
Econ 100A: Intermediate Microeconomic Analysis Lecture 16 (& may be 17)

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Plan of Today's Lecture

- Ch. 9
- Evaluating the Gains and Losses from Government Policies
- The Efficiency of a Competitive Market
- Minimum Prices
- Price Supports and Production Quotas
- Import Quotas and Tariffs
- The Impact of a Tax or Subsidy
- Government regulations / restrictions & their effects on welfare

Effects of Government Policies (Gains and Losses)

- To determine the welfare effect of a governmental policy, we can measure the gain or loss in consumer and producer surplus
- Welfare Effects
 - Gains and losses to producers and consumers
- When government controls price, some people are better off
 - May be able to buy a good at a lower price
- But what is the effect on society as a whole?
 - Is total welfare higher or lower and by how much?
- To measure gains and losses from government policies → The concepts of Consumer and Producer Surplus

Consumer surplus

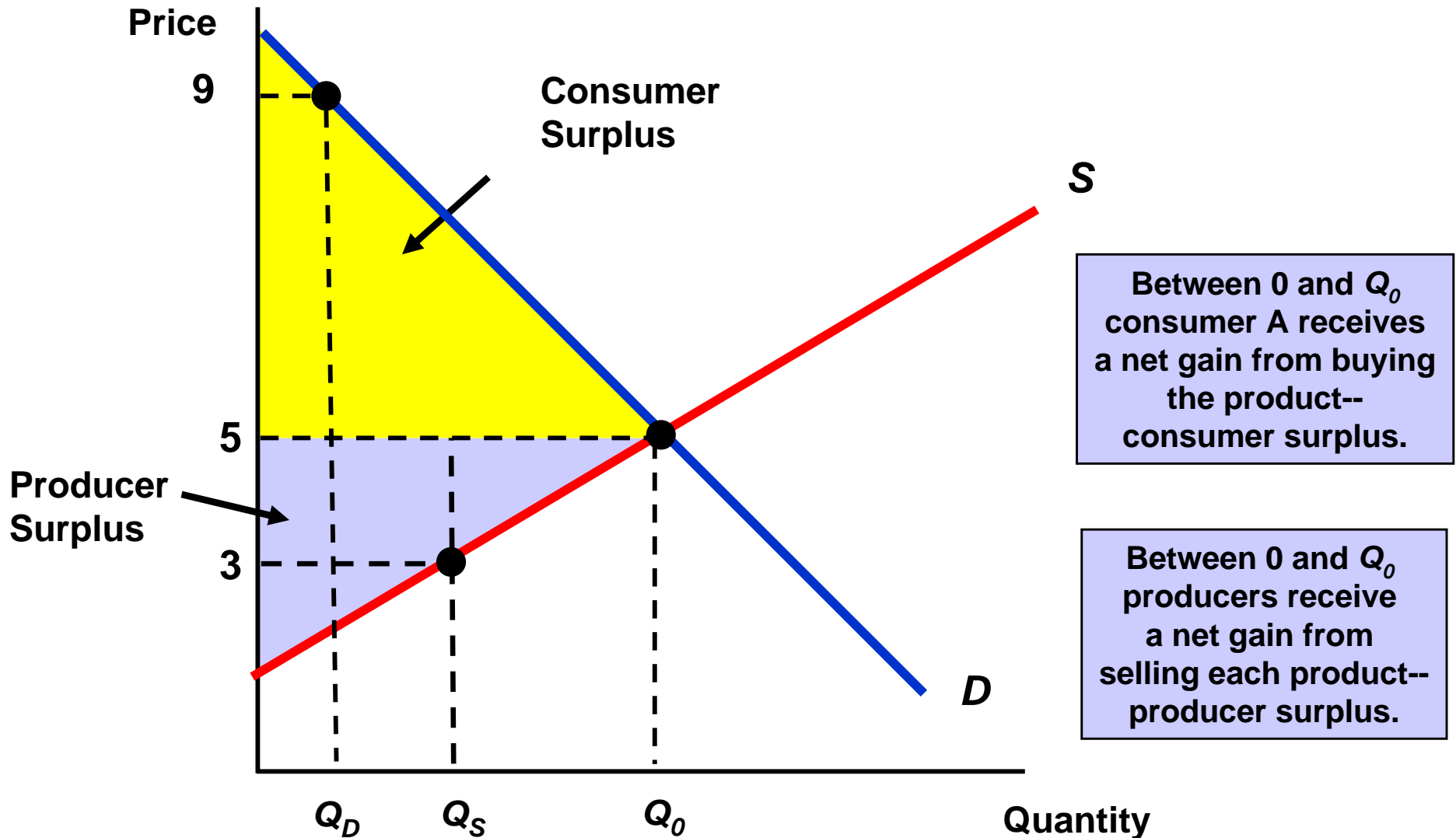
- **Consumer surplus** is the total benefit or value that consumers receive beyond what they pay for the good
- The demand curve shows the willingness to pay for all consumers in the market
- **Consumer surplus** can be measured by the area between the demand curve and the market price
- Consumer surplus measures the total net benefit to consumers

Producer Surplus

- **Producer surplus** is the total benefit or revenue that producers receive beyond what it costs to produce a good
- The supply curve shows the amount that a producer is willing to take for a certain amount of a good
- **Producer surplus** can be measured by the area between the supply curve and the market price
- Producer surplus measures the total net benefit to producers

Consumer and Producer Surplus

Graphically, Fig. 9.1, p 301



Price Controls (Price Ceiling)

