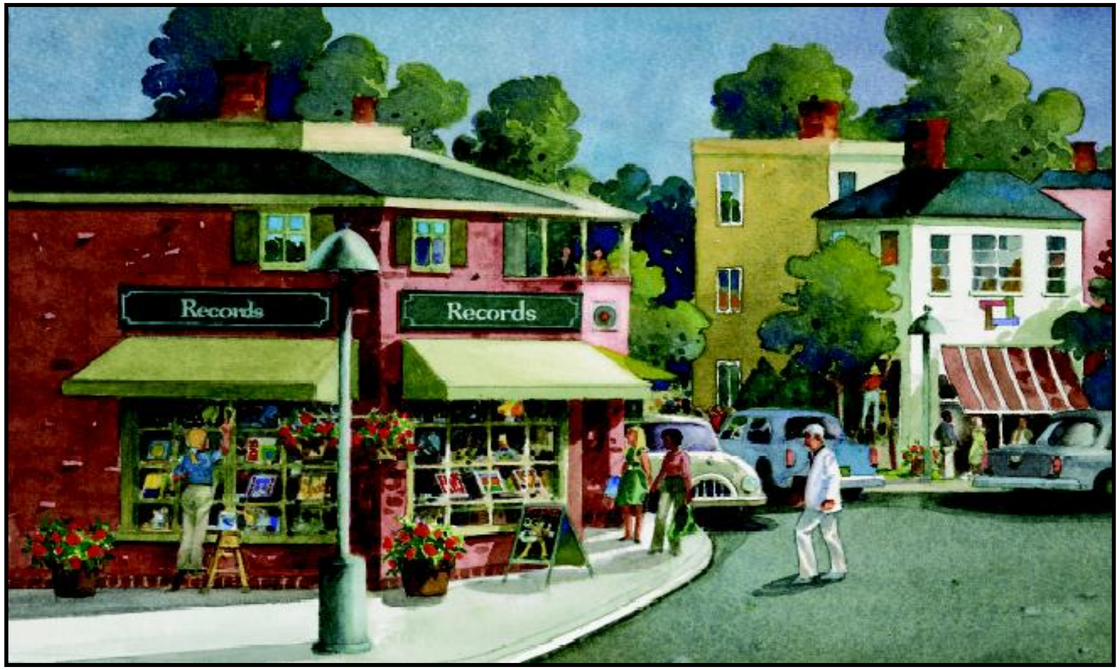
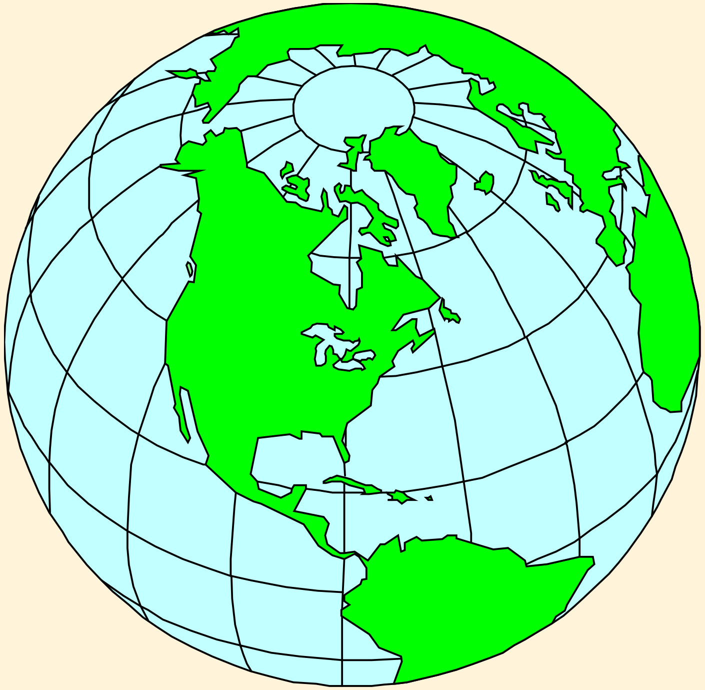


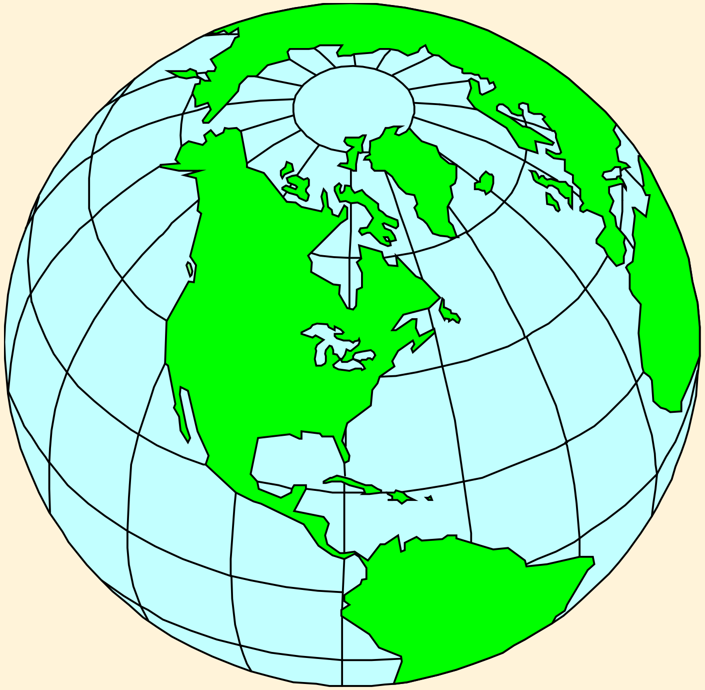

9

# Application: International Trade

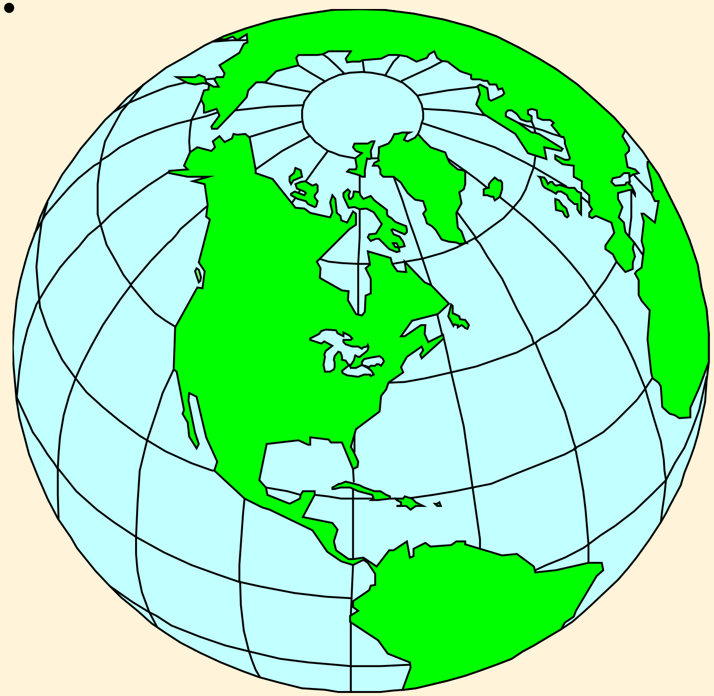
- What determines whether a country imports or exports a good?



- Who gains and who loses from free trade among countries?



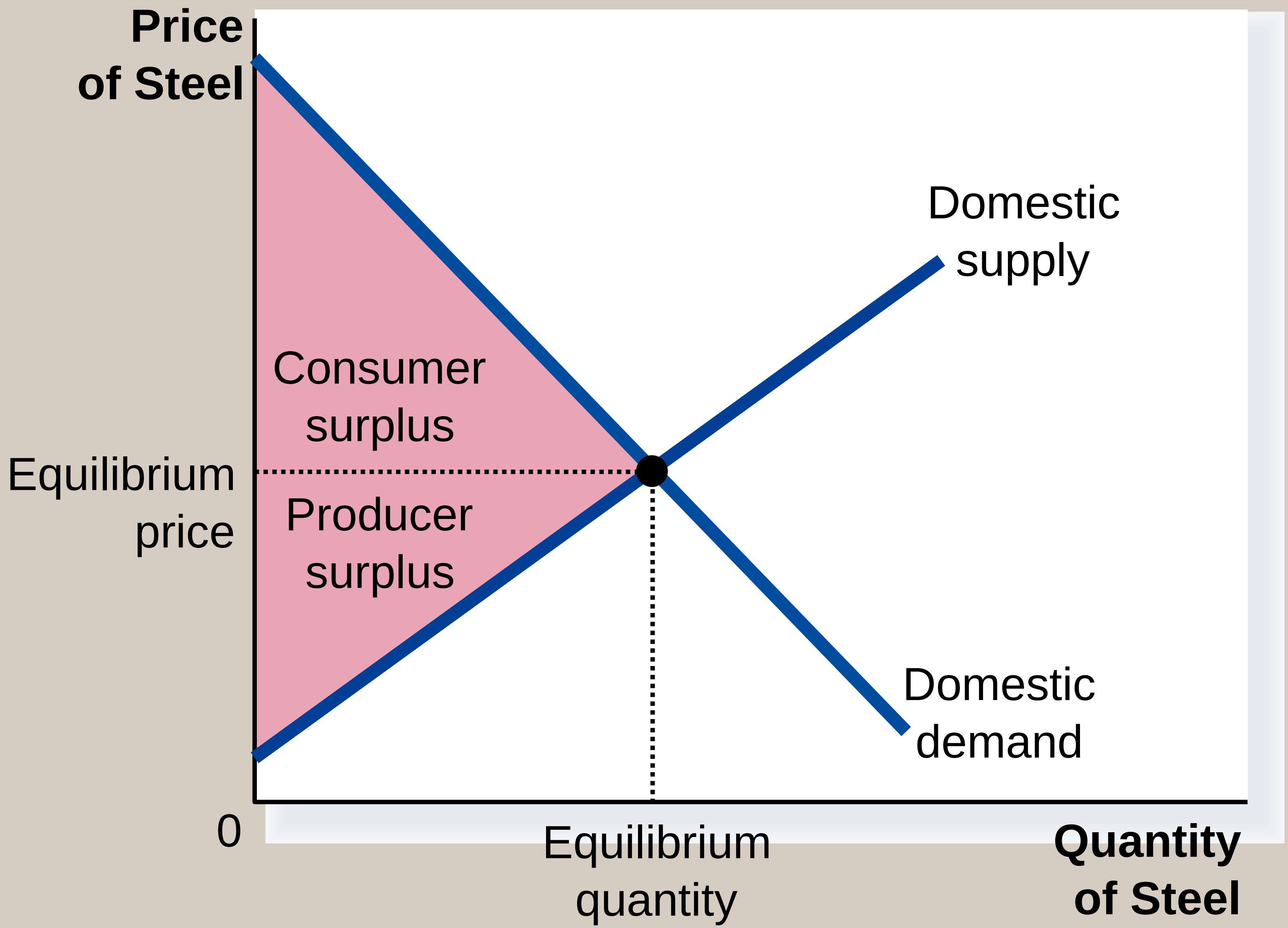
- What are the arguments that people use to advocate trade restrictions?



