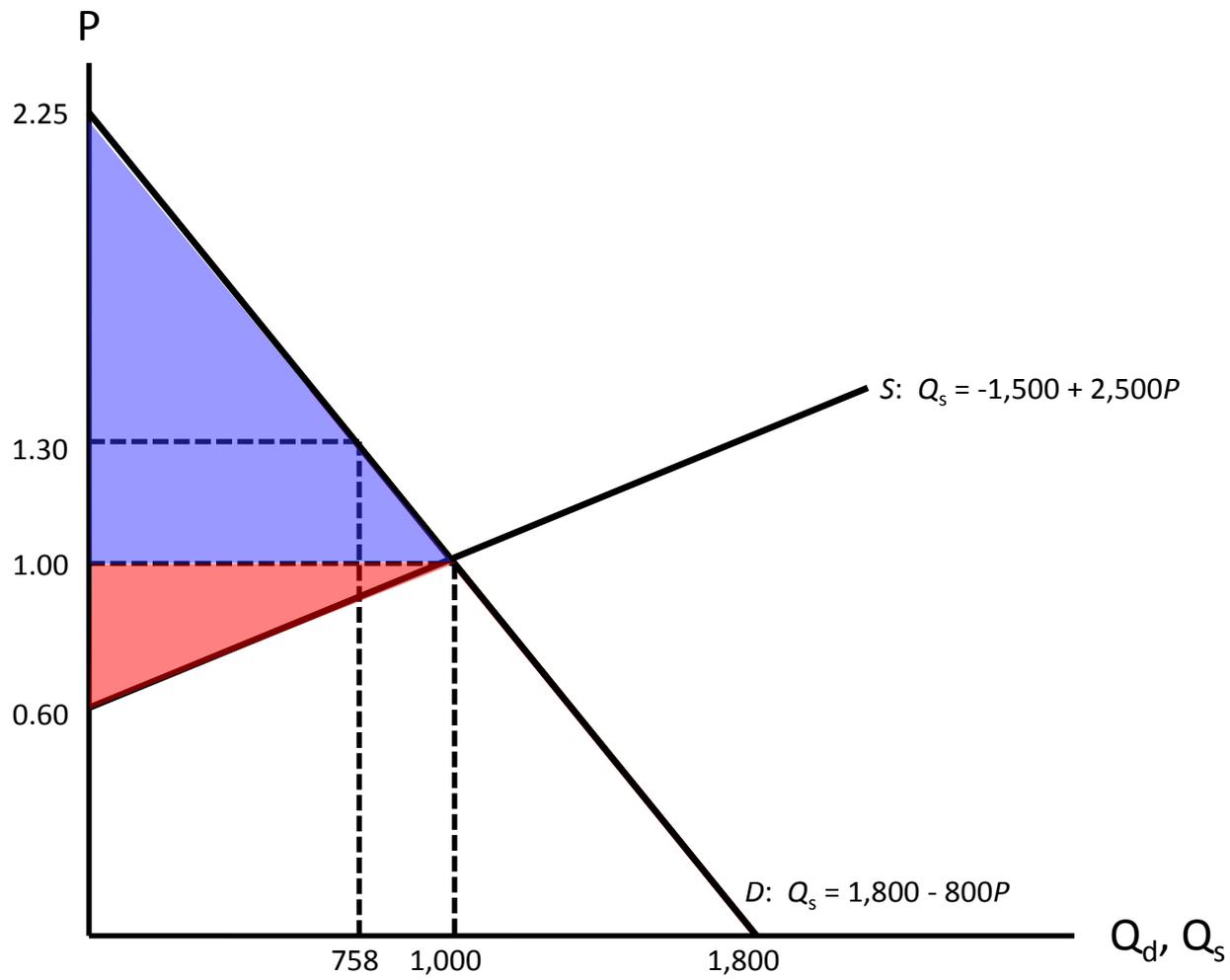


SV151, Principles of Economics

K. Christ

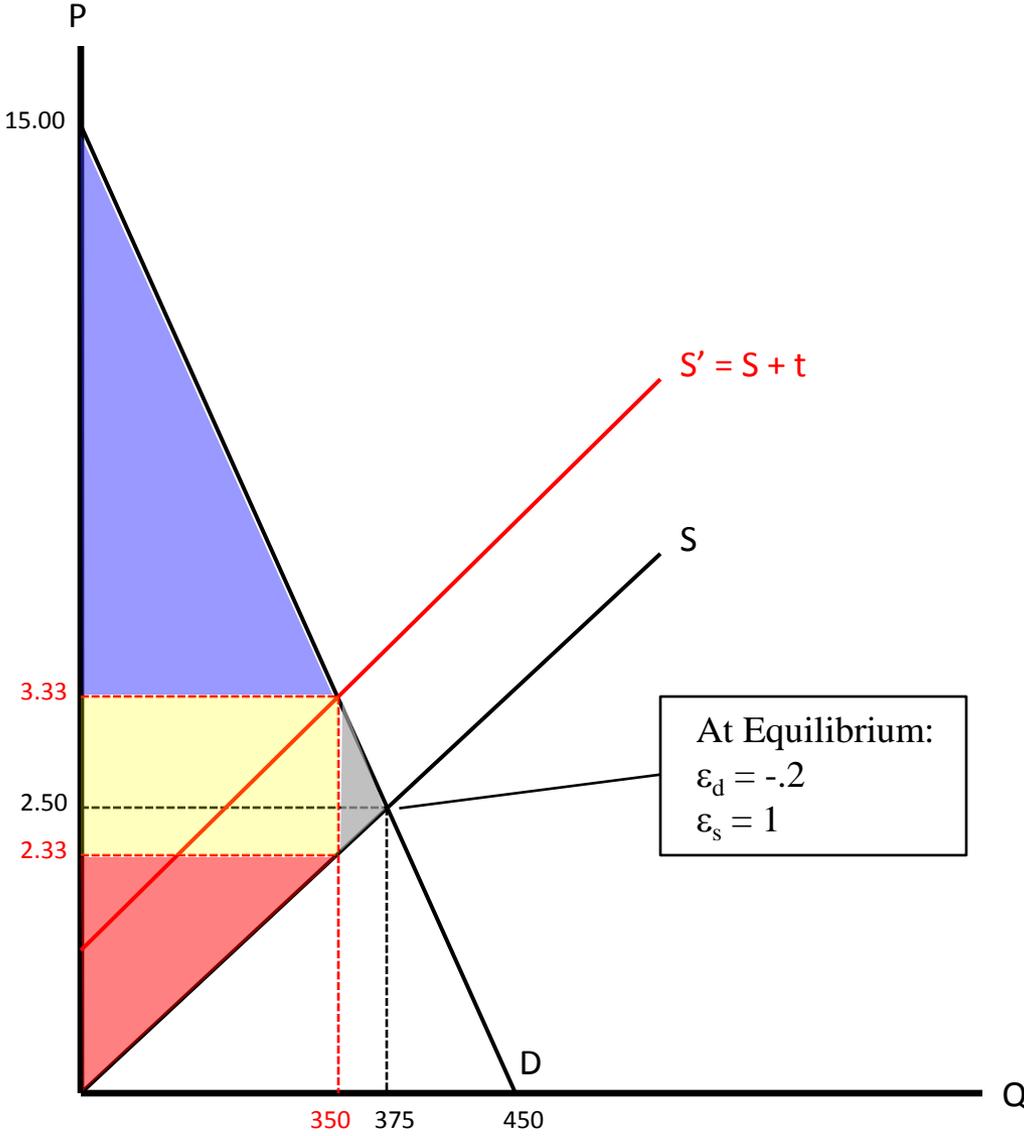
19 December 2011 – 6 January 2012

# Evaluating the “Welfare” Generated by Market Transactions



Willingness to pay	-	Price	=	Consumer Surplus	} $\sum_{i=1}^n CS_i$
2.25	-	1.00	=	1.25	
⋮		⋮		⋮	
1.30	-	1.00	=	0.30	
⋮		⋮		⋮	