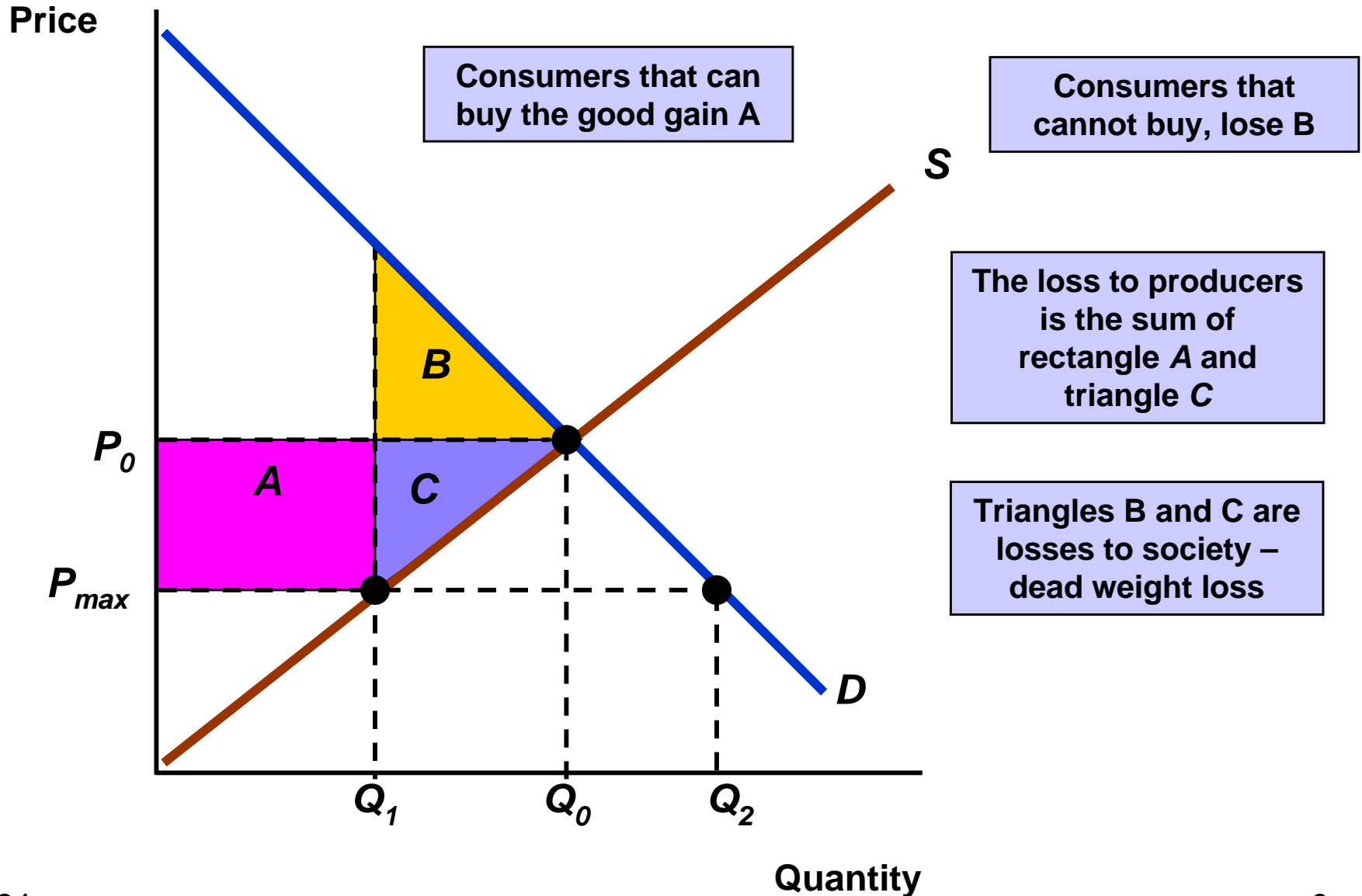
- Price ceiling = the price of a good can't go above that price
- With a binding price ceiling, producers and consumers are affected
 - When price is held too low, the quantity demanded increases and quantity supplied decreases → Excess demand (or shortage)
- How much they are affected can be determined by measuring changes in consumer and producer surplus
- Consumers
 - Some consumers are worse off because they can no longer buy the good
 - Decrease in CS for these consumers
 - Some consumers are better off because they can buy it at a lower price
 - Increase in CS for these consumers
- Producers
 - Some producers sell less at a lower price
 - Some producers are no longer in the market
 - Both of these producer groups lose and PS decreases
- The economy as a whole is worse off since surplus that used to belong to producers or consumers is simply gone

Price Controls (Price Floor)

- Price floor = the price of a good can't fall below that price
- With a binding price floor, producers and consumers are affected
 - When price is held too high, the quantity demanded decreases and quantity supplied increases → Excess supply
- How much they are affected can be determined by measuring changes in consumer and producer surplus
- Consumers – all consumers are worse off
 - Some consumers are worse off because they no longer buy the good (price is above their reservation values)
 - Decrease in CS for these consumers (to zero)
 - Some other consumers are worse off because they buy the good at a higher price (and lower quantity)
 - Decrease in CS for these consumers
- Producers
 - Some producers sell at a higher price
 - Increase in PS for these producers
 - But some of producers will sell less, and
 - Some producers are no longer in the market (due to lower demand)
 - For these producers PS decreases
- The economy as a whole is worse off since surplus that used to belong to producers or consumers is simply gone