# THE DETERMINANTS OF TRADE

- Equilibrium Without Trade
  - Assume:
    - A country is isolated from rest of the world and produces steel.
    - The market for steel consists of the buyers and sellers in the country.
    - No one in the country is allowed to import or export steel.

# Figure 1The Equilibrium without International Trade



# The Equilibrium Without International Trade

- Equilibrium Without Trade
  - Results:
    - Domestic price adjusts to balance demand and supply.
    - The sum of consumer and producer surplus measures the total benefits that buyers and sellers receive.

# The World Price and Comparative Advantage

- If the country decides to engage in international trade, will it be an importer or exporter of steel?

# The World Price and Comparative Advantage

- The effects of free trade can be shown by comparing the domestic price of a good without trade and the *world price* of the good. The *world price* refers to the price that prevails in the world market for that good.

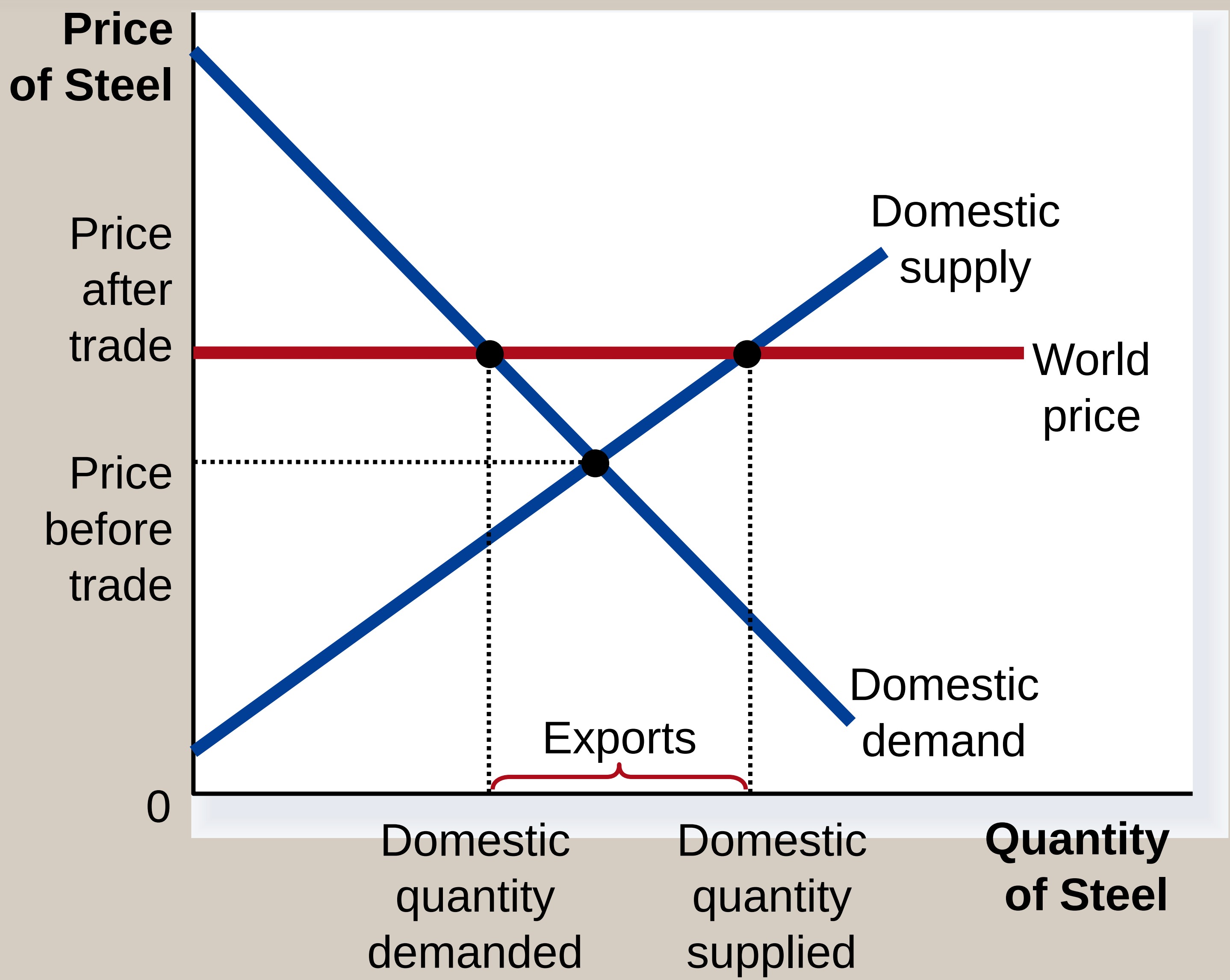
# The World Price and Comparative Advantage

- If a country has a comparative advantage, then the domestic price will be below the world price, and the country will be an *exporter* of the good.

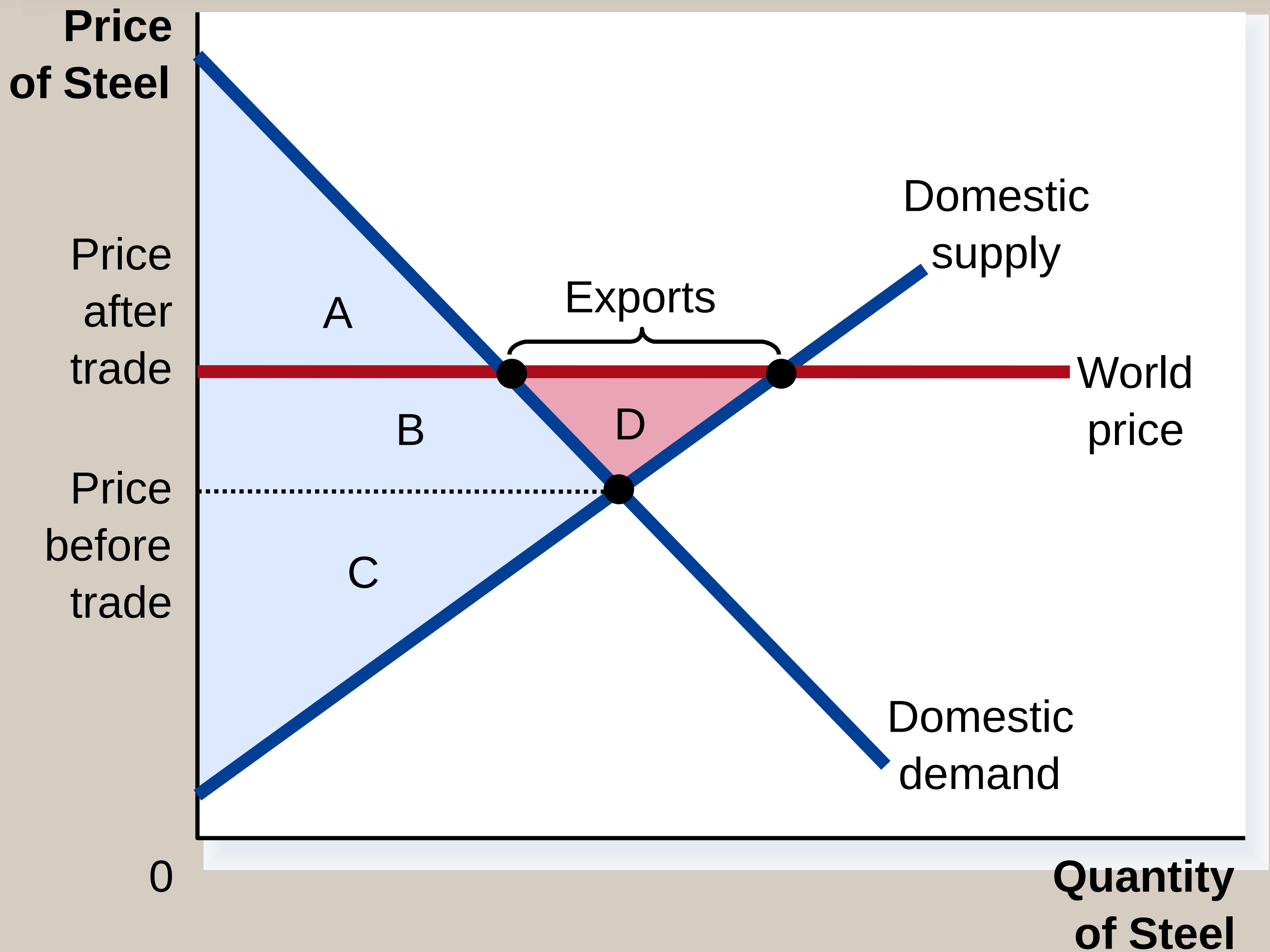
# The World Price and Comparative Advantage

- If the country does not have a comparative advantage, then the domestic price will be higher than the world price, and the country will be an *importer* of the good.