1.00	-	1.00	=	0	

# Simple Welfare Analysis of a Unit Tax



Given

$Q_d = 450 - 30P$  ( $P = 15 - 0.033Q_d$ )  
 $Q_s = 150P$  ( $P = 0.0067Q_s$ )

Without tax

Equilibrium:  $P^* = 2.50, Q^* = 375$   
 $\epsilon_d = -.2, \epsilon_s = 1$

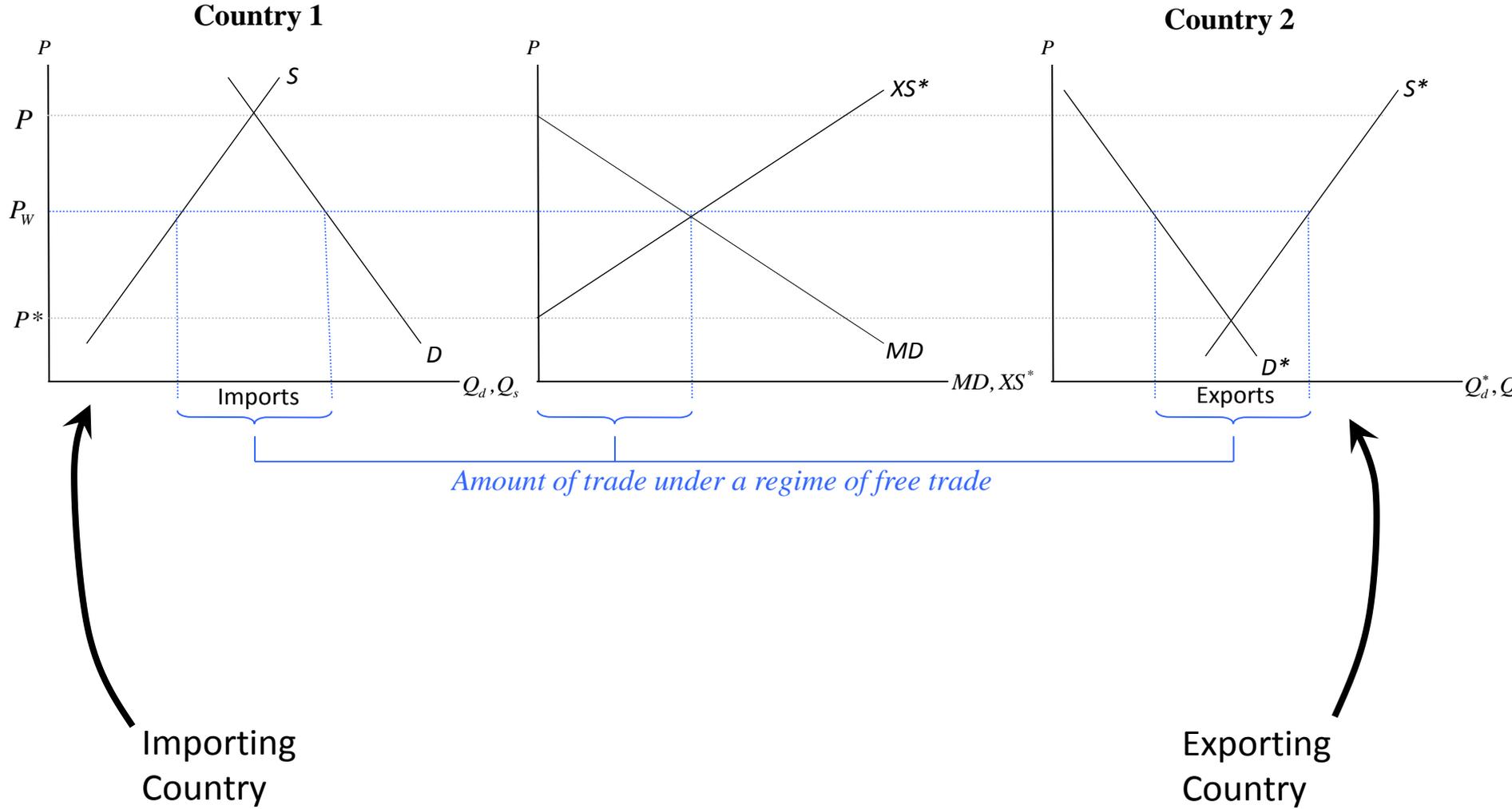
Consumer Surplus: 2,344  
 Producer Surplus: 469  
 Total Surplus: 2,813

