

# Supply

Serving Others

# Supply

1. **Plan** (or Schedule or Curve) [relating]
2. (per unit) **Price** and
3. **Quantity** supplied [reflecting]
4. **Willingness** to make available and
5. **Ability** to make available

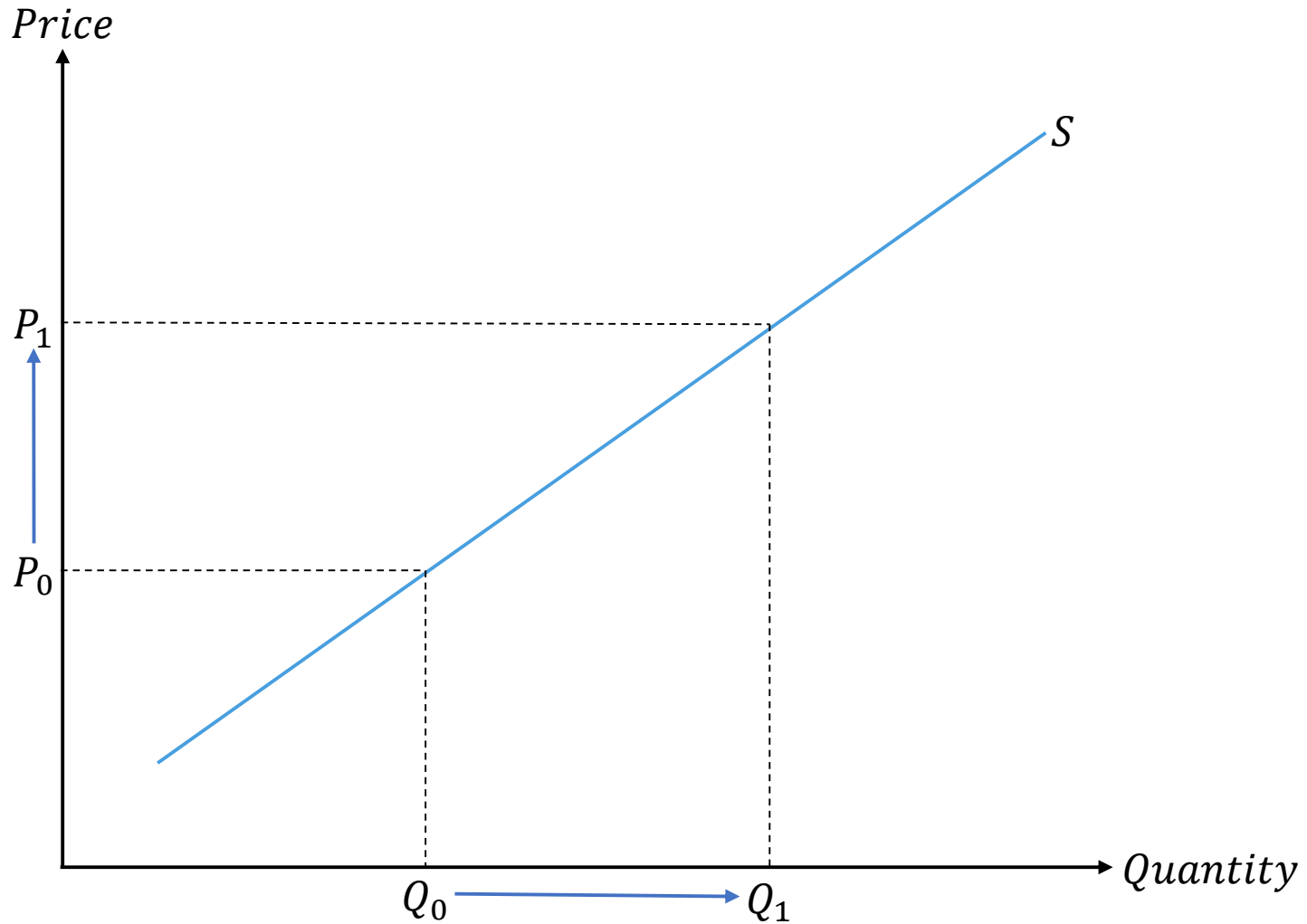
# The “Law” of Supply

*Ceteris paribus*, there is a **direct** relationship between the **quantity supplied** and the **per unit price** of a good or service

