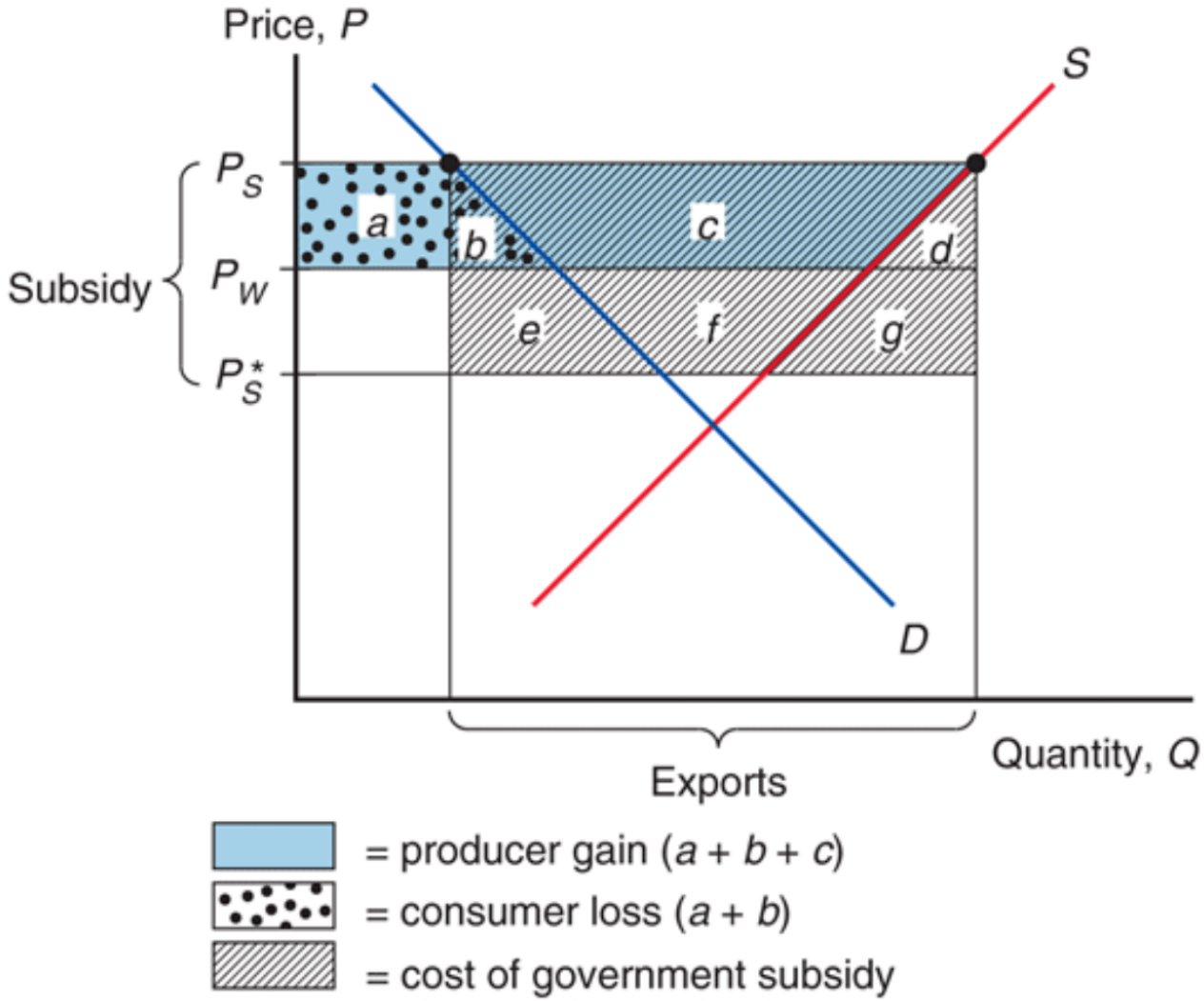
Pause

- We have seen that tariffs have costs and benefits
- Now we will analyze some other trade policy tools
  1. Export subsidies (agricultural policy)
  2. Import quotas
  3. Voluntary export restraint
- Preview: All worse than tariff
- Reason: Others get tariff government rents