With tax = 1

Equilibrium:  $P_b = 3.33, Q^T = 350$   
 Consumer surplus:  
 Producer surplus:  
 Govt. tax revenue:  
 Total surplus:  
 Dead weight loss:  
 DWL as % of surplus:

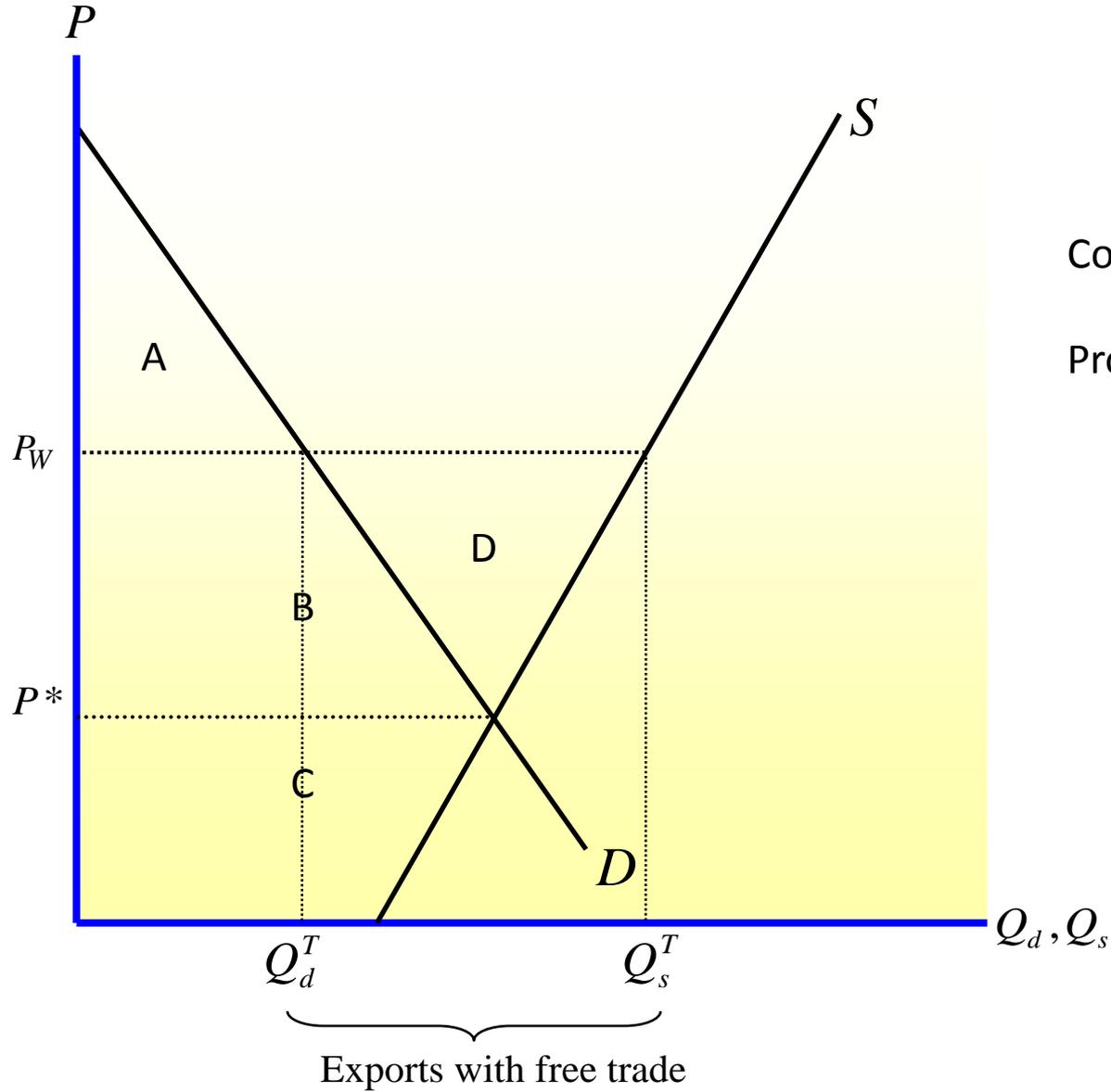
