Demand and Supply Analysis

How Markets Work

Outline

1. Demand Curves
2. Supply Curves
3. Equilibrium Prices and Quantities
4. Changes to the Equilibrium

- Textbook Readings: Ch. 3

How Prices are Determined?

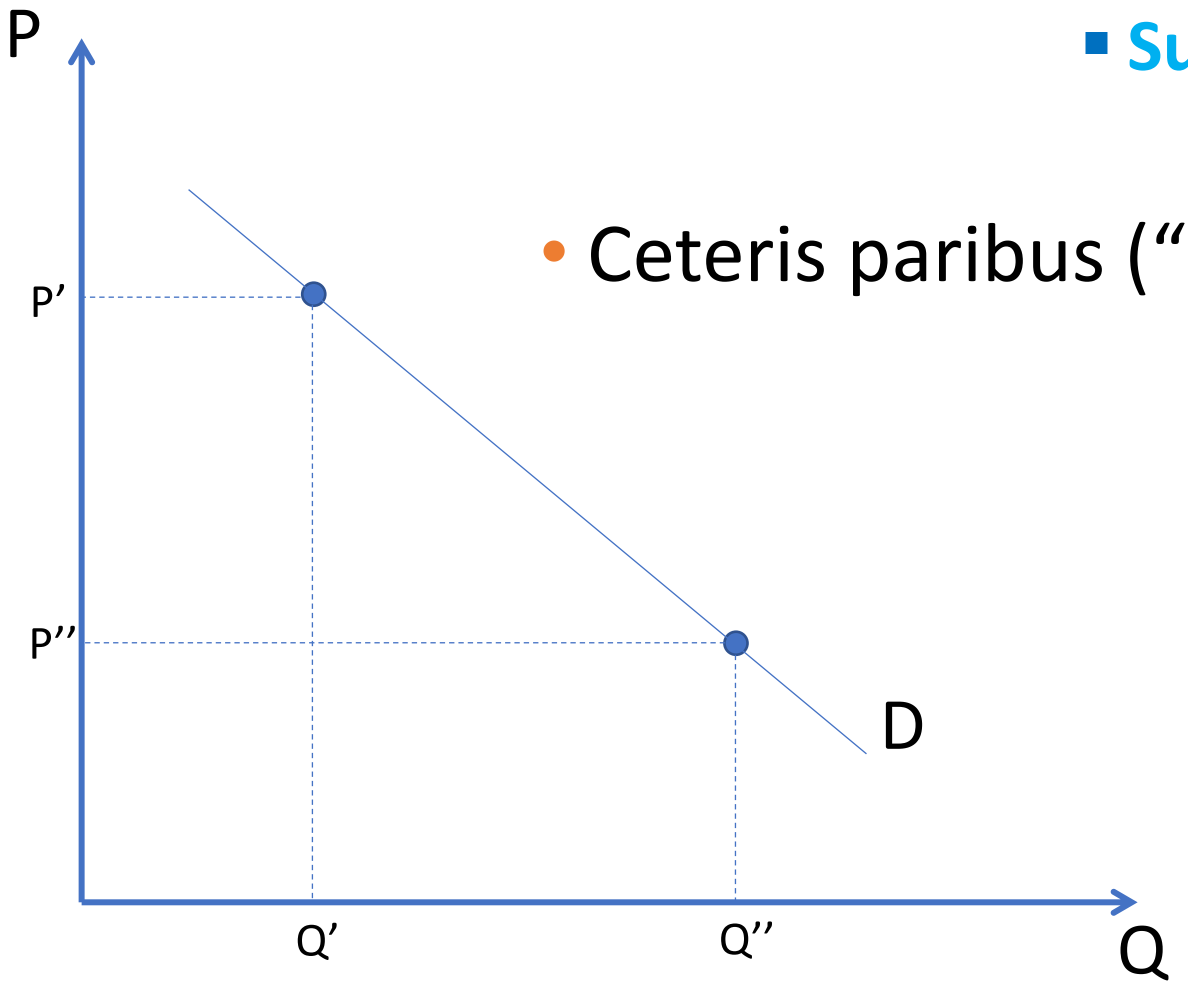
- We will explore the **model of demand and supply**
  - This tool can shed light on a lot of interesting market dynamics
- Key assumption: **perfectly competitive market**
  - **Many** buyers and sellers
  - All products sold are **identical**
  - **No barriers** to firms entering the market
- Although assumptions are restrictive, useful model when competition among sellers is intense