Gains and Losses From Export Subsidy

- Government in Foreign
  - Loses tQ
- Consumers in Foreign
  - Lose are consumer surplus between world price and domestic price
- Producers in Foreign
  - gain producer surplus between world price and domestic price

Effects of an Export Subsidy



Import Quota

- Restriction on the quantity of a good that may be imported.
- Import quota raises price of imported good, just like a tariff
- Main difference: government doesn't get revenue!
- Whoever gets the import licenses gets revenue

Voluntary Export Restraint

- Typically imposed by exporter at request of importer under threat of tariffs
- Just like an import quota except...
- The rents go to whoever exporter wants

Summary

Policy	Tariff	Export Subsidy	Import Quota	Voluntary Export Restraint
Producer surplus	Increases	Increases	Increases	Increases
Consumer surplus	Falls	Falls	Falls	Falls
Government revenue	Increases	Falls (government spending rises)	No change (rents to license holders)	No change (rents to foreigners)
Overall national welfare	Ambiguous (falls for small country)	Falls	Ambiguous (falls for small country)	Falls

- End review!

Chapter 10 : Politics and Trade Policy

- Some additional arguments for Free Trade
- Arguments Against Free Trade
  - National Welfare reasons
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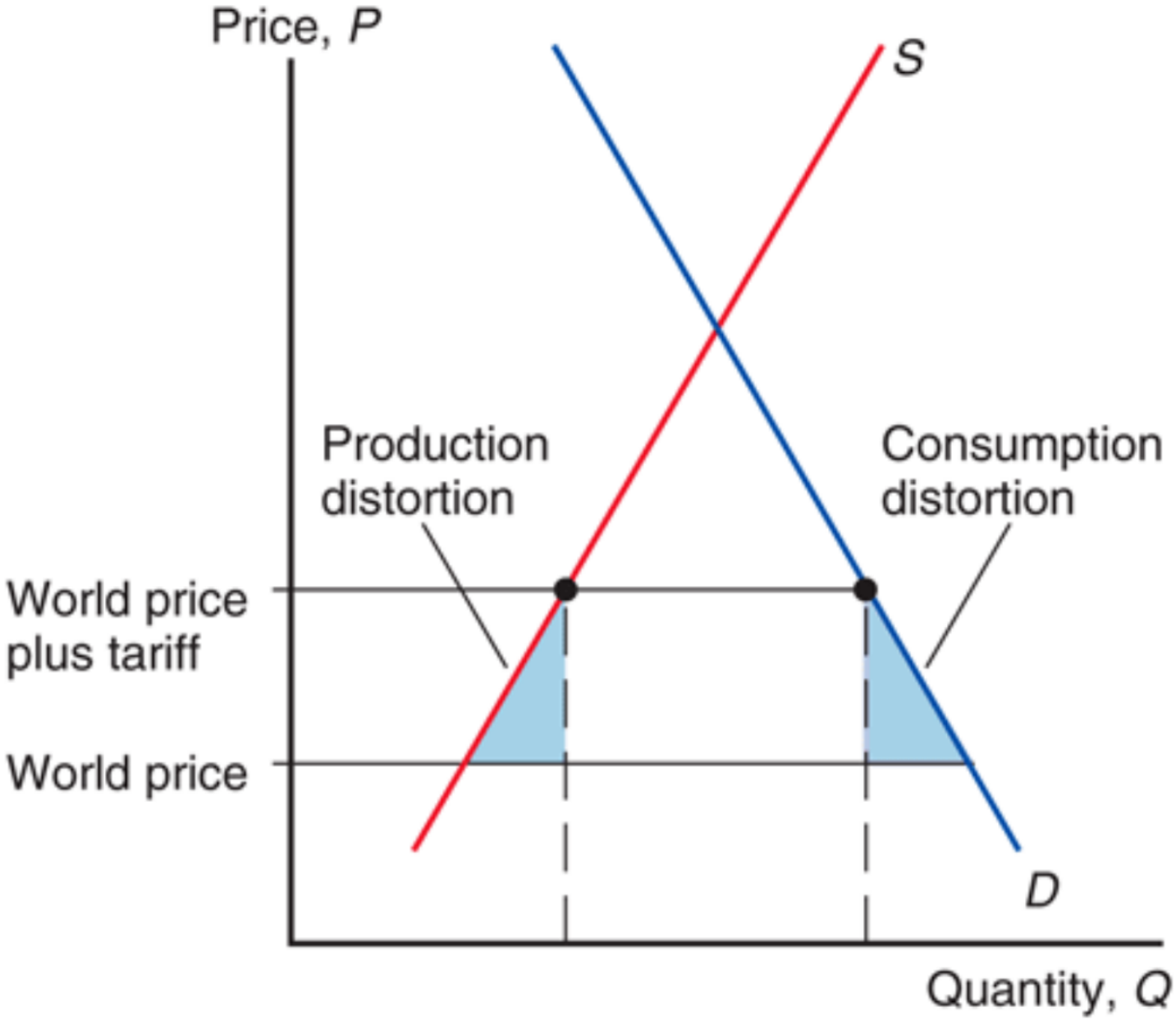
Some more arguments for Free Trade