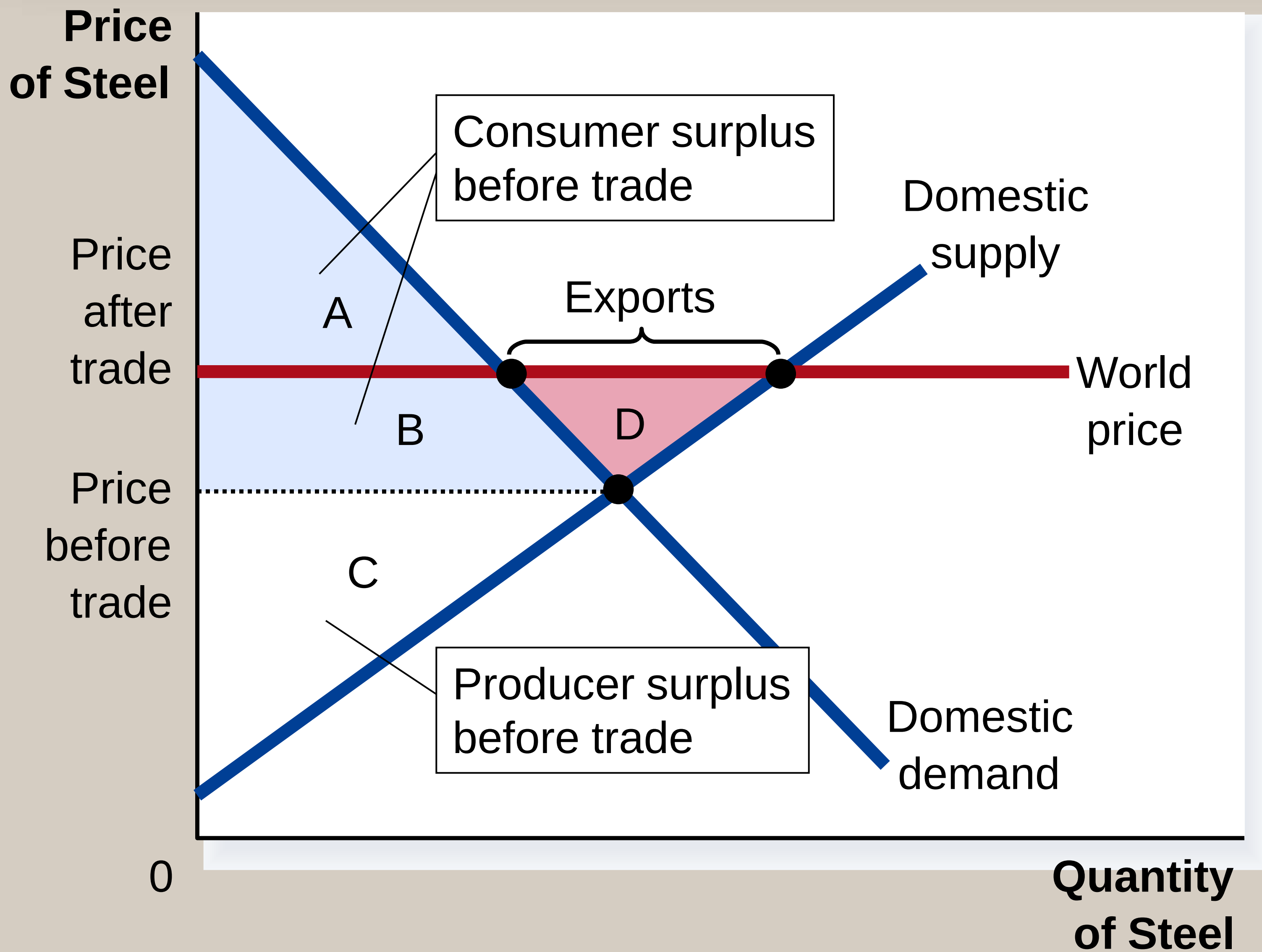
# Figure 2 International Trade in an Exporting Country



# Figure 3 How Free Trade Affects Welfare in an Exporting Country



# Figure 3 How Free Trade Affects Welfare in an Exporting Country



# How Free Trade Affects Welfare in an Exporting Country

| | Before Trade | After Trade | Change |
|---|---|---|---|
| **Consumer Surplus** | A + B | A | −B |
| **Producer Surplus** | C | B + C + D | +(B + D) |
| **Total Surplus** | A + B + C | A + B + C + D | +D |

The area D shows the increase in total surplus and represents the gains from trade.

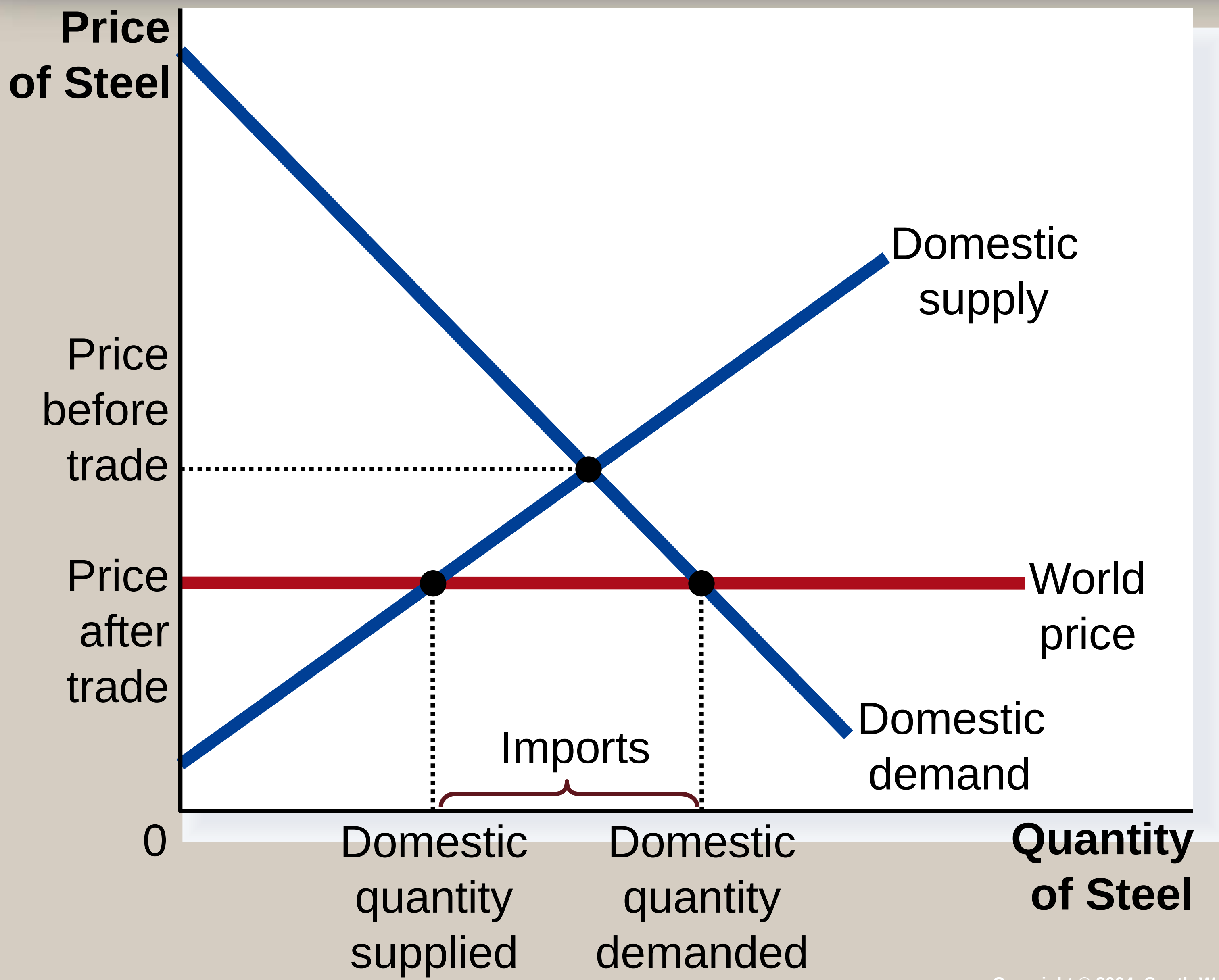
# THE WINNERS AND LOSERS FROM TRADE

- The analysis of an exporting country yields two conclusions:
  - Domestic producers of the good are better off, and domestic consumers of the good are worse off.
  - Trade raises the economic well-being of the nation as a whole.