Demand Curves

- Demand curves relate prices to quantity consumed
  - They capture how consumer demand responds to prices
- Generally, lower prices lead to higher demand for goods
  - Law of demand

The Demand Side of the Market

- The demand curve is downward sloping
  - **Substitution** effect
  - **Income** effect
- Ceteris paribus (“all else equal”)



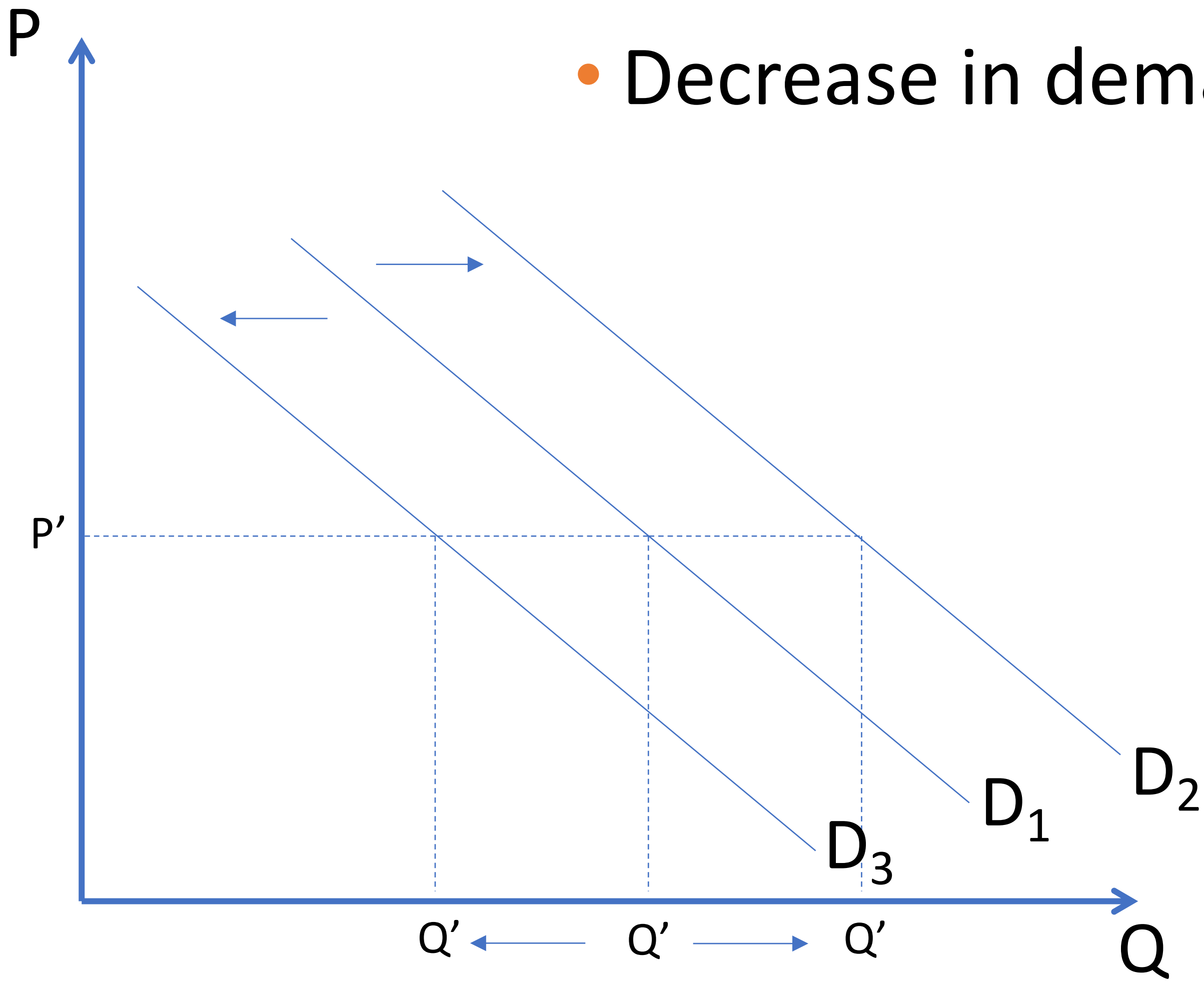
Variables that **Shift** Market Demand

- Many variables **other than price** can influence market demand