- Chap. 1-8: gains from trade
- What else?
  - Stuff we sort of already talked about
  - The rent seeking distortions
  - Politics and corruption

Stuff we already mentioned

- Efficiency losses for small countries making tariffs
- Economies of scale, trade barriers reduce market size
- Innovation, hard to pick winners
- Gains from shifting production to more productive firms

Efficiency losses of tariff



Rent seeking distortions

- Suppose we have import quotas
- How to allocate?
- Allocation system distorts production
  - Example 1: India inport licenses based on capacity, build unneeded capacity
  - Example 2: US Tuna import licenses first come first serve, warehouse in December, big rush on Jan. 1st
- Side note: License Raj in India

Political Process and Corruption

- Trade policy good in theory
- Politics is messy
  - Even good intentioned policies likely to be captured by special interest groups
  - Might cause even bigger distortions
  - Here free trade is a second best
- Similar argument to why one should follow unjust laws

Size of gains from free trade

- Tariffs are already low, further gains small

United States	0.57
European Union	0.61
Japan	0.85
Developing countries	1.4
World	0.93

Source: William Cline, *Trade Policy and Global Poverty* (Washington, D. International Economics, 2004), p. 180.

Size of gains from trade

- Research frontier: Gains from trade too small!
  - We have arguments that countries gain from trade
  - Recently theory models have been estimable
- Important new paper: Gains from trade in most models are the same
  - Arkolakis, Costinot, Rodriguez, American Economic Review, 2012
  - United States going from autarchy to free trade welfare gains 0.7-1.4%
  - Compare this to estimates of gains from migration...

Gains from trade vs migration

Table 1: Efficiency gain from elimination of international barriers (% of world GDP)

All policy barriers to merchandise trade

1.8	Goldin, Knudsen and van der Mensbrugghe (1993)
4.1	Dessus, Fukasaku, and Safadi (1999) [a]
0.9	Anderson, Francois, Hertel, Hoekman and Martin (2000)
1.2	World Bank (2001)
2.8	World Bank (2001) [a]
0.7	Anderson and Martin (2005)
0.3	Hertel and Keeney (2006), Table 2.9

All barriers to capital flows

1.7	Gourinchas and Jeanne (2006) [b]
0.1	Caselli and Feyrer (2007)

All barriers to labor mobility

147.3	Hamilton and Whalley (1984); Table 4, row 2 [c]
96.5	Moses and Letnes (2004); Table 5, row 4 [c]
67	Iregui (2005); Table 10.3 [c,d]
122	Klein and Ventura (2007); Table 3 [e]