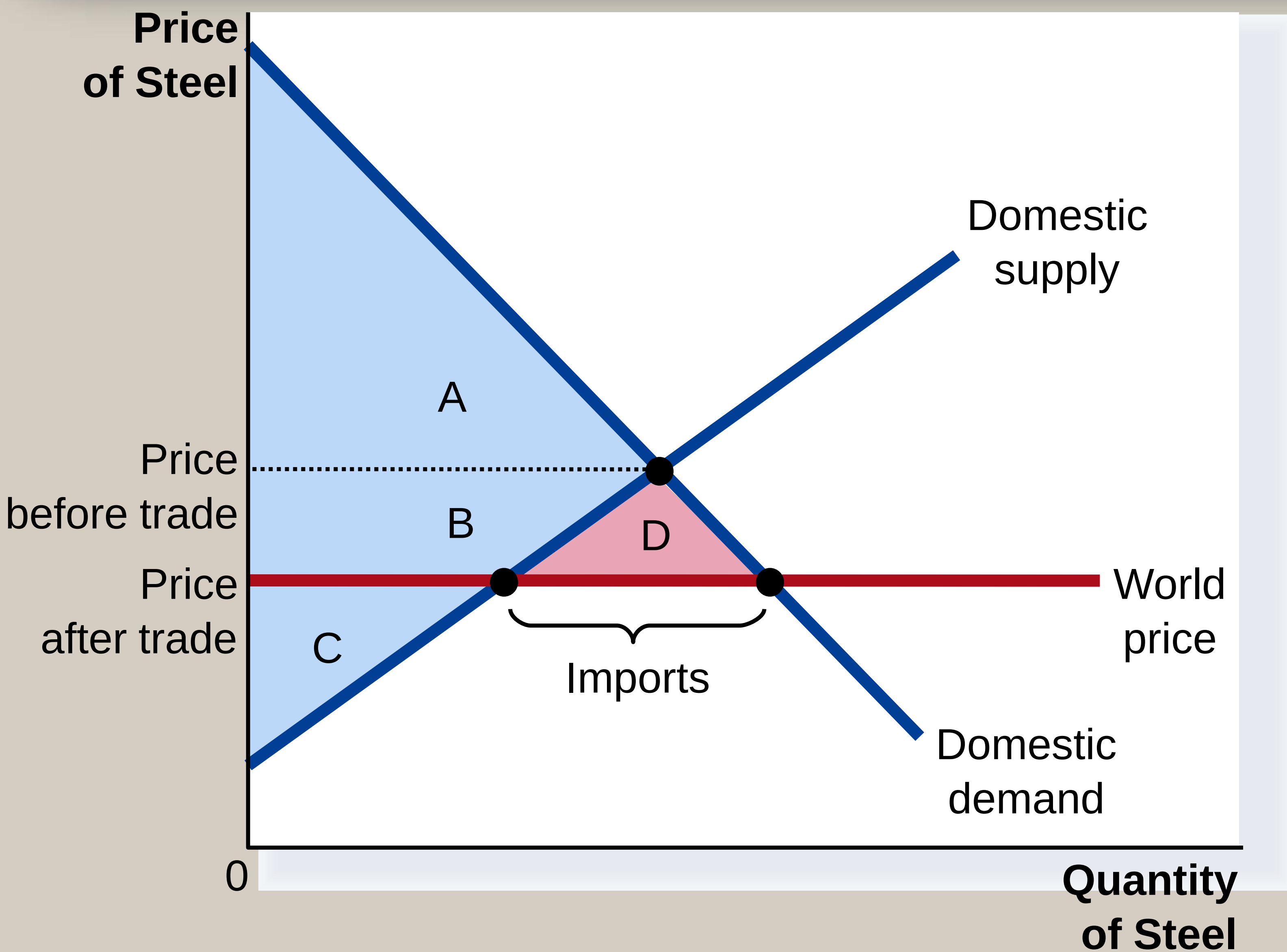
# The Gains and Losses of an Importing Country

- International Trade in an Importing Country
  - If the world price of steel is lower than the domestic price, the country will be an importer of steel when trade is permitted.
  - Domestic consumers will want to buy steel at the lower world price.
  - Domestic producers of steel will have to lower their output because the domestic price moves to the world price.

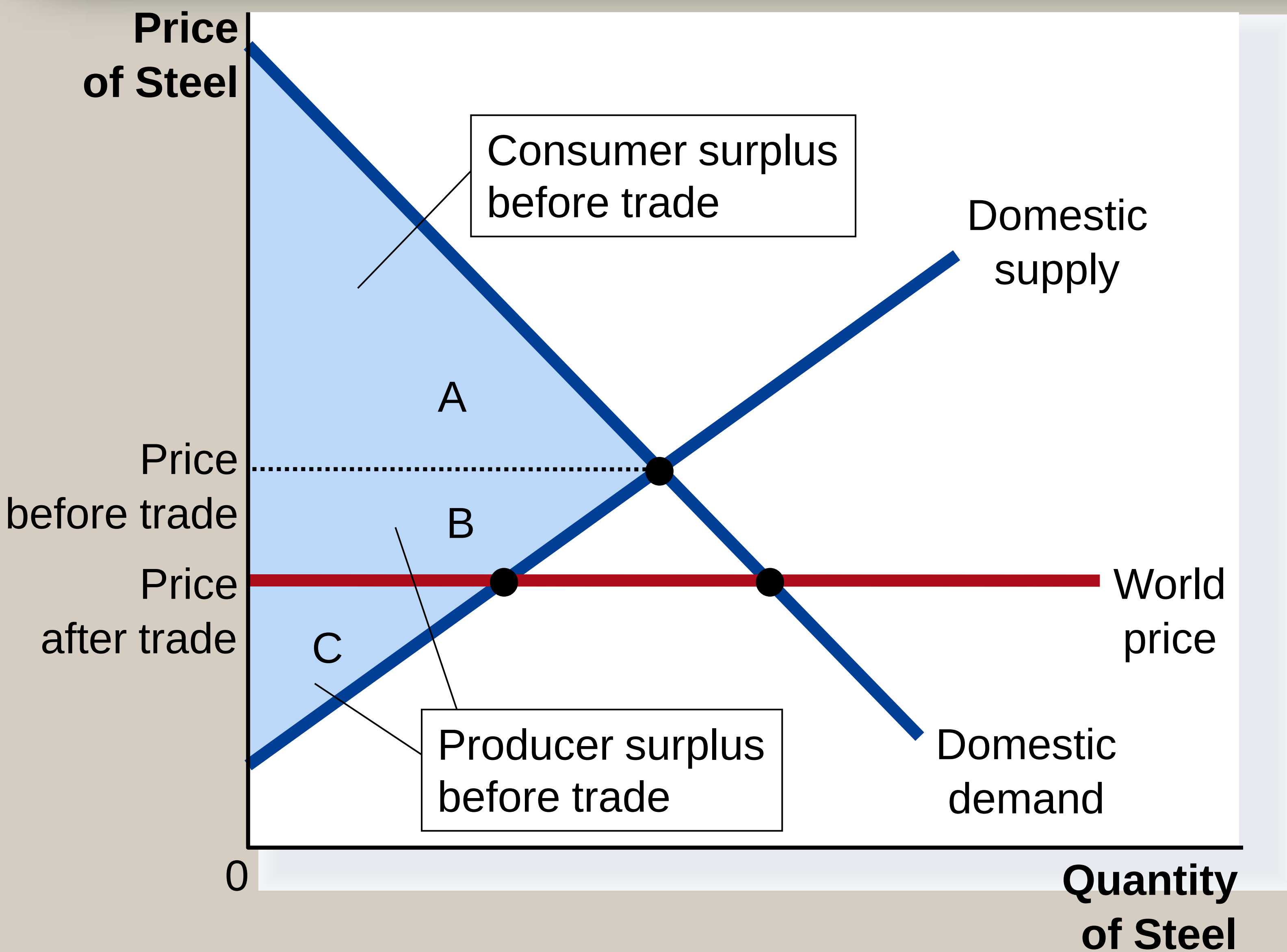
# Figure 4 International Trade in an Importing Country



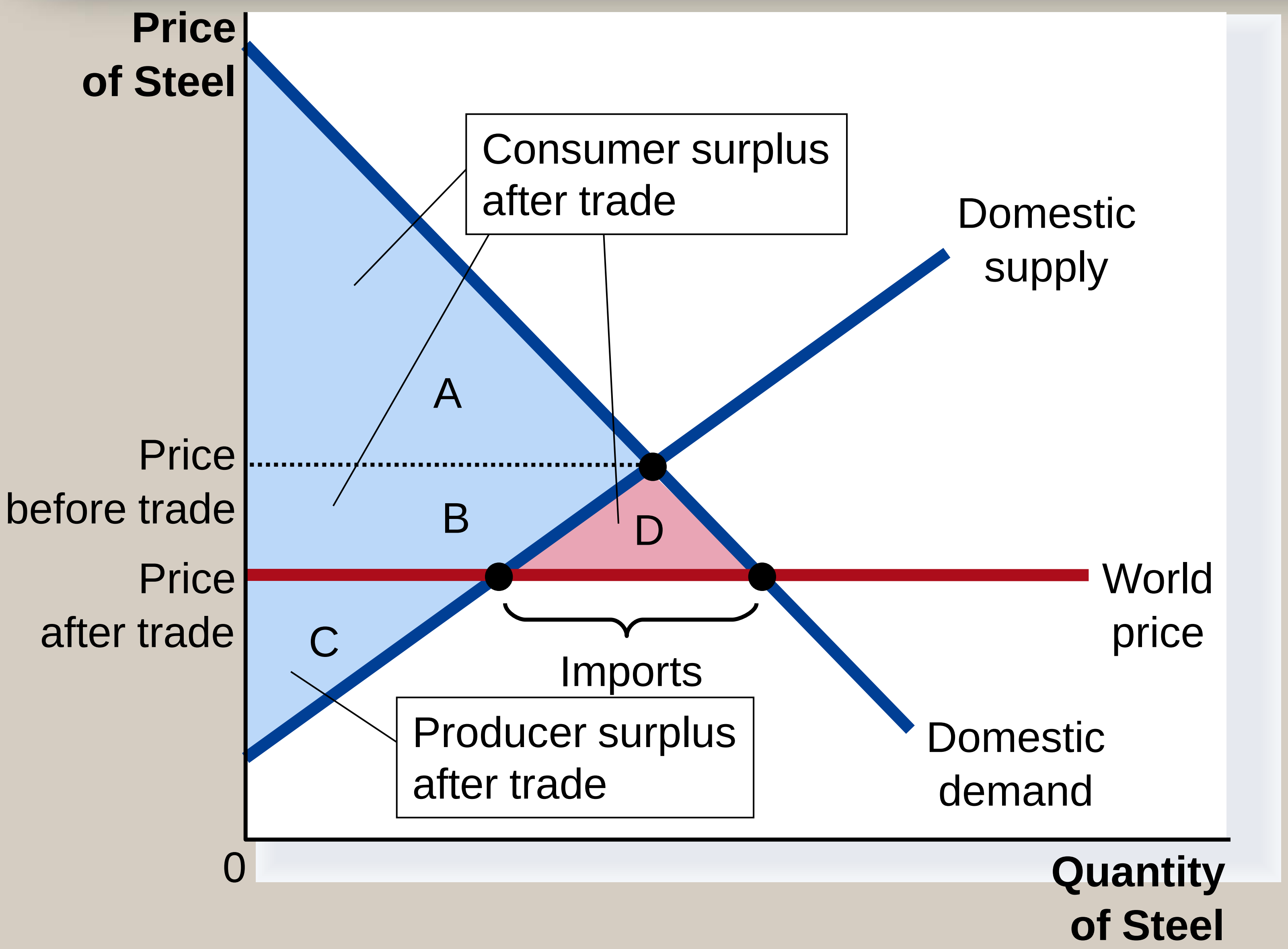
# Figure 5 How Free Trade Affects Welfare in an Importing Country