  - Change in **exogenous** factors cause demand curve to shift

- These 5 are the most important:
  - Income
  - Prices of related goods
  - Tastes
  - Population and demographics
  - Expected future prices

Demand Shocks

- Increase in demand: Right shift
- Decrease in demand: Left shift

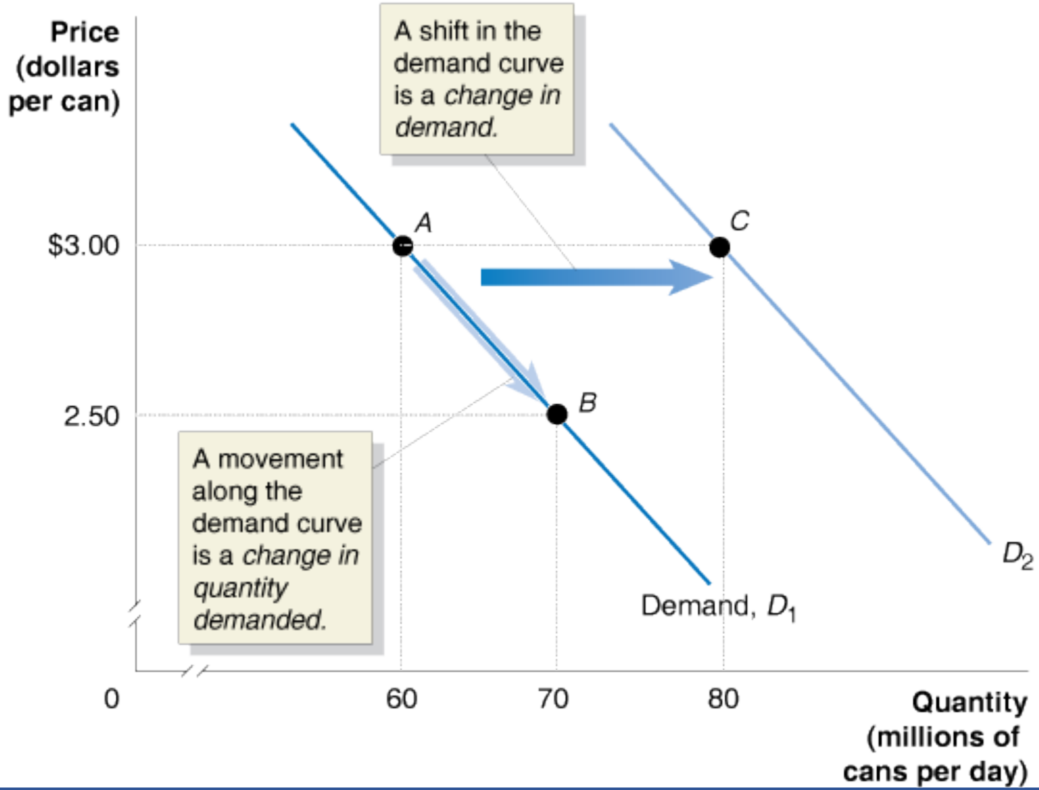


How Variables Shift Market Demand

An increase in …	shifts the demand curve to the…
Income	
Price of a **substitute** good	
Price of a **complementary** good	
Tastes	
Population and demographics	
Expected future prices	