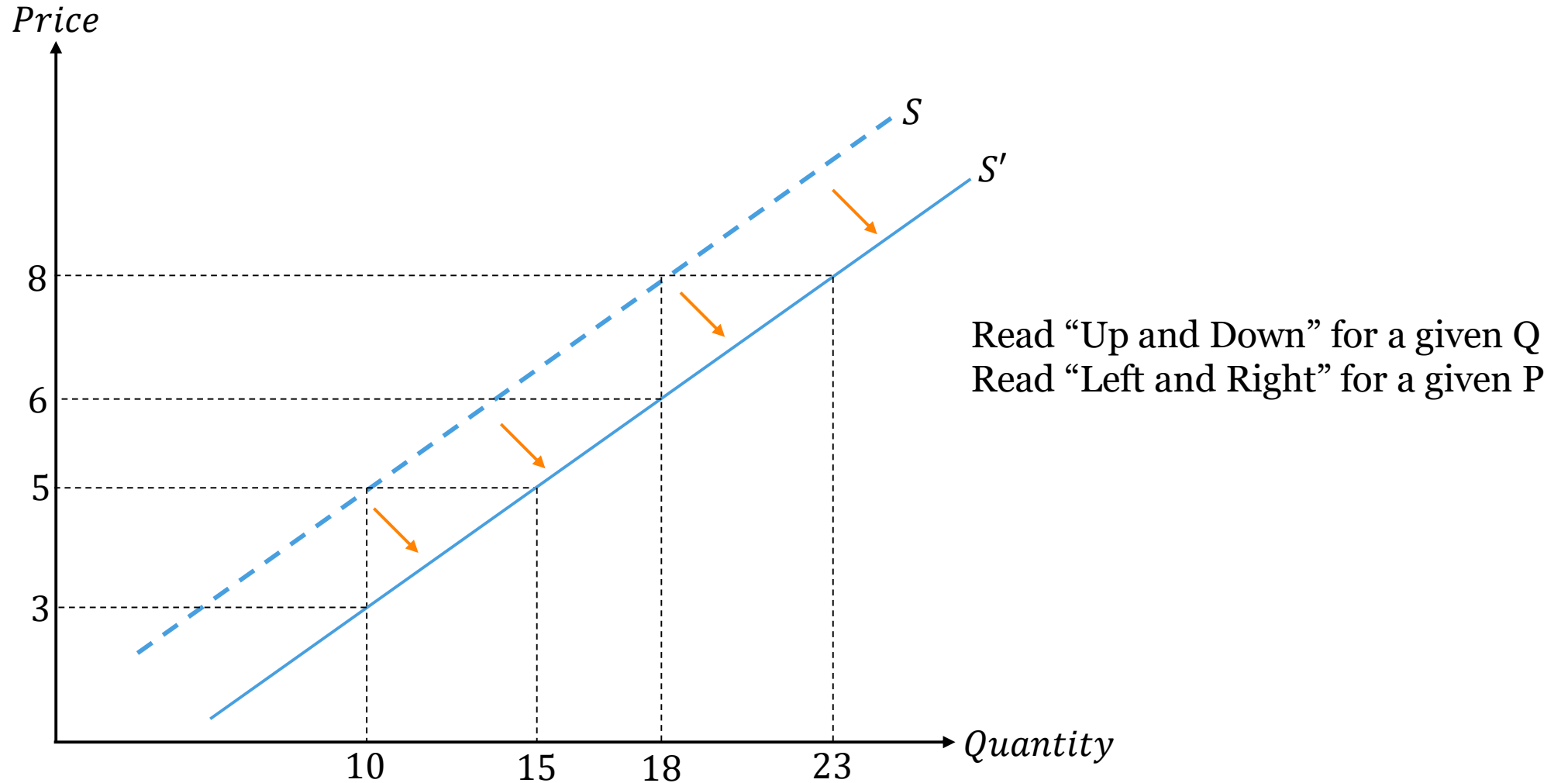
Why is the law of supply usually true? **Opportunity cost** and the **law of diminishing returns**.

Two sources of increasing opportunity cost: **intensive** margin and **extensive** margin

# Drawing a Supply Curve



# “Reading” Supply Curves



# Changes in Supply

1. Technological changes
2. Prices of resources/inputs
3. Prices of related goods or commodities
4. Expectations
5. Number of sellers (industry structure)

# Technological Change

Technological change is almost always a good thing. It allows firms to make more output out of the same number of inputs.

Other things equal, higher technological efficiency means more output for a given price, or an increase in supply.