Price Controls (Ceiling) and Surplus Changes Graphically

Fig 9.2 & 9.3, p. 302 & 303



Price Control (Floor) and Surplus Changes Graphically

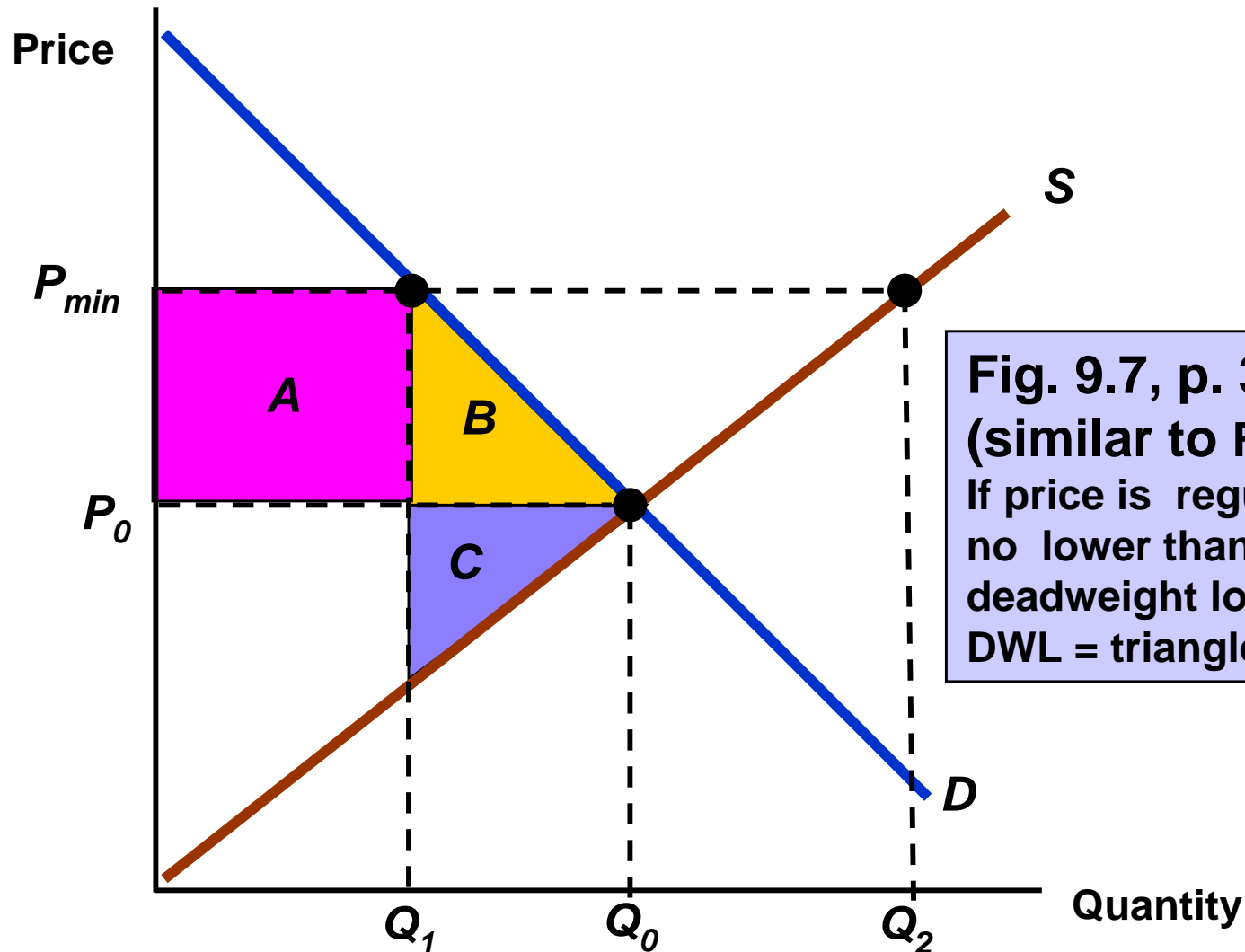
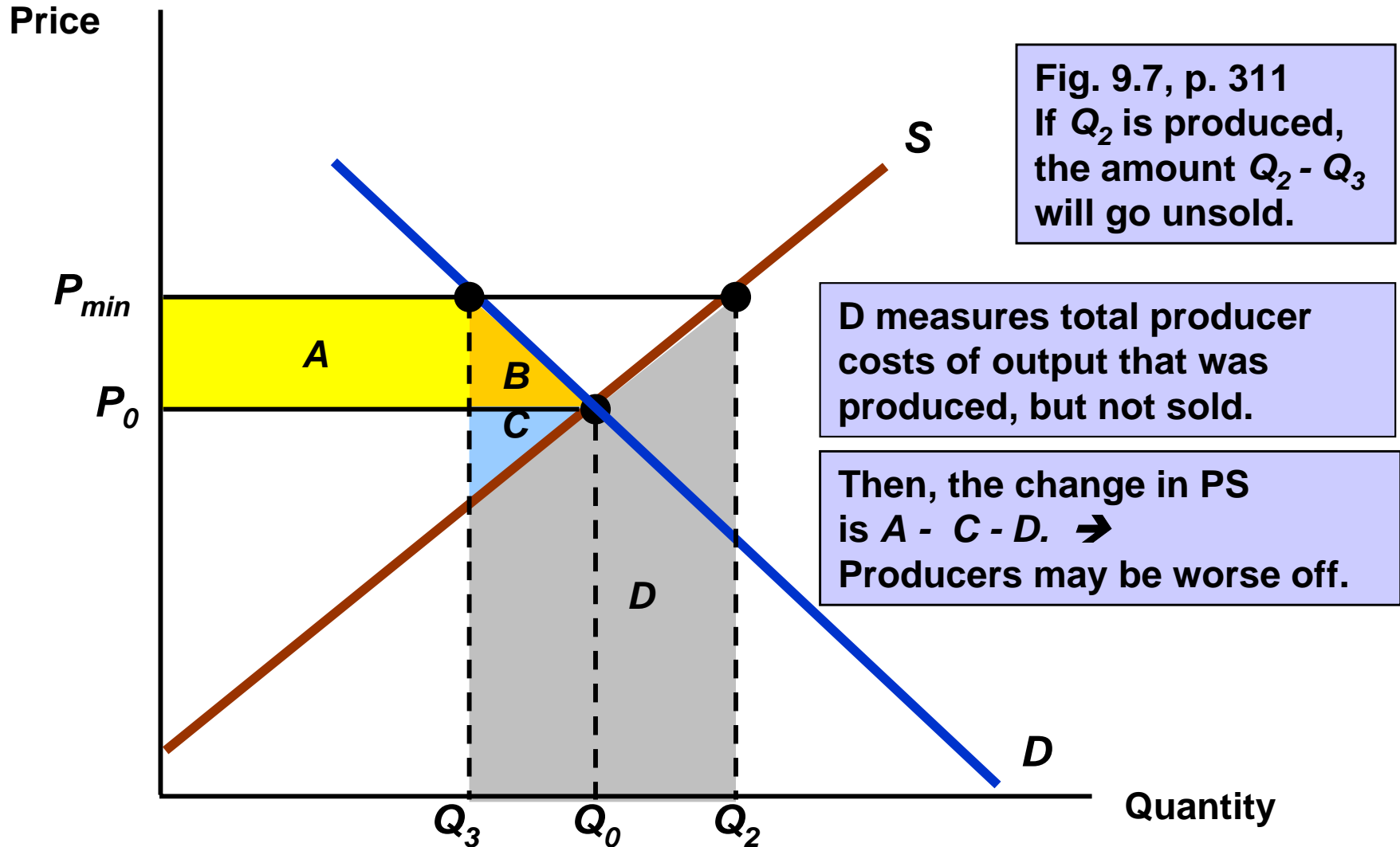