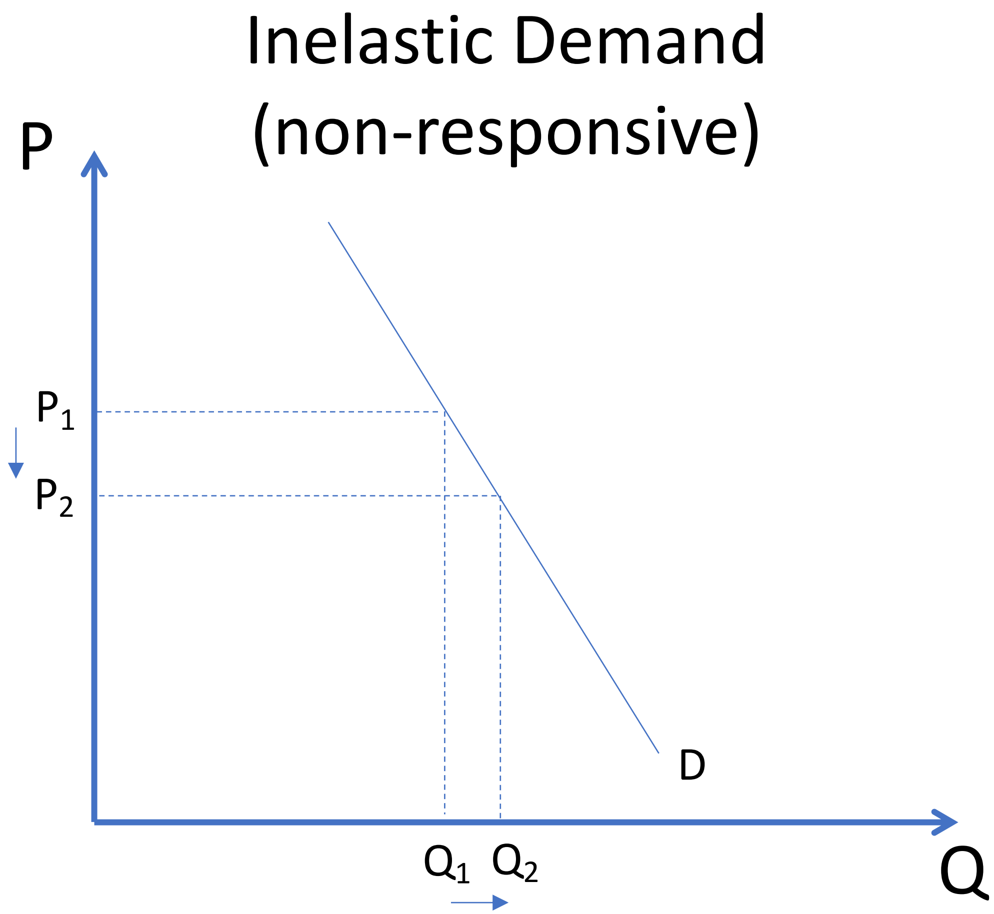
Change in Demand vs Change in Quantity Demanded