Negative technology shocks are possible, but rare

# Prices of Resources

*Ceteris paribus*, higher prices for inputs will cause firms to produce less output at a given price. This reduces supply.

Lower prices for inputs will allow firms to produce more output for a given price, increasing supply.



# Prices of Related Goods

Firms have scarce resources to produce output; when the price of one rises relative to another, firms will produce more of the higher priced and substitute away from lower priced goods.

Doing so reduces the supply of lower priced goods and increases the supply of the higher priced goods.

Example: agriculture or product lines

# Prices of Related Goods (con't)

Sometimes, however, two products are complementary, which means producing more of one produces more of another.

When the price of one good rises, more is produced, increasing the supply of the other.

Example: leather/beef or crude oil/natural gas

# Expectations

Selling now and selling in the future are substitutes. Higher prices in the future cause firms to withhold supply in the present. This reduces supply and puts upward pressure on price.

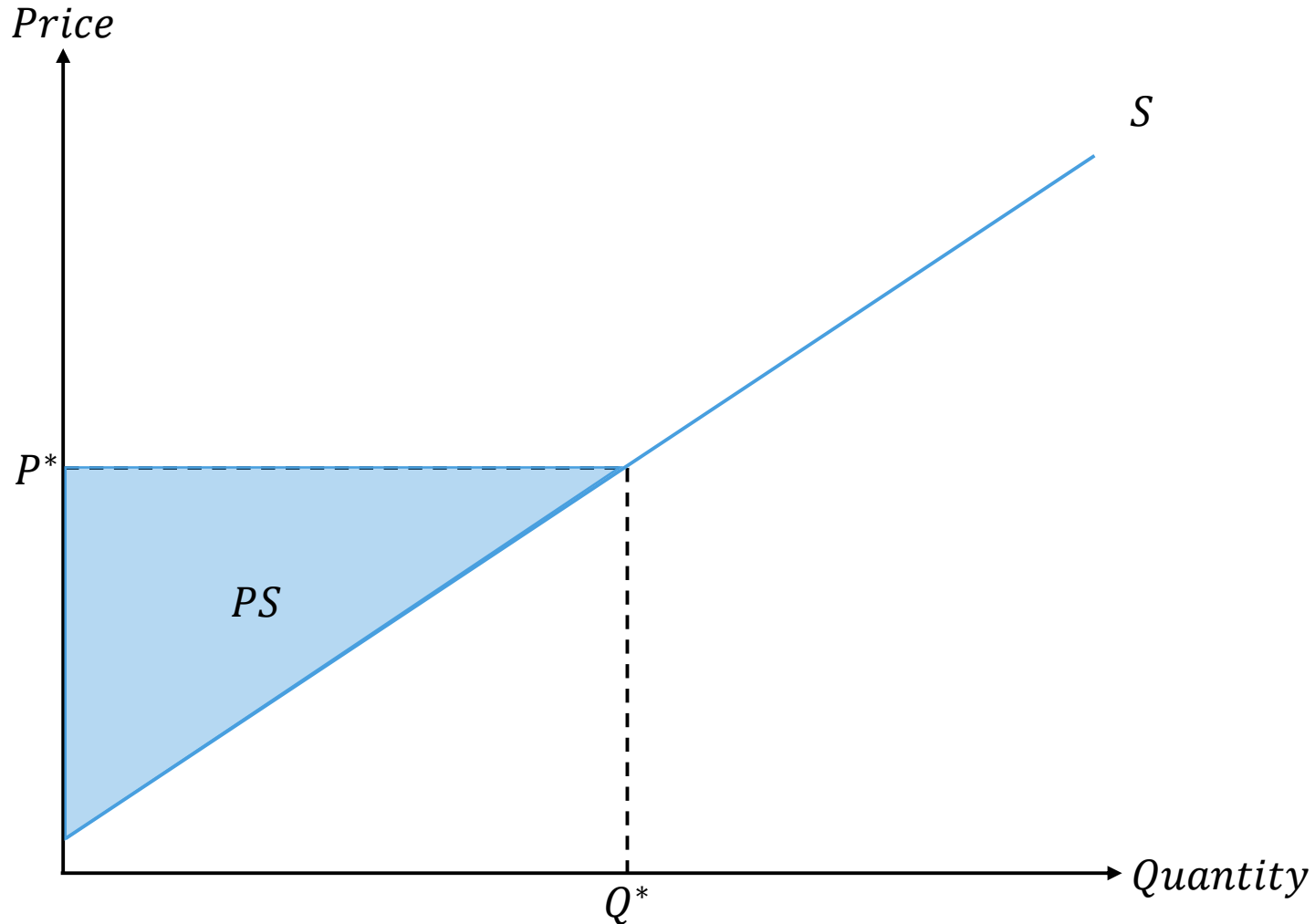
Lower prices in the future encourage firms to sell now and get higher prices. This increases supply and puts downward pressure on price.