Fig. 9.7, p. 311
(similar to Fig. 9.5, p. 307)
If price is regulated to be no lower than P_{min} ,
deadweight loss (DWL)
DWL = triangles B and C

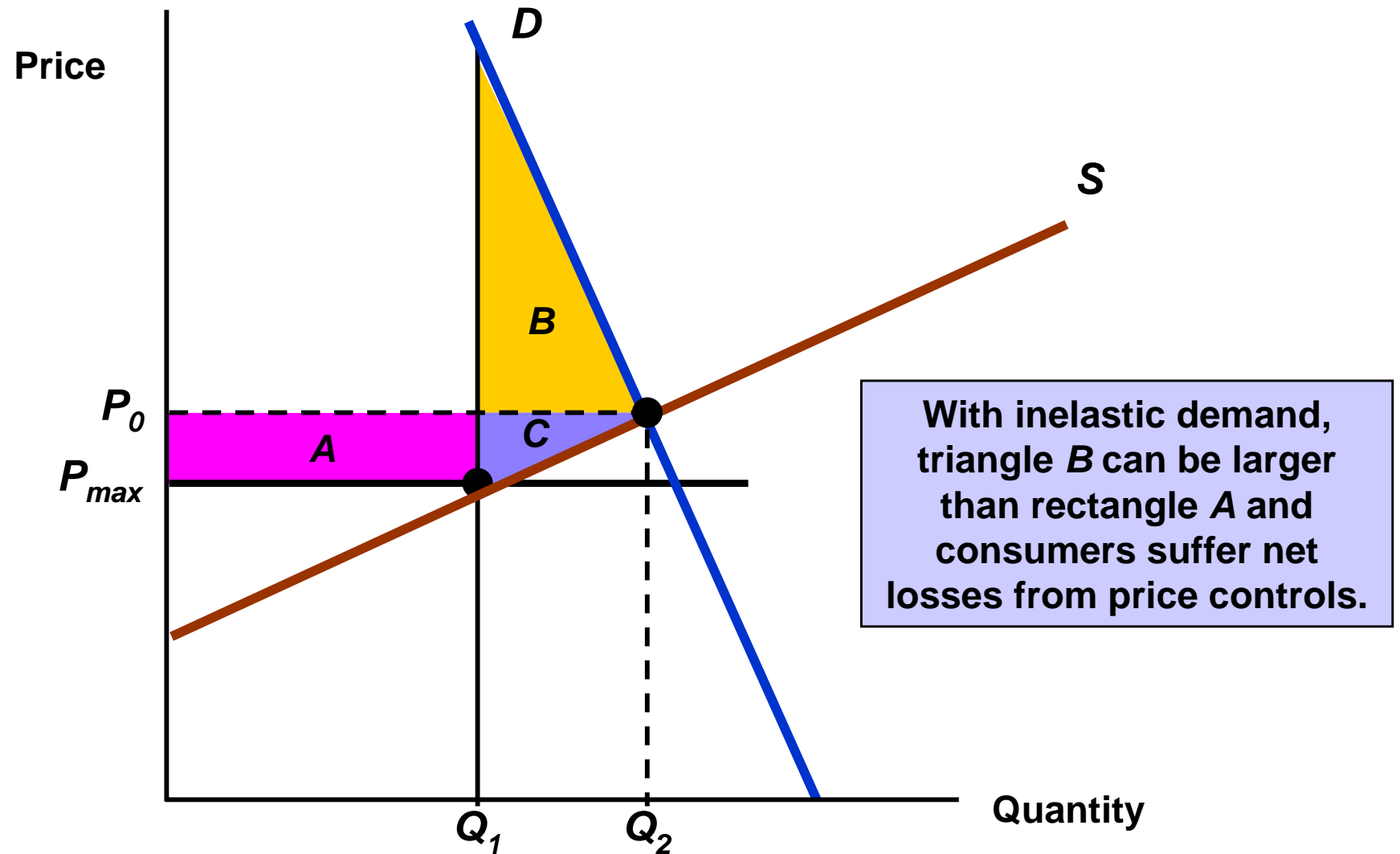
Minimum Prices (Price Floor): Graphical Analysis