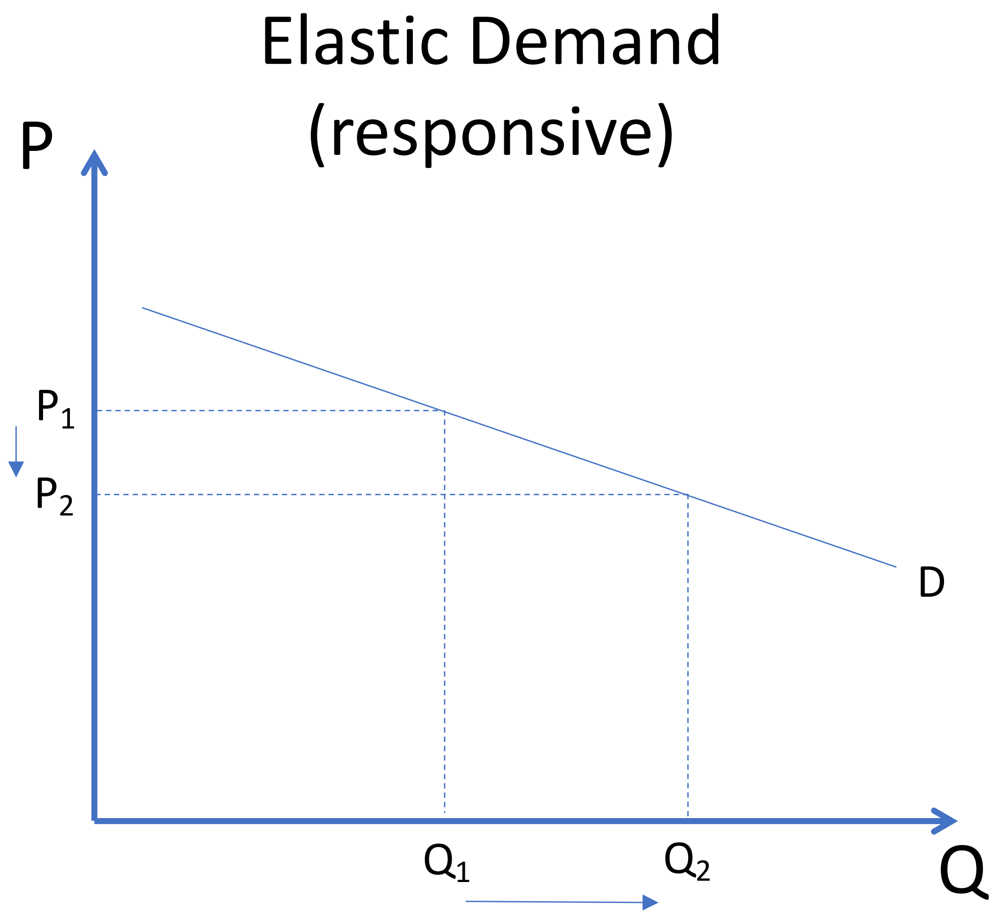
- A **movement along** the demand curve is a **change in quantity demanded**
- A **shift** of the demand curve is a **change in demand**



Inelastic vs Elastic Demand Curves

- Sometimes the slope of the curve matters: steeper, flatter?