# Figure 5 How Free Trade Affects Welfare in an Importing Country



# Figure 5 How Free Trade Affects Welfare in an Importing Country



# How Free Trade Affects Welfare in an Importing Country

| | Before Trade | After Trade | Change |
|---|---|---|---|
| **Consumer Surplus** | A | A + B + D | +(B + D) |
| **Producer Surplus** | B + C | C | −B |
| **Total Surplus** | A + B + C | A + B + C + D | +D |

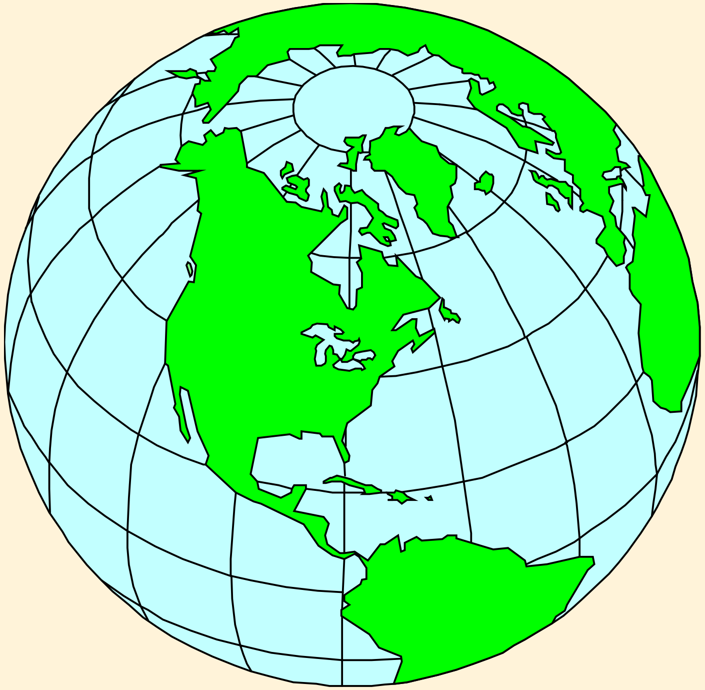
The area D shows the increase in total surplus and represents the gains from trade.

# THE WINNERS AND LOSERS FROM TRADE

- How Free Trade Affects Welfare in an Importing Country
  - The analysis of an importing country yields two conclusions:
    - Domestic producers of the good are worse off, and domestic consumers of the good are better off.
    - Trade raises the economic well-being of the nation as a whole because the gains of consumers exceed the losses of producers.

# THE WINNERS AND LOSERS FROM TRADE

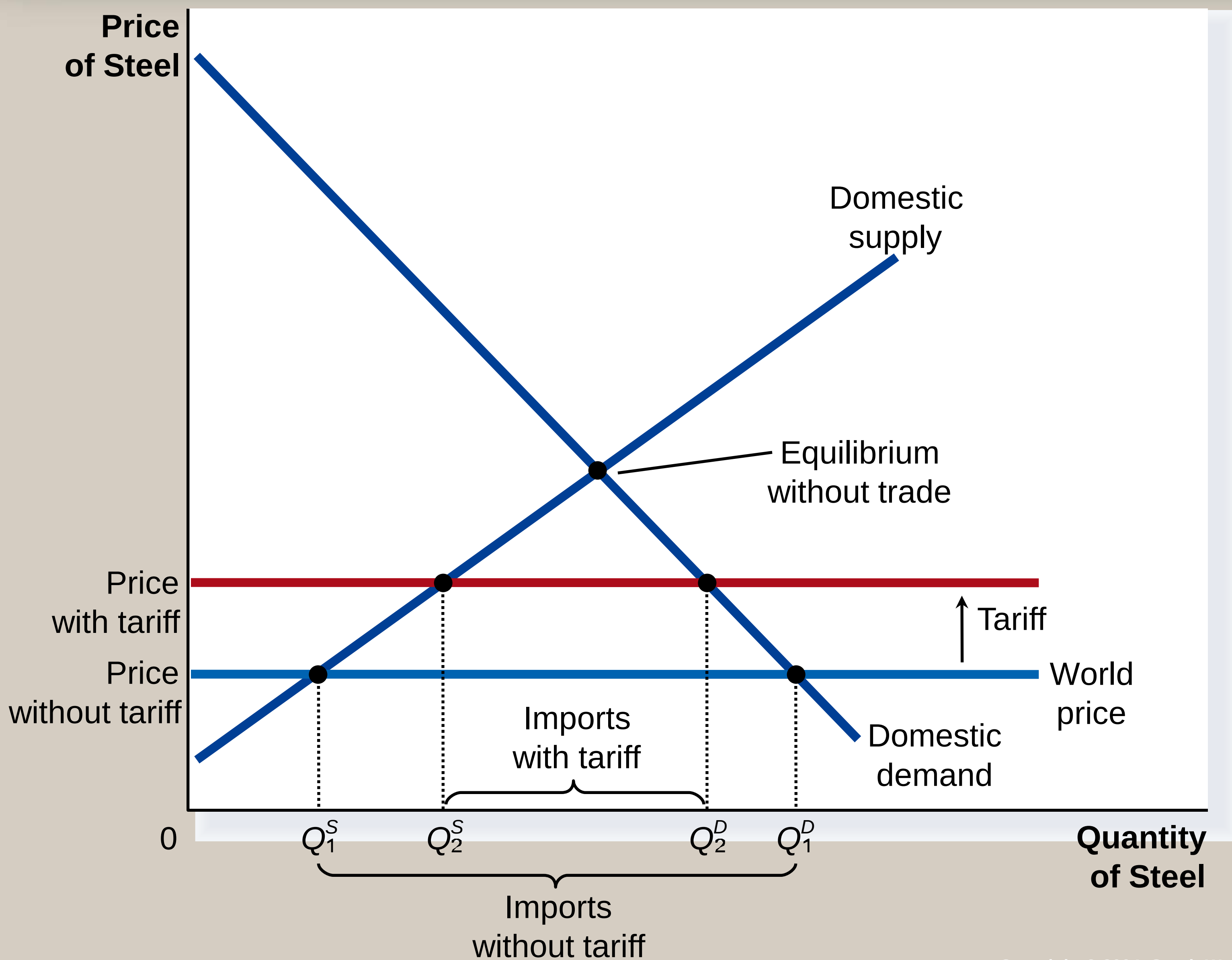
- The gains of the winners exceed the losses of the losers.
- The net change in total surplus is positive.