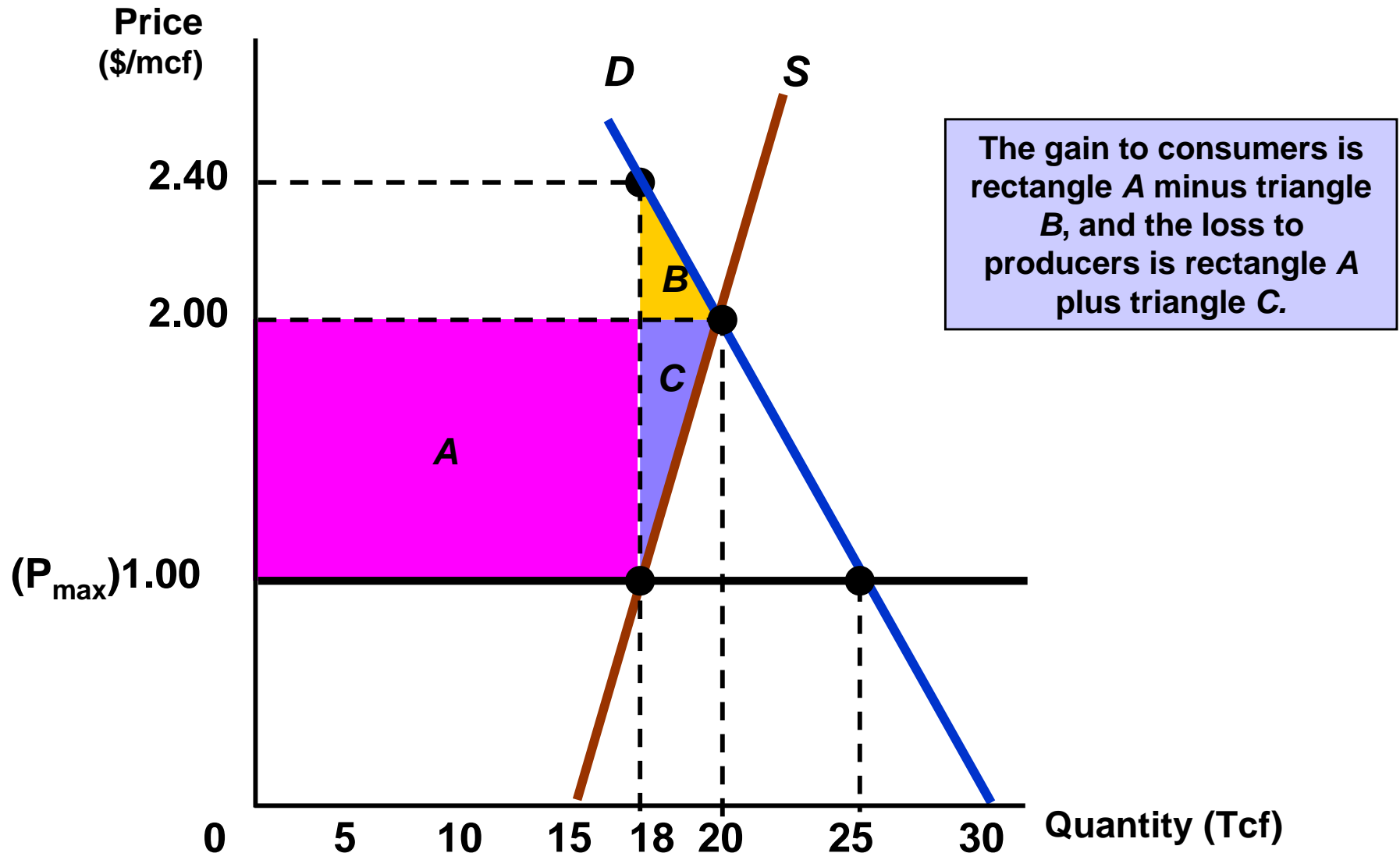
Deadweight Loss

- The **deadweight loss** is the inefficiency of the price controls – the total loss in surplus (consumer plus producer)

Price Controls With Inelastic Demand & (elastic supply)



Price Controls (Ceiling) and Natural Gas Shortages



Economic Efficiency: Market Competition & Market Failures

- We define the **economic efficiency** as:
 - Maximization of aggregate consumer and producer surplus
- If
 - markets are competitive &
 - no market failures are present
- → competitive markets lead to economic efficiency
- Policies such as price controls cause dead weight losses & impose an **efficiency cost** on the economy (society)

Types of Market Failures

1. Externalities

- Costs or benefits that do not show up as part of the market price (e.g. pollution)
- Costs or/ and benefits are external to the market