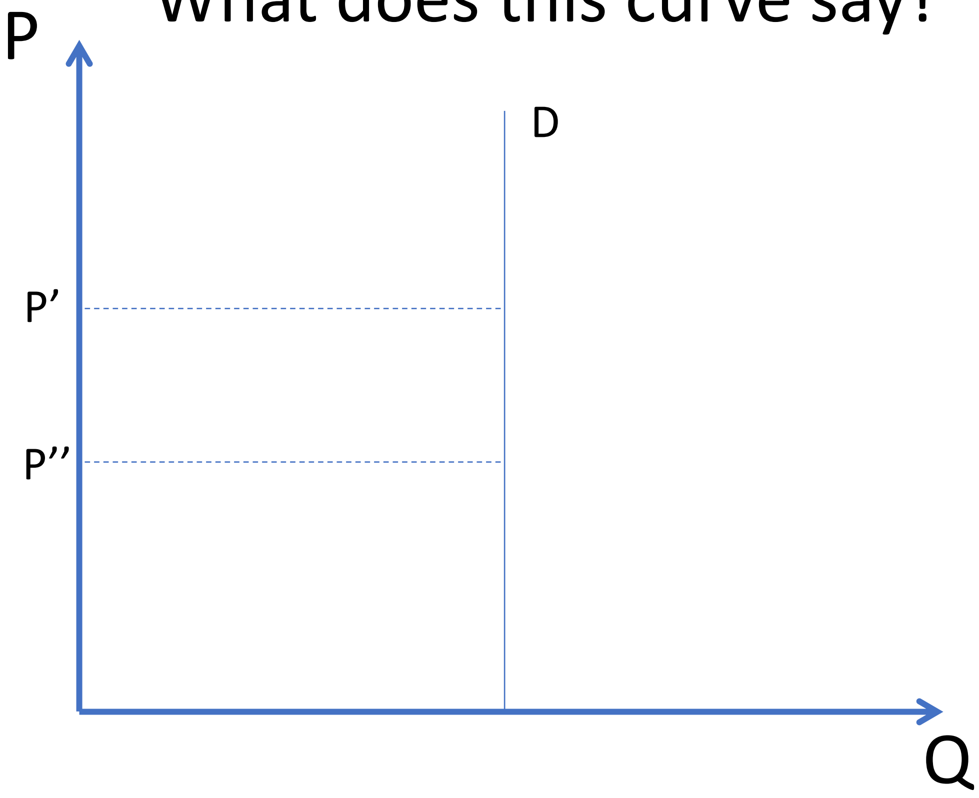




Perfectly Inelastic and Elastic Demand Curves

- Demand curves can also be vertical and horizontal lines

What does this curve say?