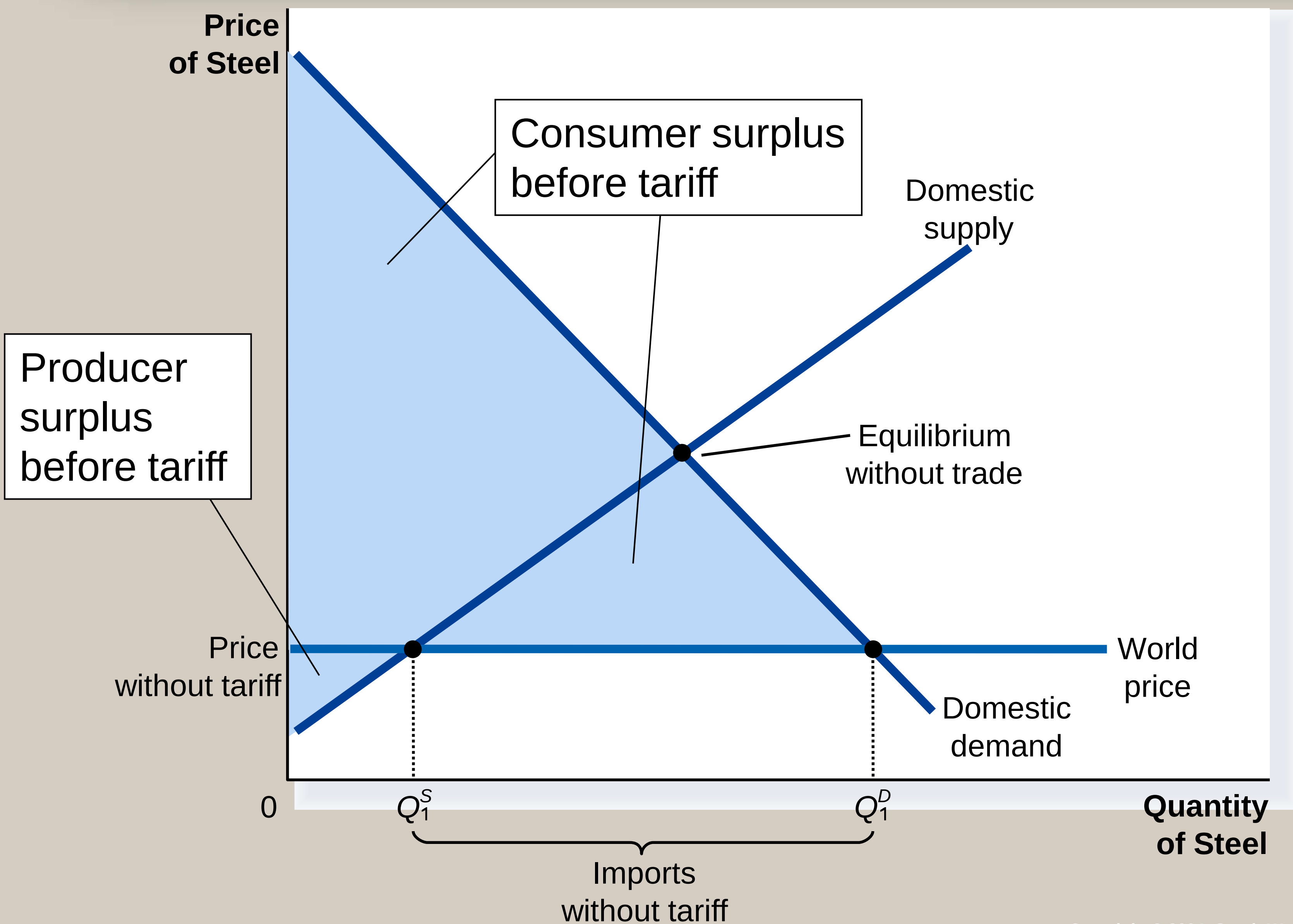
# The Effects of a Tariff

- A *tariff* is a tax on goods produced abroad and sold domestically.
- Tariffs raise the price of imported goods above the world price by the amount of the tariff.