# International Trade

## Basic Model: Import Demand (MD) and Export Supply (XS)



# International Trade

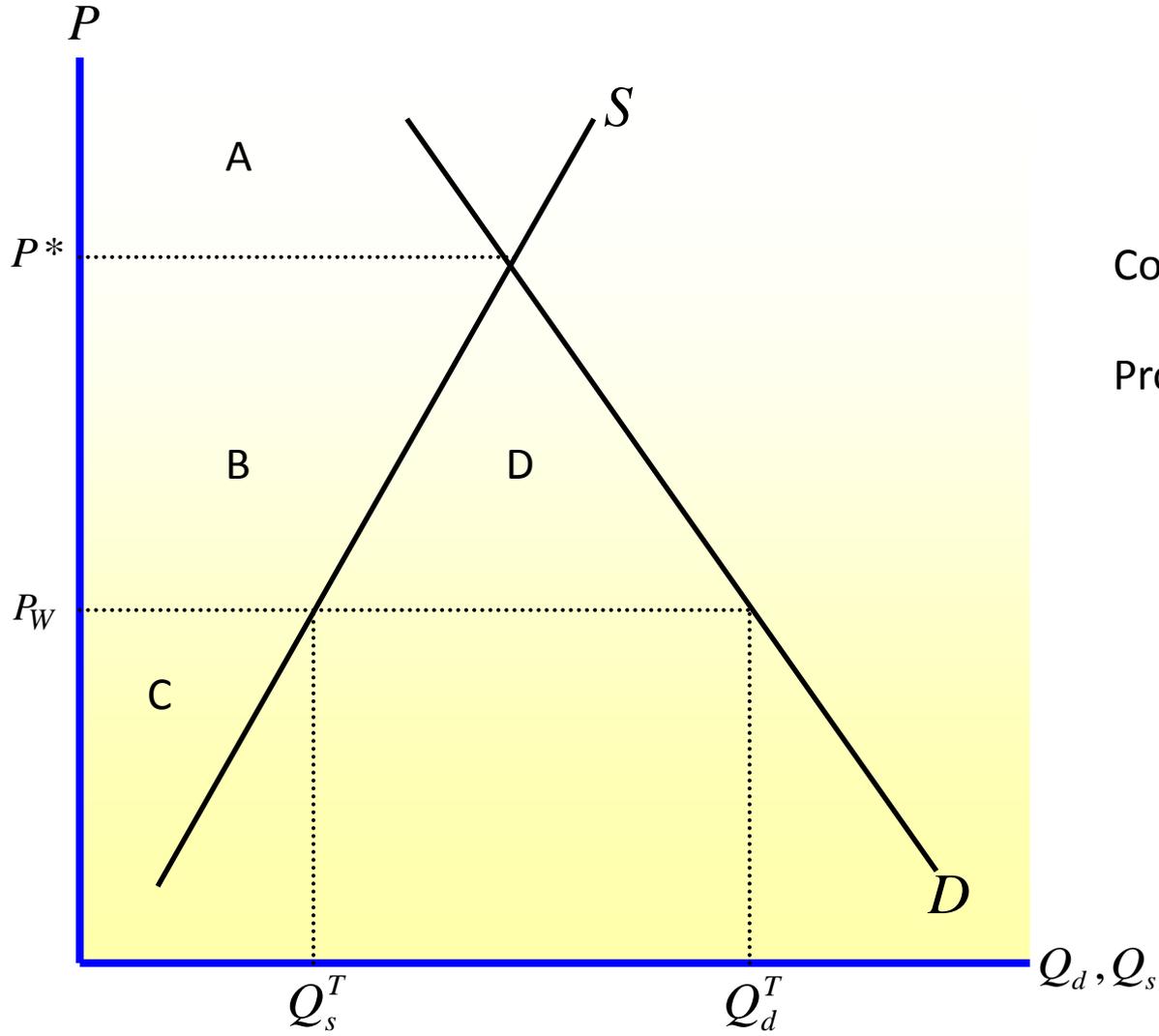
## Welfare Analysis for an Exporting Country