# Number of Firms (industry structure)

Just like with demand, if there are suddenly twice as many suppliers, there will be more supplied at nearly every price, which constitutes an increase in supply.

Sometimes, however, when firms enter or exit a market/industry, there will be changes to the elasticity of supply, as well.

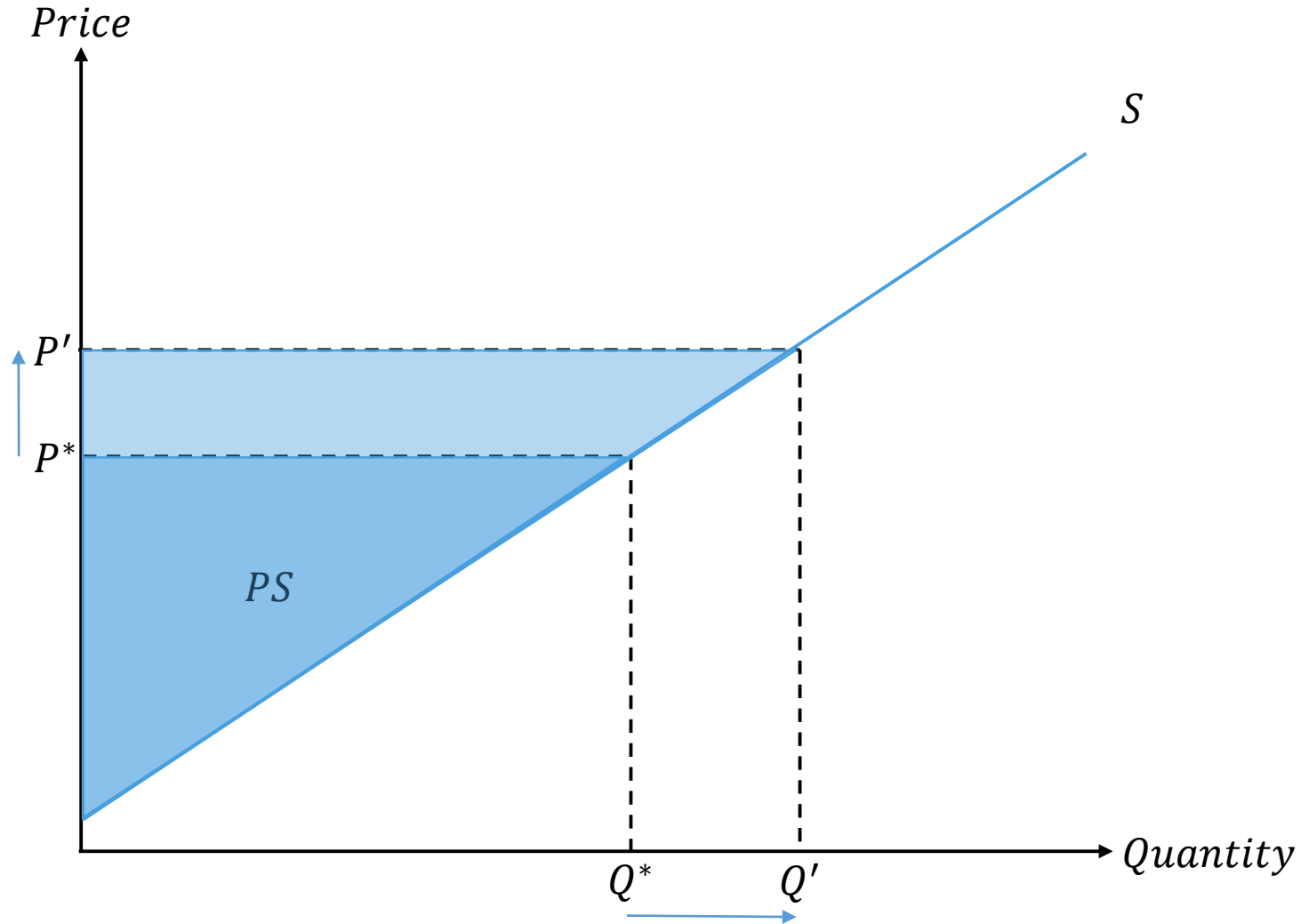