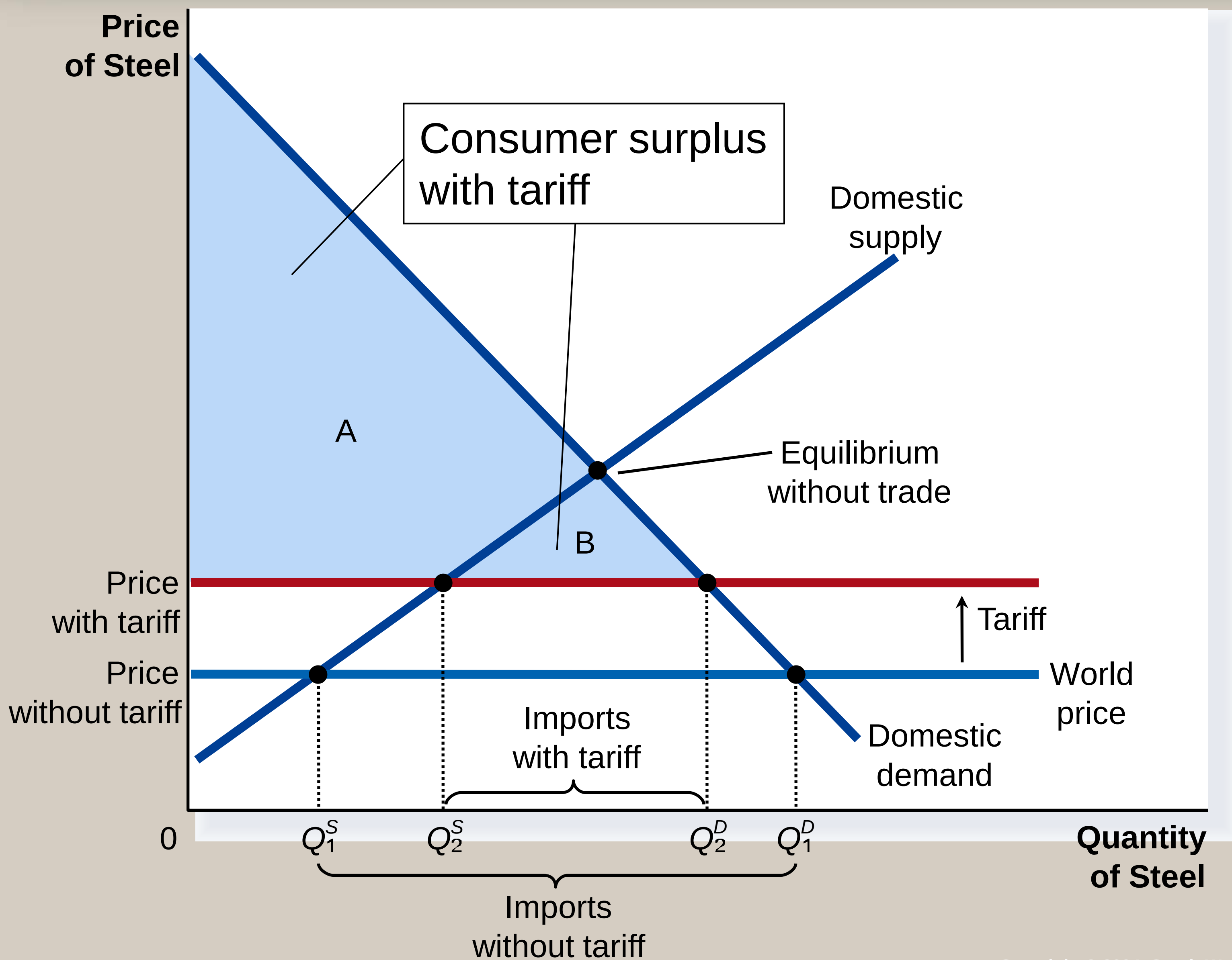
# Figure 6 The Effects of a Tariff



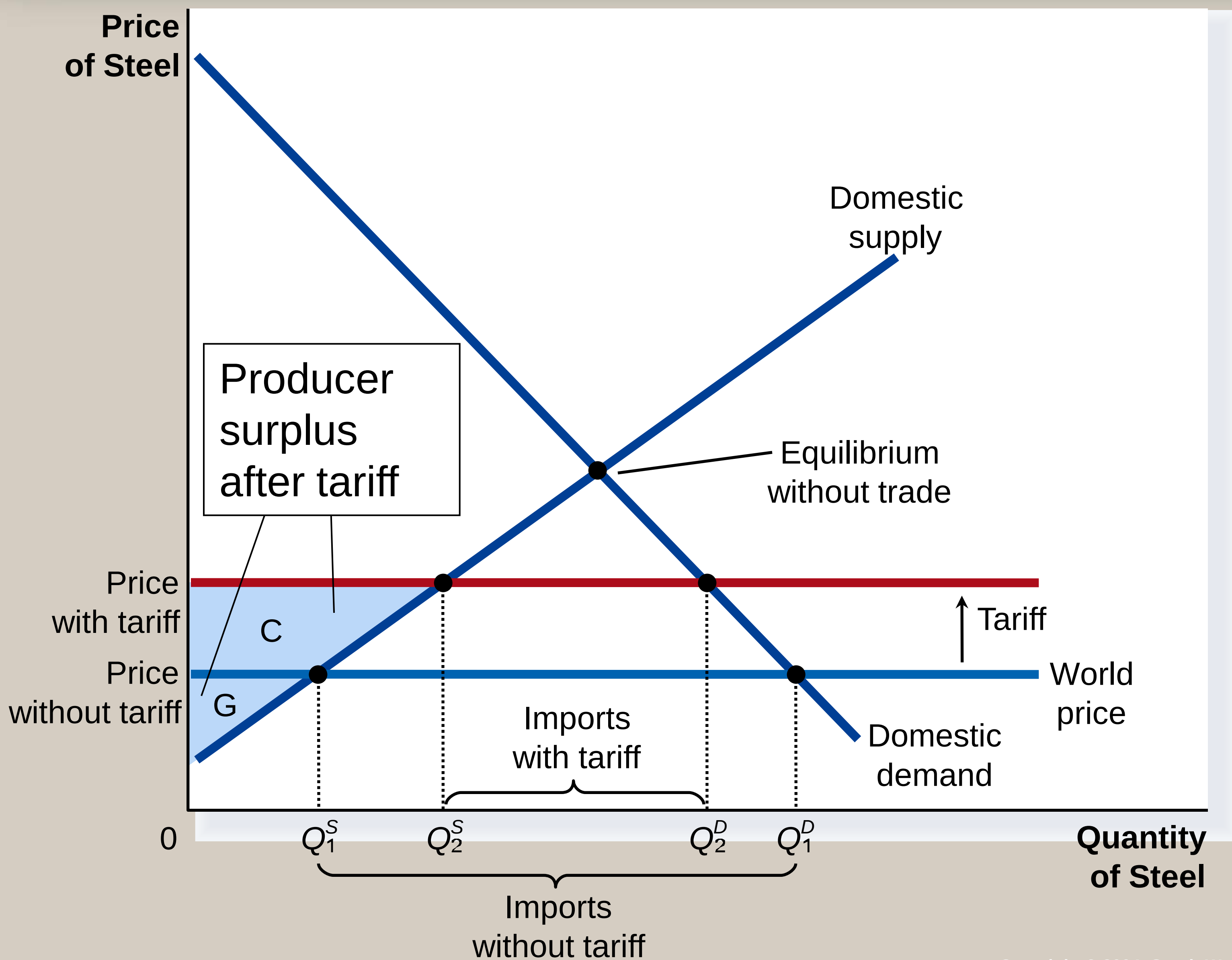
# Figure 6 The Effects of a Tariff



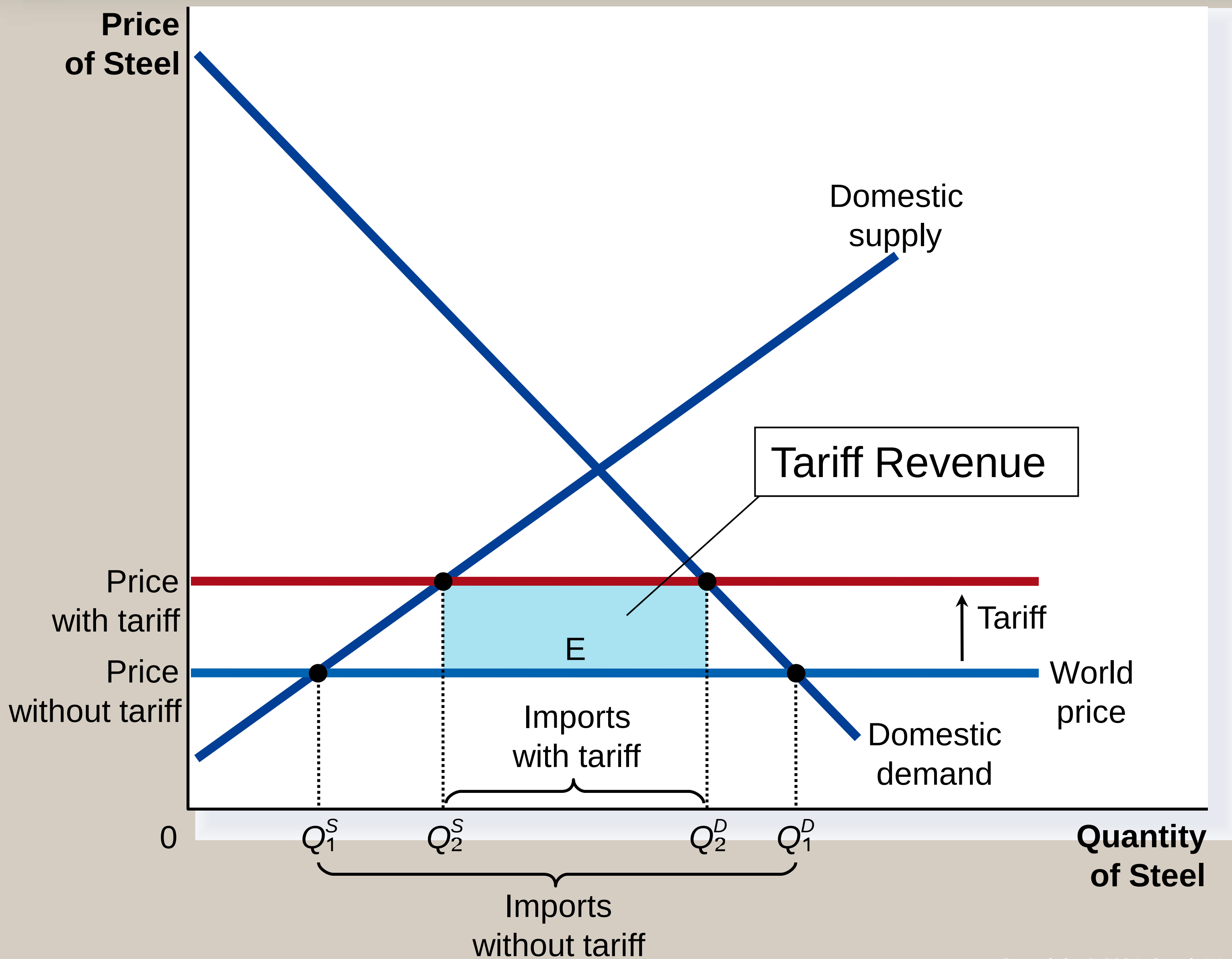
# Figure 6 The Effects of a Tariff



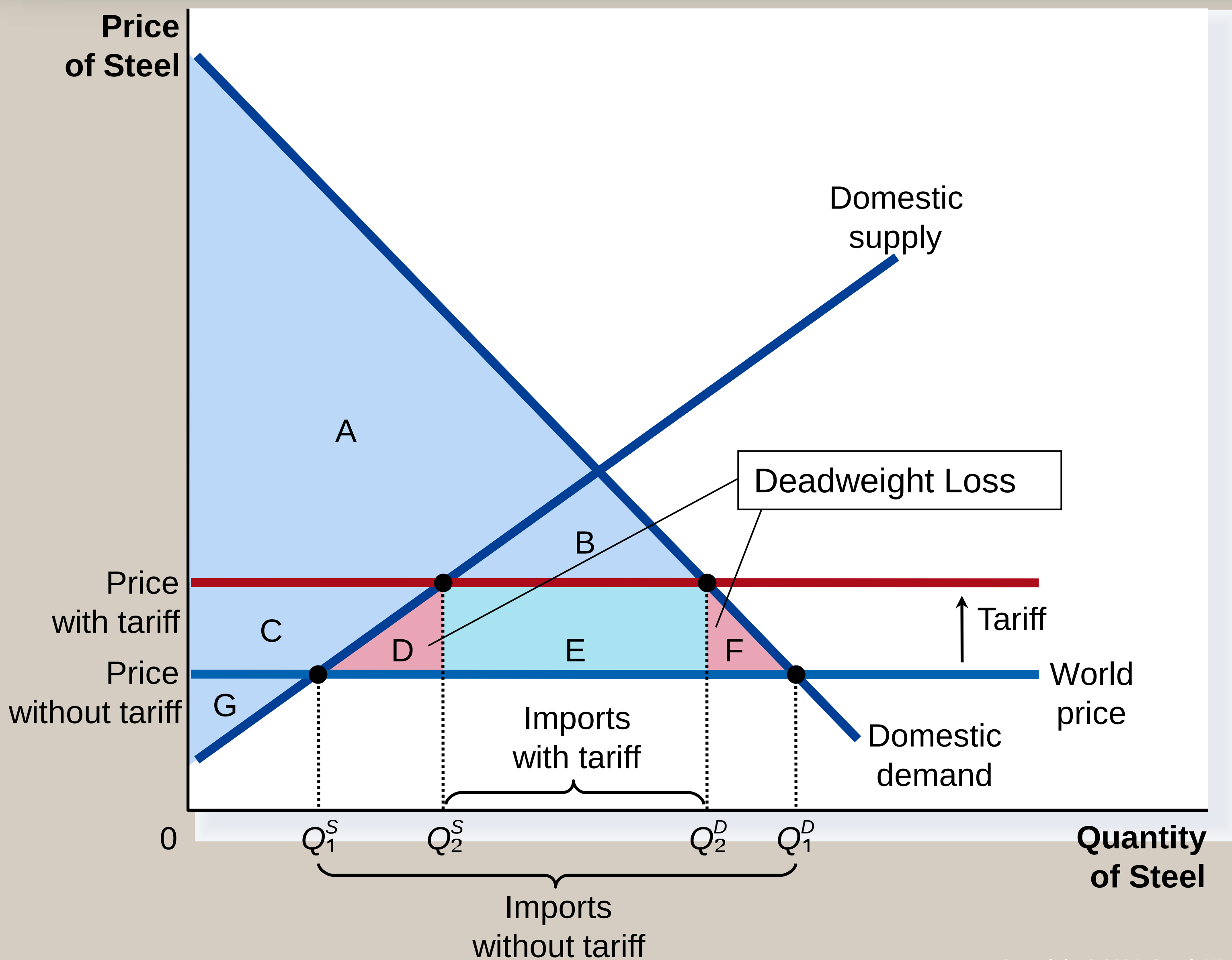
# Figure 6 The Effects of a Tariff



# Figure 6 The Effects of a Tariff



# Figure 6 The Effects of a Tariff



# The Effects of a Tariff

| | Before Tariff | After Tariff | Change |
|---|---|---|---|
| **Consumer Surplus** | A + B + C + D + E + F | A + B | −(C + D + E + F) |
| **Producer Surplus** | G | C + G | +C |
| **Government Revenue** | None | E | +E |
| **Total Surplus** | A + B + C + D + E + F + G | A + B + C + E + G | −(D + F) |

The area D + F shows the fall in total surplus and represents the deadweight loss of the tariff.