Consumers: 😞  
Producers: 😊

# International Trade

## Welfare Analysis for an Importing Country

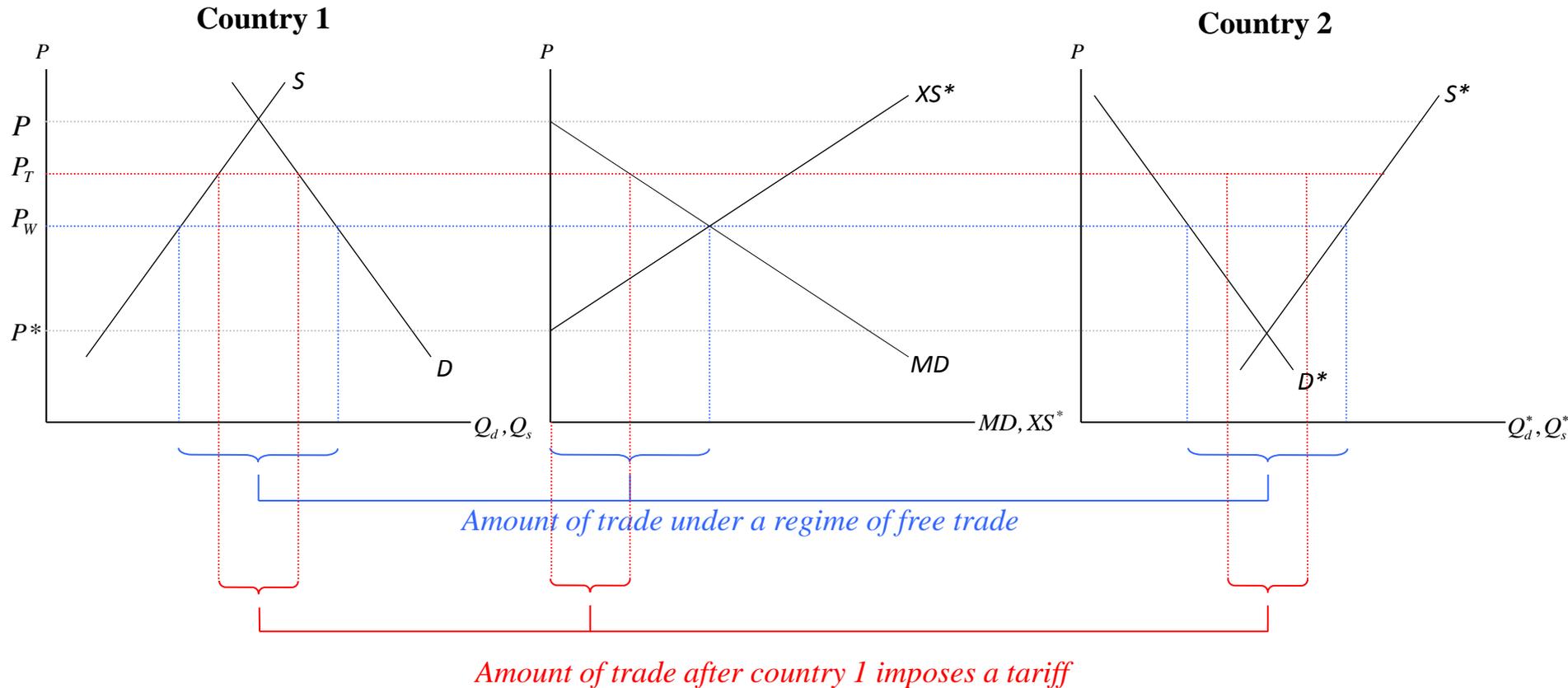


Consumers: 😊  
Producers: 😞

Imports with free trade

# International Trade

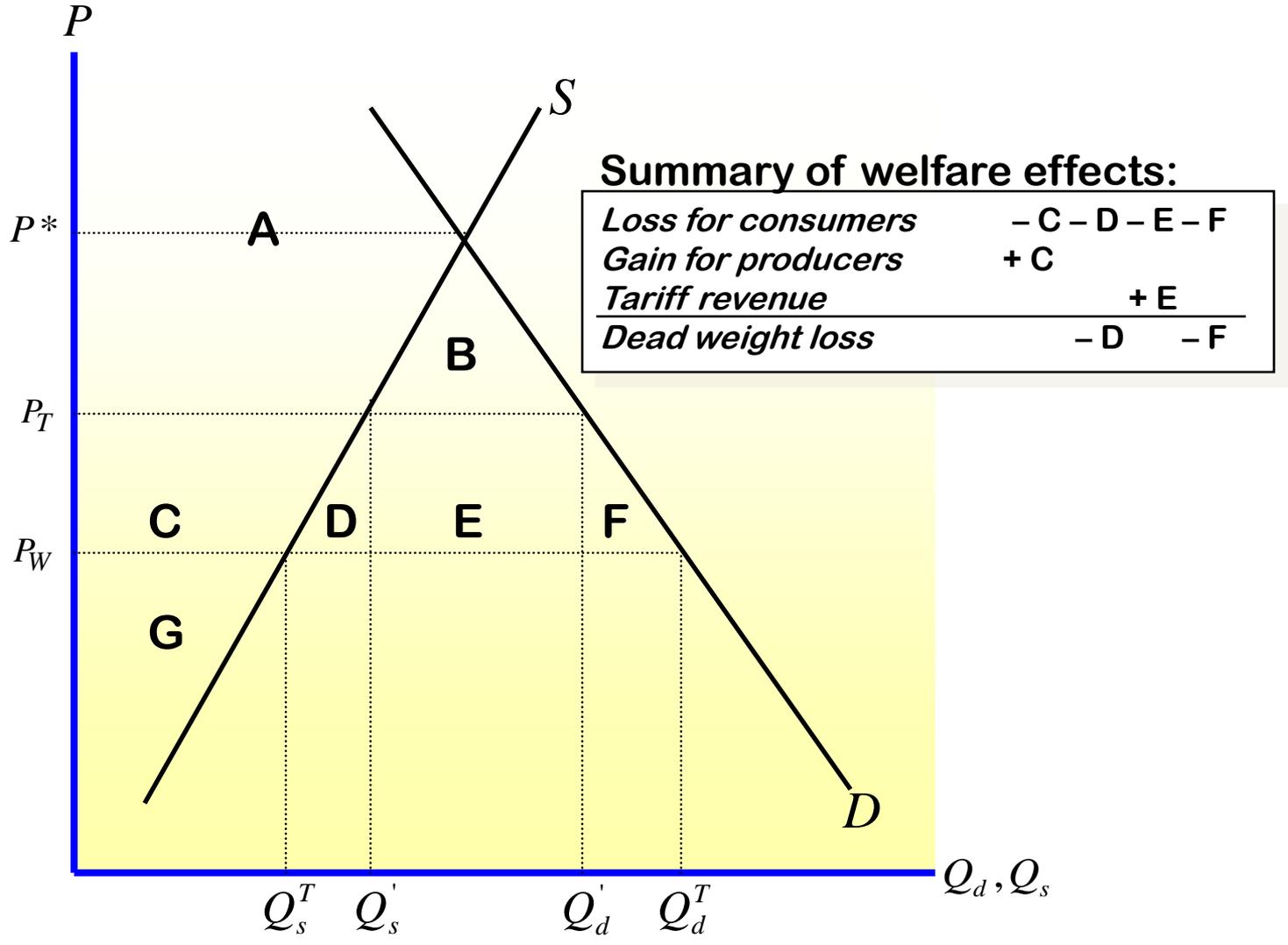
## Welfare Analysis of Tariffs (and Quotas): Simple Analysis\*