# Surplus, Graphically



## Calculating PS

1. Geometry: area of a triangle
2. Calculus: area under a curve

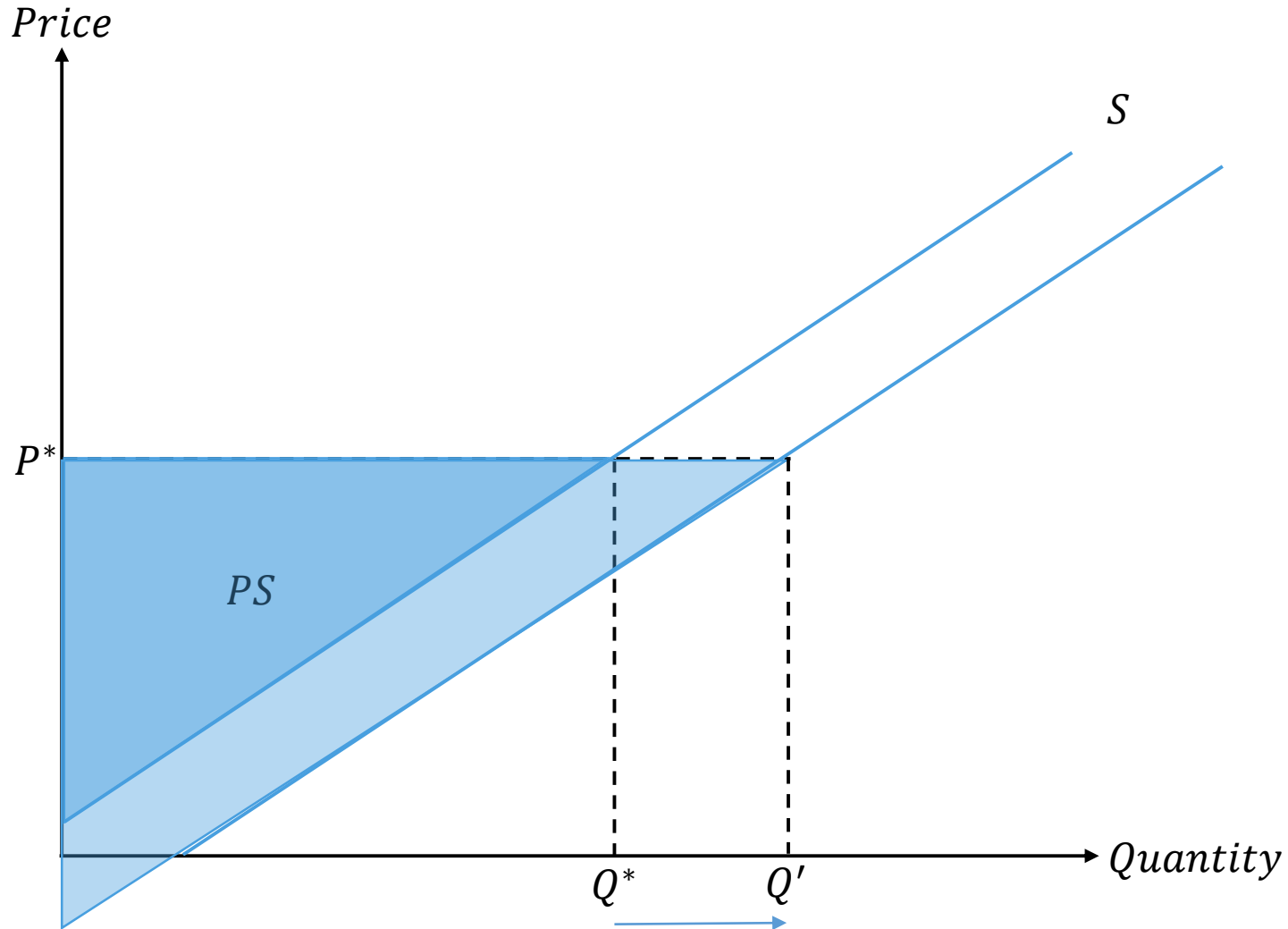
# Changing Surplus



## Changing PS

1. Higher price means more PS
2. Lower price means less PS

# Surplus, Graphically



## Changing PS

1. Increasing supply increases PS
2. Decreasing supply decreases PS