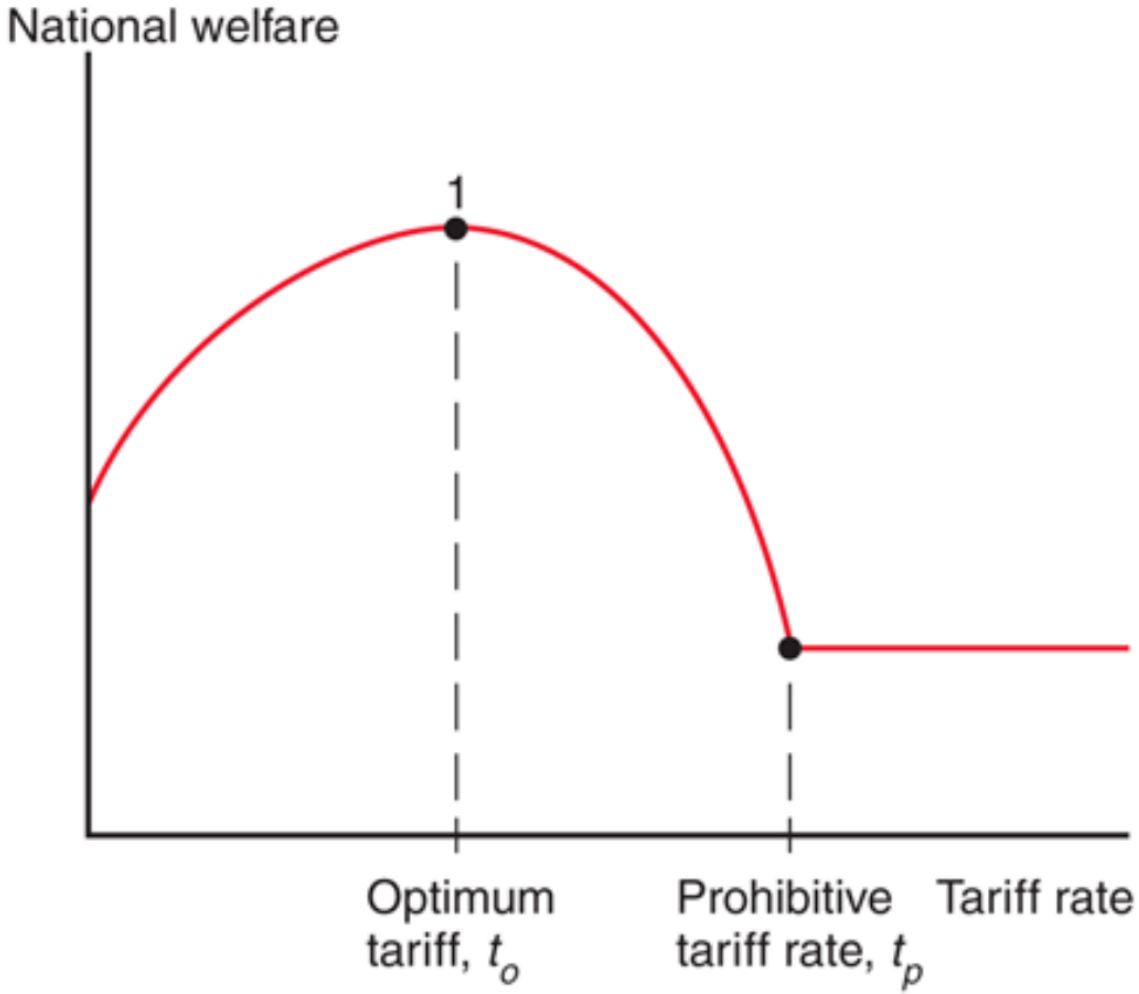
Source: Clemens, Michael, "Economics and Emigration: Trillion Dollar Bills on the Sidewalk?", Journal of Economic Perspectives, 2011

Pause

- We have seen more arguments for free trade
  - Classical gains from trade
  - Trade policy causes rent seeking distortions
  - Trade policy is often captured by special interests
- Now we will focus on arguments against free trade
  - The optimum tariff
  - Domestic market failure and trade policy

The optimum tariff

- We saw that optimum tariff levels are always positive
- Same argument can be used to justify optimum export tax!