\* An underlying assumption here is that the entire amount of the tariff is passed on as a price increase to consumers. This is what is known in International Trade theory as a “small country” assumption.

# International Trade

## Welfare Analysis of Tariffs (and Quotas)



# Political Economy of Trade Policy

## History of the Political Economy of Trade: The First Era of “Globalization”

- ❑ 1776: Smith’s *Wealth of Nations* argues eloquently against “mercantilist” approaches, and in favor of free trade.
- ❑ 1818: Ricardo’s *Principles of Political Economy and Taxation* introduces the concept of comparative advantage
- ❑ 1840s: “Corn law” debates in the U.K. lead to the unilateral adoption of free trade by Great Britain.
- ❑ Late 1800s: Remarkable expansion of world trade.
- ❑ 1900-1914: Culmination of this period of “globalization”



**Smith**  
1723 – 1790



**Ricardo**  
1772 – 1823



**Richard Cobden and  
John Bright**

# Political Economy of Trade Policy

## History of the Political Economy of Trade: Breakdown of World Trade

- ❑ 1914-1920: World War I breaks down the international trading system.
- ❑ 1921-1930: Uneven recovery only partially restores international trade to pre-war level.
- ❑ 1930-1945: The Great Depression and World War II seriously damage the international trading system
  - Smoot Hawley tariff (June 1930) represents a high water mark of U.S. protectionism.
  - Reciprocal Trade Agreements Act (1934) represents a step back in the direction of “managed trade”.
  - World trade declines by 66% between 1929 and 1934.



**Sen. Reed Smoot and Rep. Willis Hawley**

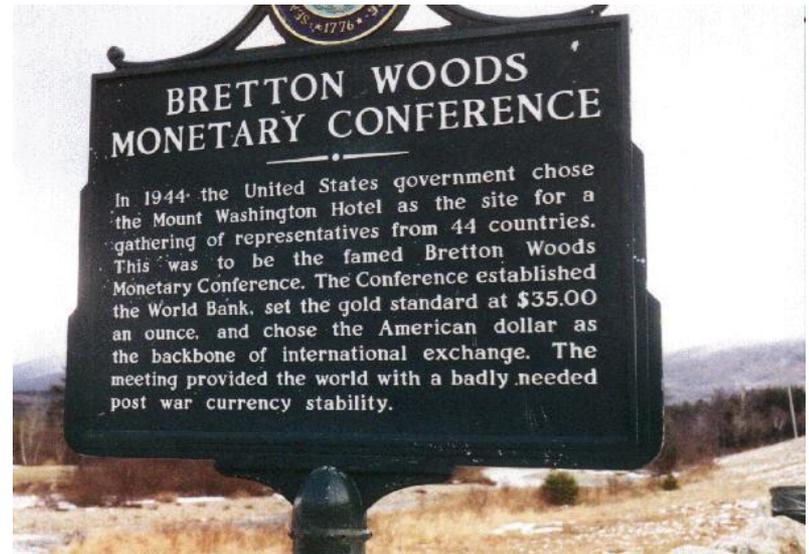
# Political Economy of Trade Policy

## History of the Political Economy of Trade: Bretton Woods

July 1944: Delegates from 44 nations gather at Bretton Woods, a small resort town in New Hampshire to deliberate upon and agree to a system of rules and international institutions for governing commercial and financial relations among the major industrial states.