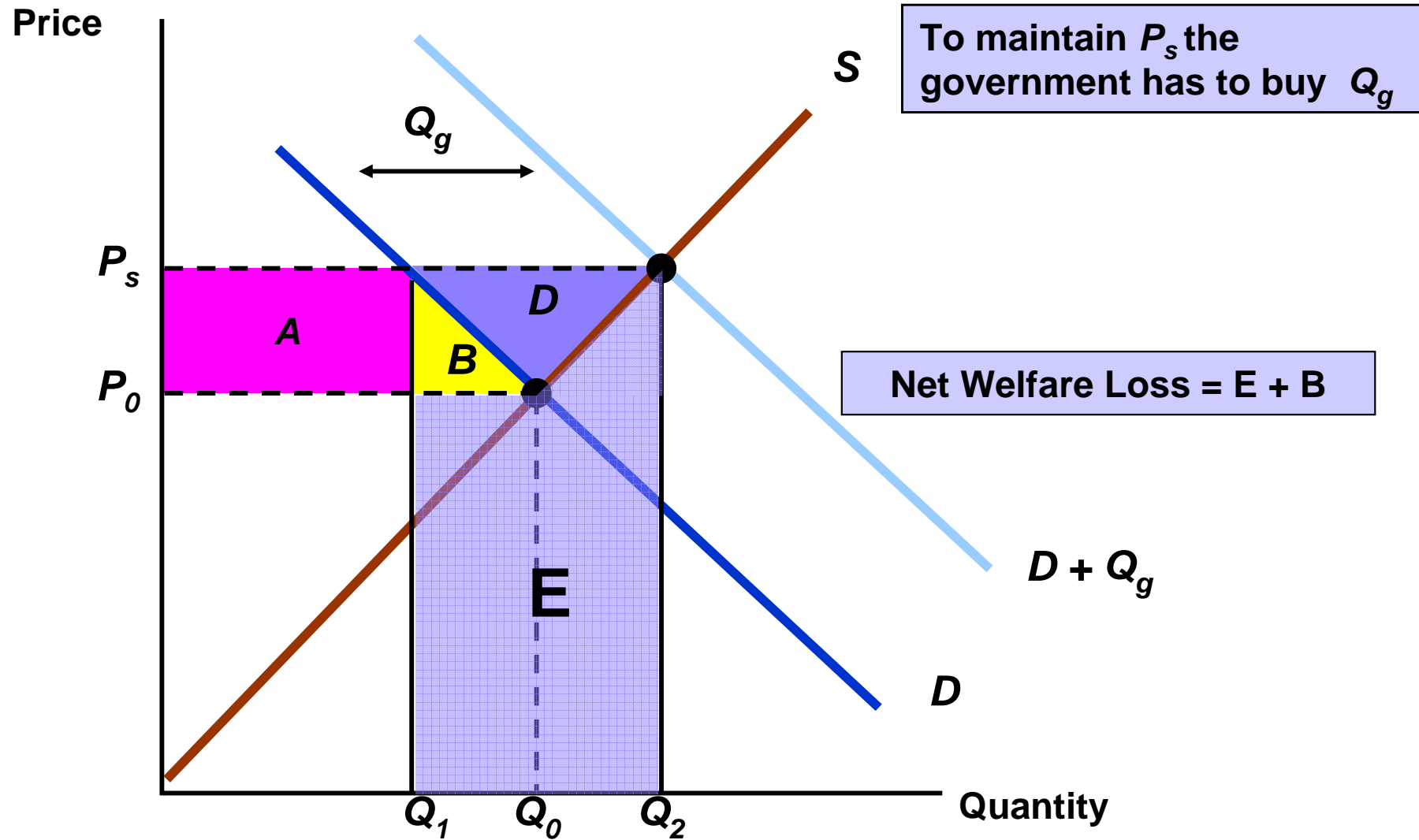
2. Lack of Information

- Imperfect information prevents consumers from making utility-maximizing decisions
- If 1 or 2 → Government intervention may be desirable (i.e., unregulated markets may be sub efficient)

Price Supports

- Much of agricultural policy is based on a system of **price supports**
 - Prices set by government above free-market level and maintained by governmental purchases of excess supply
- Government can also increase prices through restricting production
 - directly or
 - through incentives to producers

Price Supports, Fig 9.10, p. 315

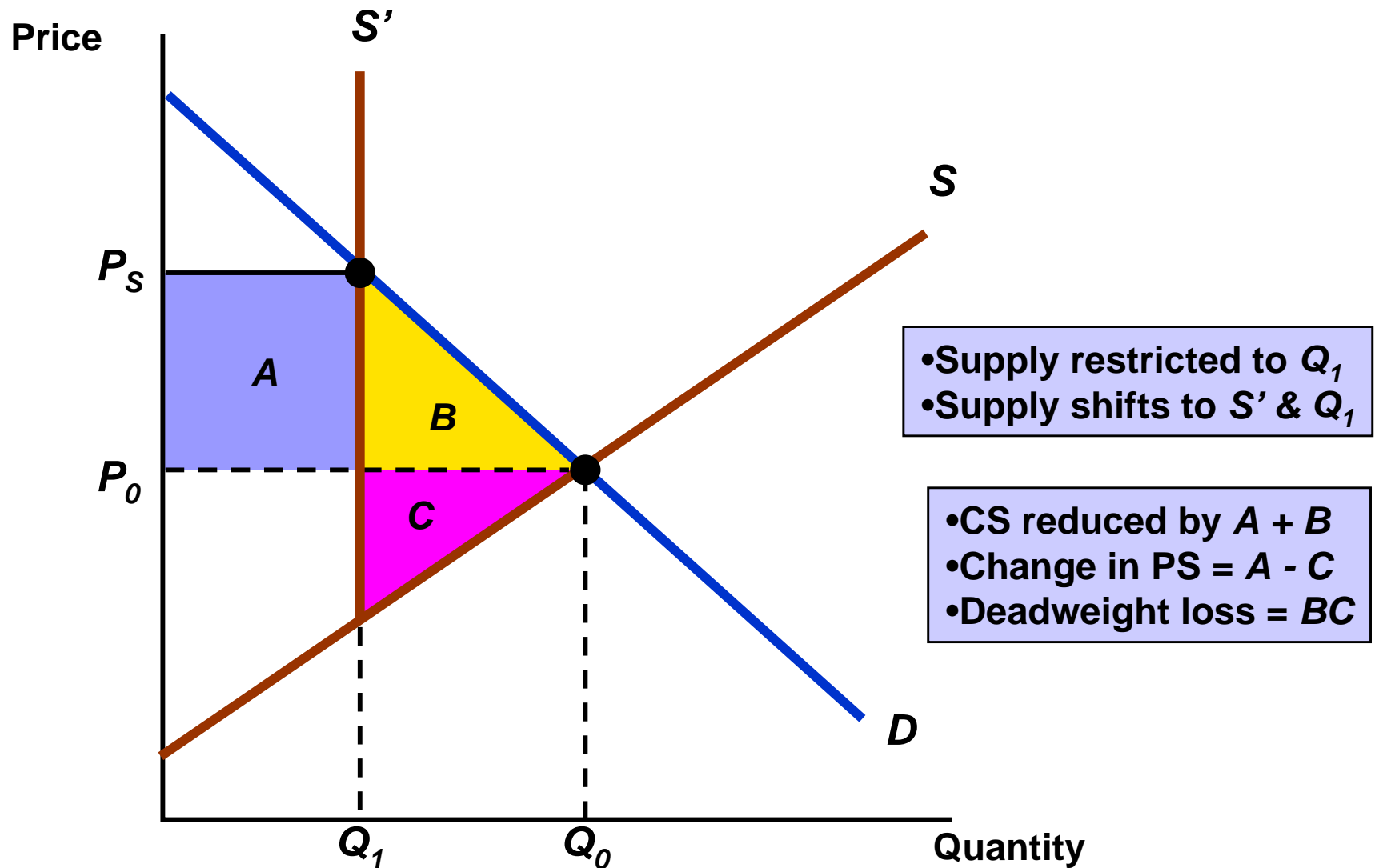


Welfare Effects of Price Supports

- Government may be able to “dump” some of the goods in the foreign markets
 - Hurts domestic producers that government is trying to help in the first place
- Total welfare effect of policy
$$\Delta CS + \Delta PS - \text{Govt. cost} = D - (Q_2 - Q_1)P_S$$
- Society is worse off overall
- Less costly to simply give farmers the money [but the problem with selection – whom to give money?]