The optimum tariff

- Why do we rarely see export taxes?
- Why are tariff levels currently so low?
- Why don't large countries impose tariffs on small countries?

The market failure argument

- Many US cities are congested with traffic
  - As Dane's you don't really understand this
  - Chicago traffic, commute times
- To reduce traffic problems
  - Give firms a tax benefit to locating outside of city center
  - OR raise toll on traffic going into the city
- Economists typically support the toll, because it directly addresses the externality
- Moving firms has all sorts of secondary effects
- But maybe the toll cannot be changed for some reason...

The theory of the second best

- Markets are great, but plenty of market failures
  - Traffic is one example of an externality
  - Pollution is another
  - Typically things worse in developing countries
- The best policy is usually to tax the externality
- But if that isn't possible, maybe trade policy can help
  - Suppose corruption makes it hard for new manufacturing firms to enter
  - Too little manufacturing
  - We could use trade policy to encourage entry into manufacturing
- On the other hand
  - It is hard to choose winners
  - Effects of second-best costly and hard to predict

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- Now we will talk about how trade policy is formed

Political Models of Trade Policy

Models related to trade policy:

1. Median voter theorem
2. Collective action

Median Voter Theorem

Electoral competition can be modeled as:

- Two parties: Liberals (L) and the Greens (G)
- Continuum of voters of size N
- Line the voters up by their preferred tariff
- A voter chooses the party closest to her preferred tariff
- Parties take tariff positions to maximize support
- Suppose that voters have a uniform distribution over preferred tariffs between 0 and T

Median Voter Theorem

- Both parties choose the same, median voter supported trade policy
- What if there are three parties?
- Median voter theorem predictions contrast with trade policy
  - Typically trade policy helps one industry a lot
  - Typically trade policy hurts everyone else a little

Collective Action

- Trade policy is a *public good*
  - That is, it cannot be excluded
- Nearly everyone in EU hurt by agricultural export subsidies
- Suppose I write a letter to my representative
  - The probability my letter is pivotal is small
  - The benefit I get from removing subsidies is (relatively) small
  - There is a small cost to sending a letter
  - I won't do it
- Suppose I am a EU farmer
  - The probability my letter is pivotal is larger (smaller group of potential writers)
  - The benefit I get from keeping subsidies is much larger
  - There is a small cost to sending a letter
  - I do it
- Result: All the letters from farmers

Punchline: Collective action

- Policies with large aggregate loss but small individual loss are difficult to change
- Small groups with concentrated losses are more willing to pay effort fixed cost

Real Politics

- Politicians win elections partly because:
  1. they advocate popular policies (median voter theorem)
  2. they have funds to run campaigns (collective action)
- We expect trade policy in well-organized groups with concentrated gains

Which Industries are Protected?

- Agriculture
  - Small but politically vocal labor force in the US
  - Japan has 1000% tariff on rice imports!
- Textiles (USA, about 14 $ billion)
  - Declining in importance thanks to WTO
  - Billions of dollars in US welfare loss due to protection:

	2002 Estimate	2015 Projected
Total	14.1	2.6
Textiles and apparel	11.8	0.5

Source: U.S. International Trade Commission.

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- We have seen arguments against free trade
  - The optimum tariff
  - Domestic market failure and trade policy
- We have talk about how trade policy is formed
  - Median voter
  - Collective action
- Next international negotiations
  - Theory
  - History

International Negotiations

- A US-centric history of trade milestones:
  - 1930: Smoot-Harley Act
  - 1932: Bilateral negotiations
  - 1947: Multilateral negotiations (GATT)
  - 1995: WTO
- US Tariff rates over the years