**Mount Washington Hotel  
Bretton Woods, New Hampshire**



# Political Economy of Trade Policy

## History of the Political Economy of Trade: Bretton Woods

- Chief features of the Bretton Woods system:
  - 1) An obligation for each country to maintain its exchange rate within a fixed value—plus or minus one percent.
  - 2) The provision of emergency international finance to bridge temporary payments imbalances.
  
- Key institutions of the Bretton Woods system:
  - 1) International Monetary Fund
  - 2) World Bank
  - 3) A Trade Organization (GATT and later the WTO)

# Political Economy of Trade Policy

## History of the Political Economy of Trade: Key International Institutions of the World Trading System

The International Monetary Fund (IMF, 1945):

- 1) Monitors economic and financial developments and policies in member countries and at the global level, and provides policy advice to its members.
- 2) Lends to member countries with balance of payments problems.
- 3) Provides governments and central banks of its member countries with technical assistance.

The World Bank (1945). The "World Bank" is the name that has come to be used for the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). A specialized United Nations agency that provides low-interest loans, interest-free credit, and grants to developing countries, under the assumption that infrastructure, education, and healthcare are fundamental to economic growth.

The World Trade Organization (WTO, 1994-1995): The only global international organization dealing with the rules of trade between nations. An important part of its mission includes mechanisms for dispute resolution between countries so that retaliatory trade policies and trade wars do not disrupt the flow of goods and services among nations.

# Arguments in Favor of Free Trade

- ❑ Efficiency arguments – specialization based on comparative advantage, opportunities for Pareto improvements
- ❑ Lower costs (achieved mainly via *economies of scale*)
- ❑ Increased variety of goods
- ❑ Increased competition
- ❑ Enhanced flow of ideas

# Arguments for Restricting Trade

- ❑ Jobs arguments
- ❑ National security
- ❑ Infant industry argument
- ❑ National competitiveness / unfair competition
- ❑ Protection as a bargaining chip.

# Types of market failure and social responses

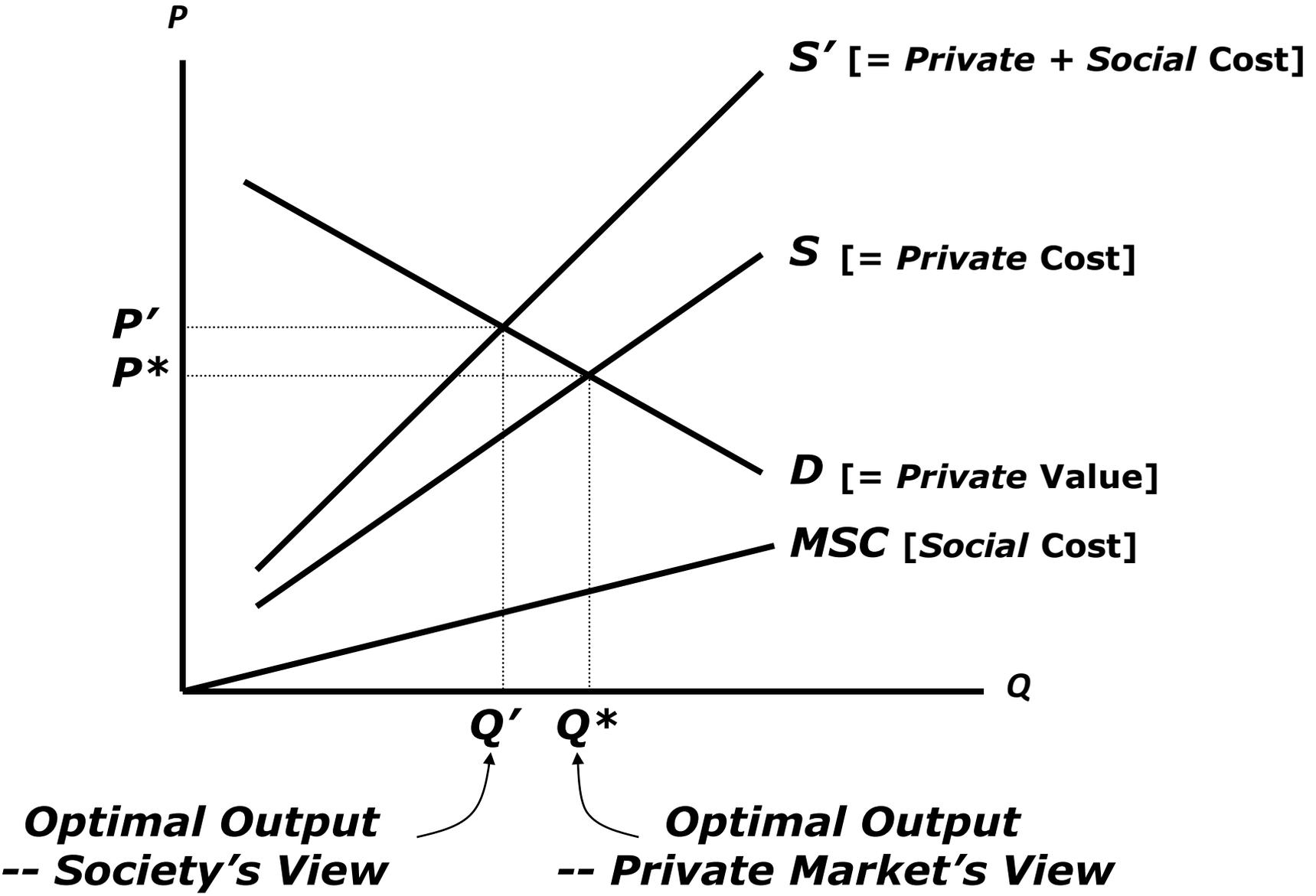
## **Type of market failure**

## **Common social responses**

<b>Externalities</b>	Prohibitions Taxes and Subsidies Contracting, creation of new markets
<b>Public Goods</b>	Public provision
<b>Monopoly</b>	Antitrust laws, competition policy Industry regulation
<b>Asymmetric Information</b>	Consumer protection laws Licensing and certification programs