Supply Restrictions

Fig 9.11, p. 317

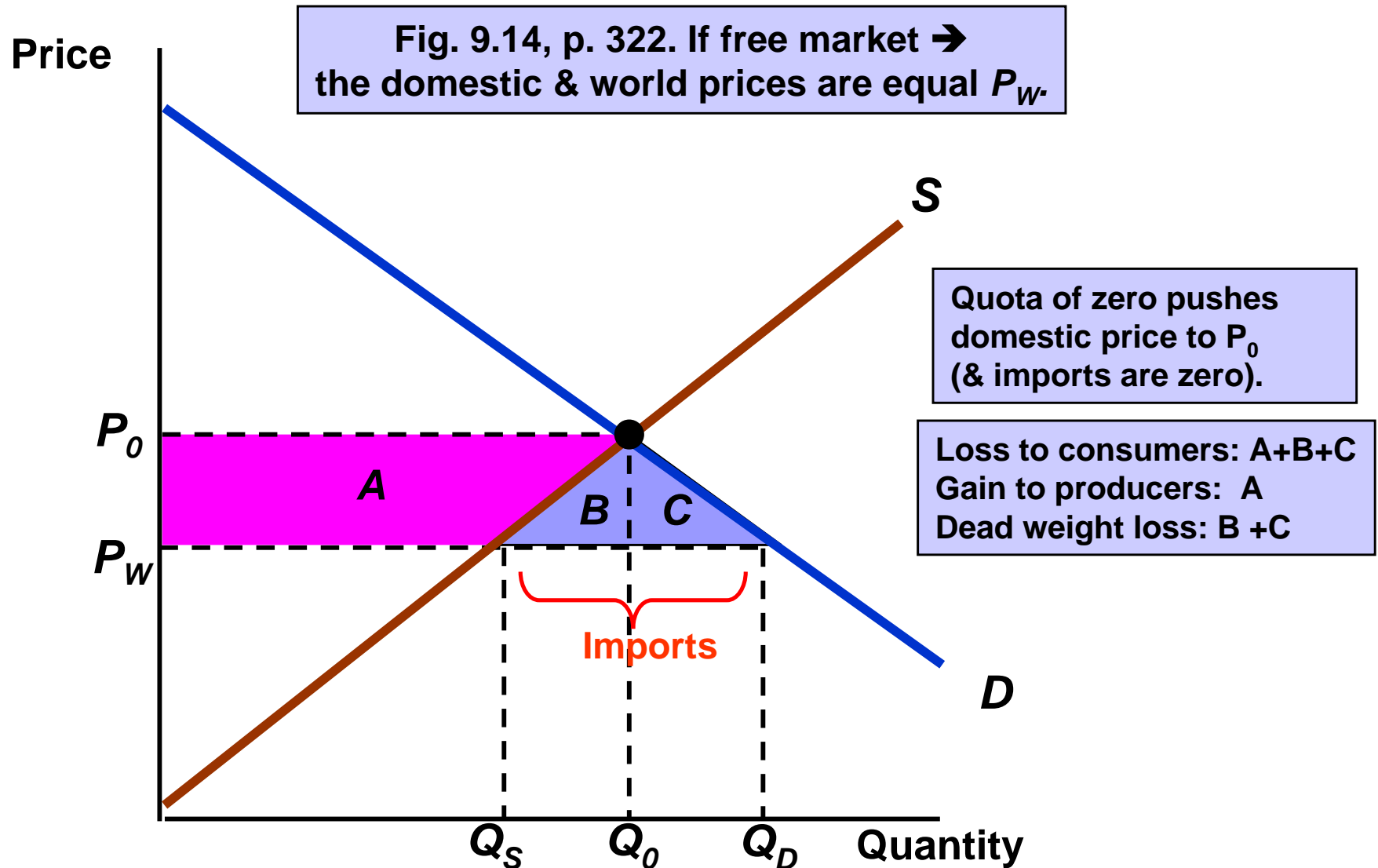


Import Quotas and Tariffs

- With lower world price, domestic consumers have incentive to purchase from abroad
 - Domestic price falls to world price (imports equal difference of quantity supplied & quantity demanded)
- Domestic industry might convince government to protect industry (by eliminating imports). Means:
 - Quota of zero or high tariff