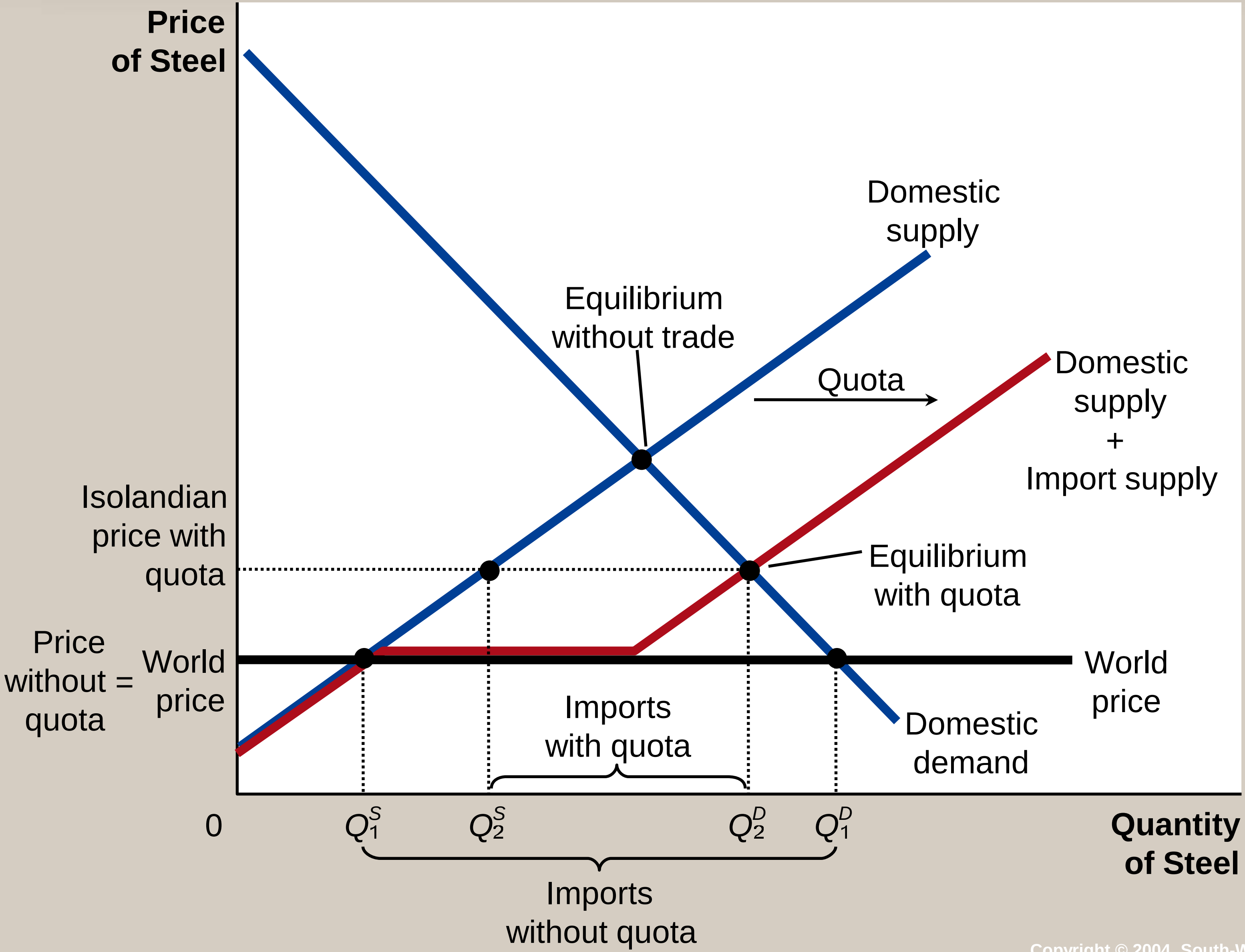
# The Effects of a Tariff

- A tariff reduces the quantity of imports and moves the domestic market closer to its equilibrium without trade.
- With a tariff, total surplus in the market decreases by an amount referred to as a deadweight loss.

# The Effects of an Import Quota

- An *import quota* is a limit on the quantity of a good that can be produced abroad and sold domestically.

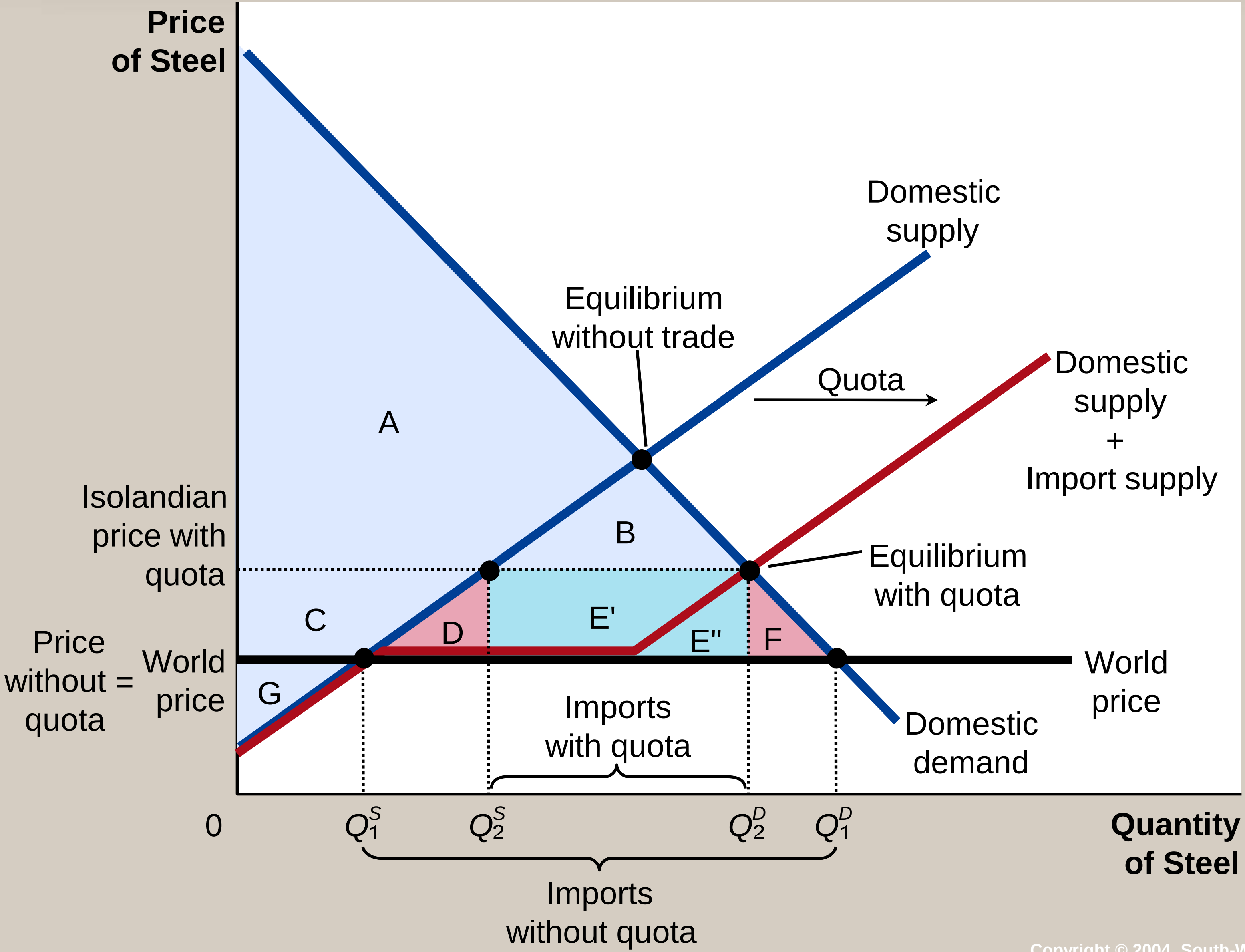
# Figure 7 The Effects of an Import Quota



# The Effects of an Import Quota

- Because the quota raises the domestic price above the world price, domestic buyers of the good are worse off, and domestic sellers of the good are better off.
- License holders are better off because they make a profit from buying at the world price and selling at the higher domestic price.

# Figure 7 The Effects of an Import Quota



# The Effects of an Import Quota

| | Before Quota | After Quota | Change |
|---|---|---|---|
| Consumer Surplus | A + B + C + D + E' + E'' + F | A + B | −(C + D + E' + E'' + F) |
| Producer Surplus | G | C + G | +C |
| License-Holder Surplus | None | E' + E'' | +(E' + E'') |
| Total Surplus | A + B + C + D + E' + E'' + F + G | A + B + C + E' + E'' + G | −(D + F) |

The area D + F shows the fall in total surplus and represents the deadweight loss of the quota.

# The Effects of an Import Quota

- With a quota, total surplus in the market decreases by an amount referred to as a deadweight loss.
- The quota can potentially cause an even larger deadweight loss, if a mechanism such as lobbying is employed to allocate the import licenses.

# The Lessons for Trade Policy

- If government sells import licenses for full value, revenue equals that of an equivalent tariff and the results of tariffs and quotas are identical.

# The Lessons for Trade Policy

- Both tariffs and import quotas . . .
  - raise domestic prices.
  - reduce the welfare of domestic consumers.
  - increase the welfare of domestic producers.
  - cause deadweight losses.

# The Lessons for Trade Policy

- Other Benefits of International Trade
  - Increased variety of goods
  - Lower costs through economies of scale
  - Increased competition
  - Enhanced flow of ideas

# THE ARGUMENTS FOR RESTRICTING TRADE

- Jobs
- National Security
- Infant Industry
- Unfair Competition
- Protection-as-a-Bargaining Chip

# CASE STUDY: Trade Agreements and the World Trade Organization

- Unilateral: when a country removes its trade restrictions on its own.
- Multilateral: a country reduces its trade restrictions while other countries do the same.

# CASE STUDY: Trade Agreements and the World Trade Organization

- NAFTA
  - The North American Free Trade Agreement (NAFTA) is an example of a multilateral trade agreement.
  - In 1993, NAFTA lowered the trade barriers among the United States, Mexico, and Canada.

# CASE STUDY: Trade Agreements and the World Trade Organization

- GATT
  - The General Agreement on Tariffs and Trade (GATT) refers to a continuing series of negotiations among many of the world's countries with a goal of promoting free trade.
  - GATT has successfully reduced the average tariff among member countries from about 40 percent after WWII to about 5 percent today.

# Summary

- The effects of free trade can be determined by comparing the domestic price without trade to the world price.
  - A low domestic price indicates that the country has a comparative advantage in producing the good and that the country will become an exporter.
  - A high domestic price indicates that the rest of the world has a comparative advantage in producing the good and that the country will become an importer.

# Summary

- When a country allows trade and becomes an exporter of a good, producers of the good are better off, and consumers of the good are worse off.
- When a country allows trade and becomes an importer of a good, consumers of the good are better off, and producers are worse off.

# Summary

- A tariff—a tax on imports—moves a market closer to the equilibrium than would exist without trade, and therefore reduces the gains from trade.
- Import quotas will have effects similar to those of tariffs.

# Summary

- There are various arguments for restricting trade:  protecting jobs, defending national security, helping infant industries, preventing unfair competition, and responding to foreign trade restrictions.
- Economists, however, believe that free trade is usually the better policy.