# Traditional Analysis of Externalities

## The Externality Approach



# Alternative Approaches to Externalities: “Pigovian” Taxes

## Pigovian Taxes as a Solution



Arthur Cecil Pigou  
1877-1959

### ***The Economics Of Welfare (1920)***

In theory, a tax set equal to the external social costs can correct the market failure by inducing suppliers to "internalize the externalities".

### ***Some Aspects of the Welfare State (1954)***

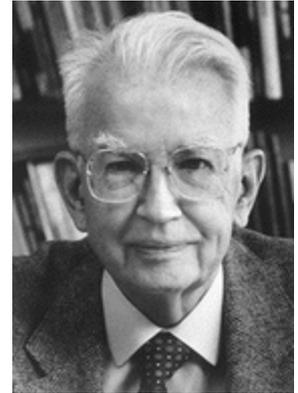
"It must be confessed, however, that we seldom know enough to decide in what fields and to what extent the State, on account of [the gaps between private and public costs] could interfere with individual choice."

# Alternative Approaches to Externalities: The Coase Theorem

## Coase, "The Problem of Social Cost" (1960)

“It is strange that a doctrine as faulty as that developed by Pigou should have been so influential ...”

“The traditional approach [to the externality problem, the ‘Pigovian’ approach] has tended to obscure the nature of the choice that has to be made. The question is commonly thought of as one in which A inflicts harm on B. But this is wrong. We are dealing with a problem of a reciprocal nature. To avoid the harm to B would be to inflict harm on A ... The problem is to avoid the more serious harm.”



Ronald Coase  
1910 -

**The Coase Theorem: In the absence of transaction costs, all government allocations of property rights are equally efficient, because interested parties will bargain privately to correct any externality.**

**Implication: Any market plagued by externalities can be made efficient if property rights are clearly defined and assigned, and if transaction (bargaining) costs are negligible.**

# Alternative Approaches to Externalities: The Coase Theorem

## Property rights approach to externalities: tradable permits Numeric example

Suppose that two utilities each release 10 tons of sulfur dioxide into the atmosphere, and that the government wants to reduce the total amount of sulfur dioxide emissions to 16 tons. Further, assume that it costs utilities different amounts to reduce their emissions:

Utility	Total Cost to reduce emissions to ...		
	9 Tons	8 Tons	7 Tons
A	\$50,000	\$125,000	\$225,000
B	\$100,000	\$250,000	\$450,000

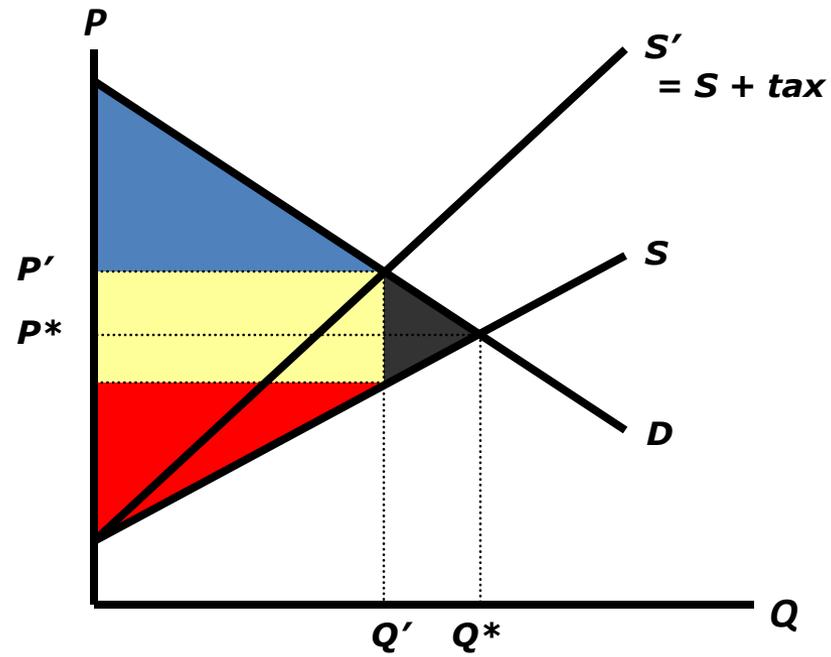
How much will the reduction to 16 tons cost if the government simply limits each utility to 8 tons of sulfur dioxide emissions?

If the government issues each utility the “right” to release 8 tons of sulfur dioxide, and further allows the utilities to sell these rights, what will happen and how much will reduction to 16 tons cost?

# Alternative Approaches to Pollution

## Carbon Tax vs. Cap & Trade: Welfare Analysis

### Carbon Tax



### Cap & Trade