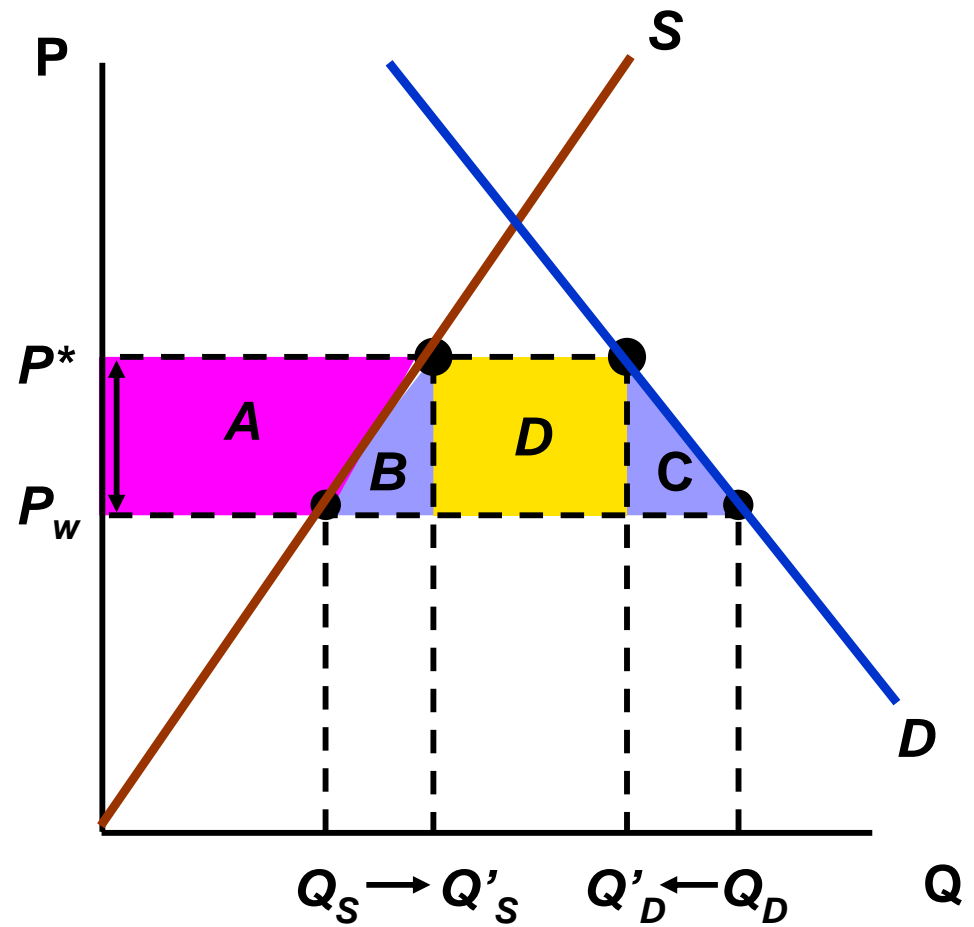
Import Tariffs & Quotas

[aim to reduce / eliminate imports]



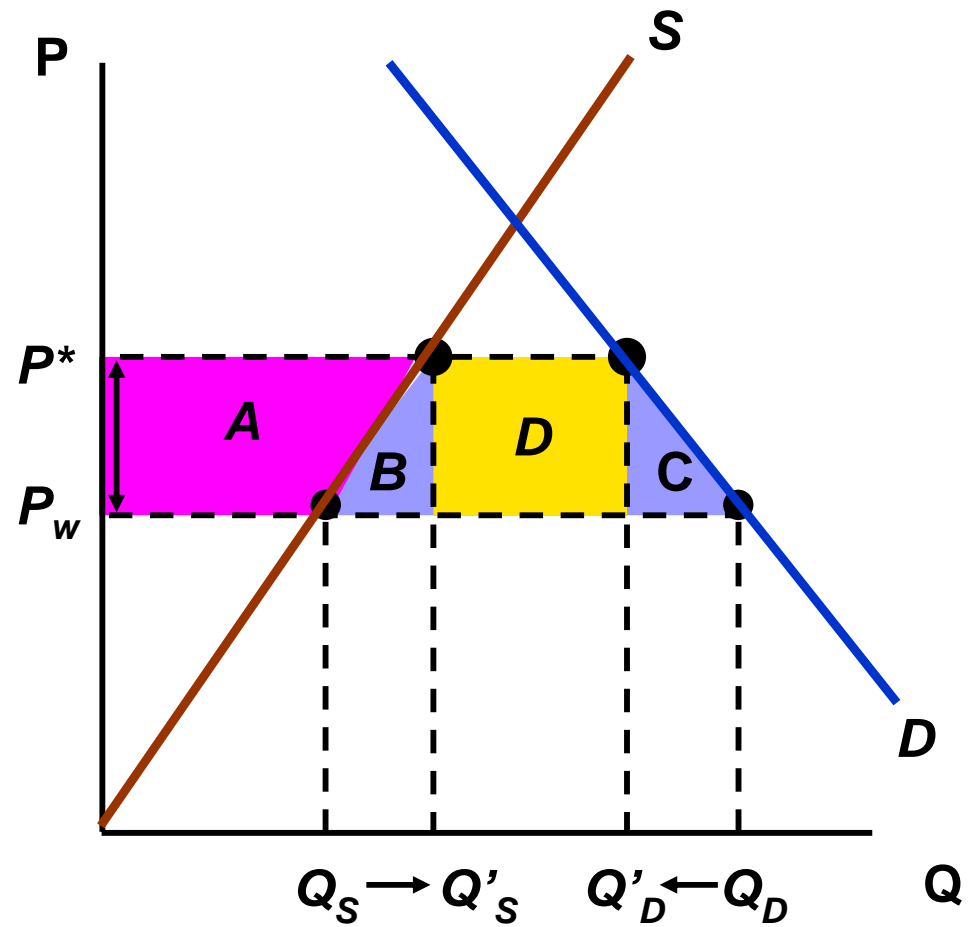
Import Tariff (General Case)

- The increase in price can be achieved by a tariff
- Q_S increases and Q_D decreases
- Area A is the gain to domestic producers
- The loss to consumers is $A + B + C + D$
- $DWL = B + C$
- Government Revenue is $D = \text{tariff} * \text{imports}$



Import Quota (General Case)

- If a quota is used, rectangle D becomes part of the profits to foreign producers
- Consumers lose $A+B+C+D$
- Producers gain A
- Net domestic loss is $B + C + D$



Summary of Today & Plan of Next Lecture

- Ch. 9 material
- Producer and consumer surplus
- Dead weight loss
- Market efficiency
- Efficiency cost
- Market Failures originate in
 - Externalities
 - Information imperfections
- Welfare Effects of Government Restrictions /Regulations:
 - Price supports
 - Import Tariffs
 - Import Quotas
- Next Lecture: Monopoly – to start