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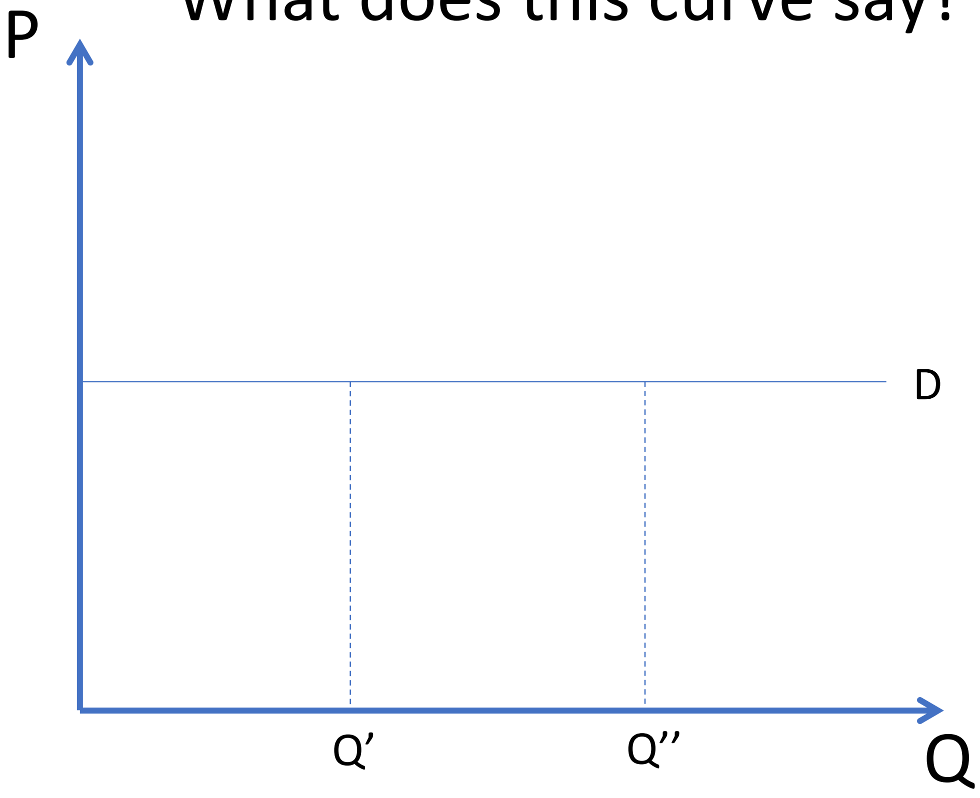
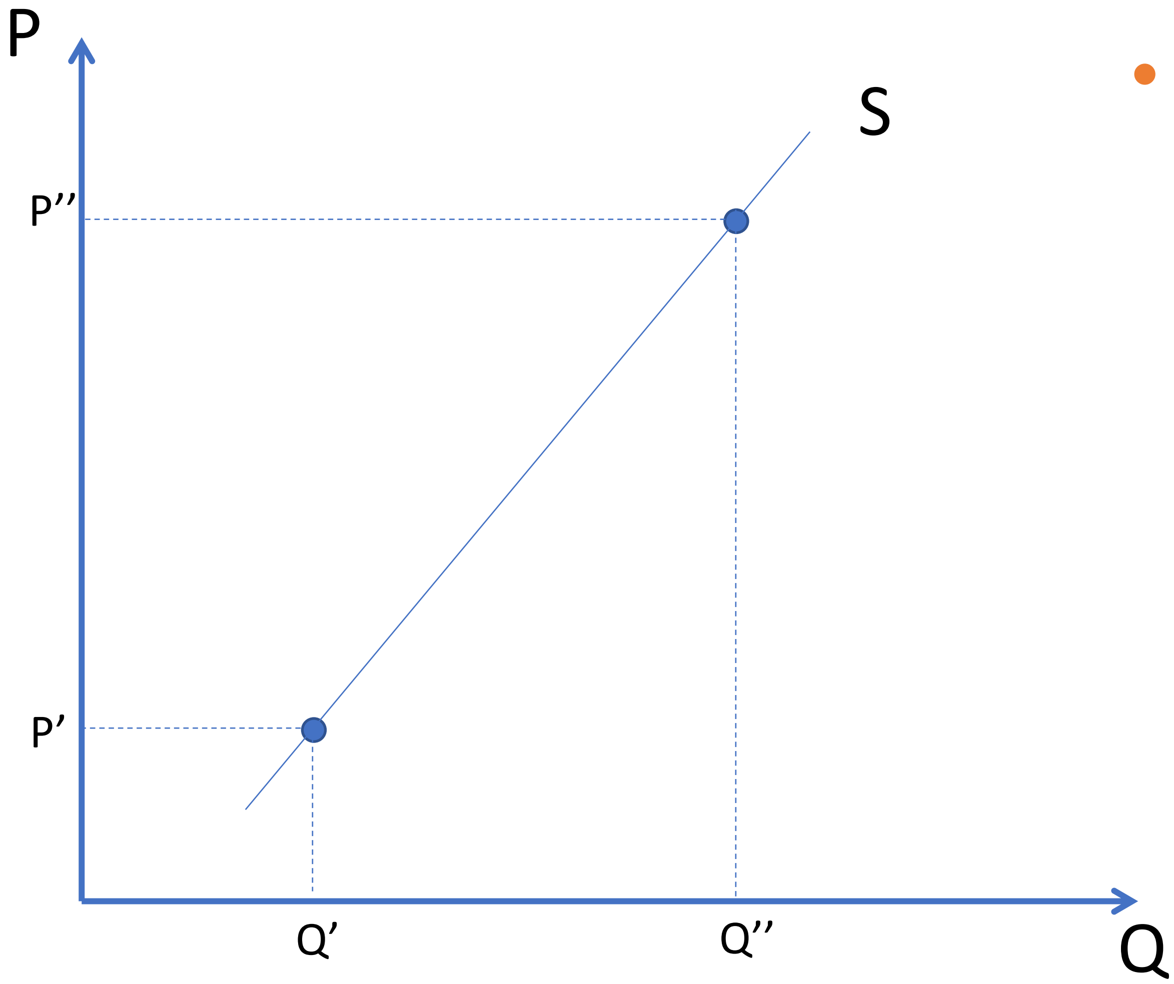


Supply Curves

- Supply curves relate prices to quantity supplied by firms
  - They capture how firms respond to prices
- Generally, higher prices lead to higher supply of goods
  - Law of supply

The Supply Side of the Market

- The supply curve is upward sloping
    - Ceteris paribus



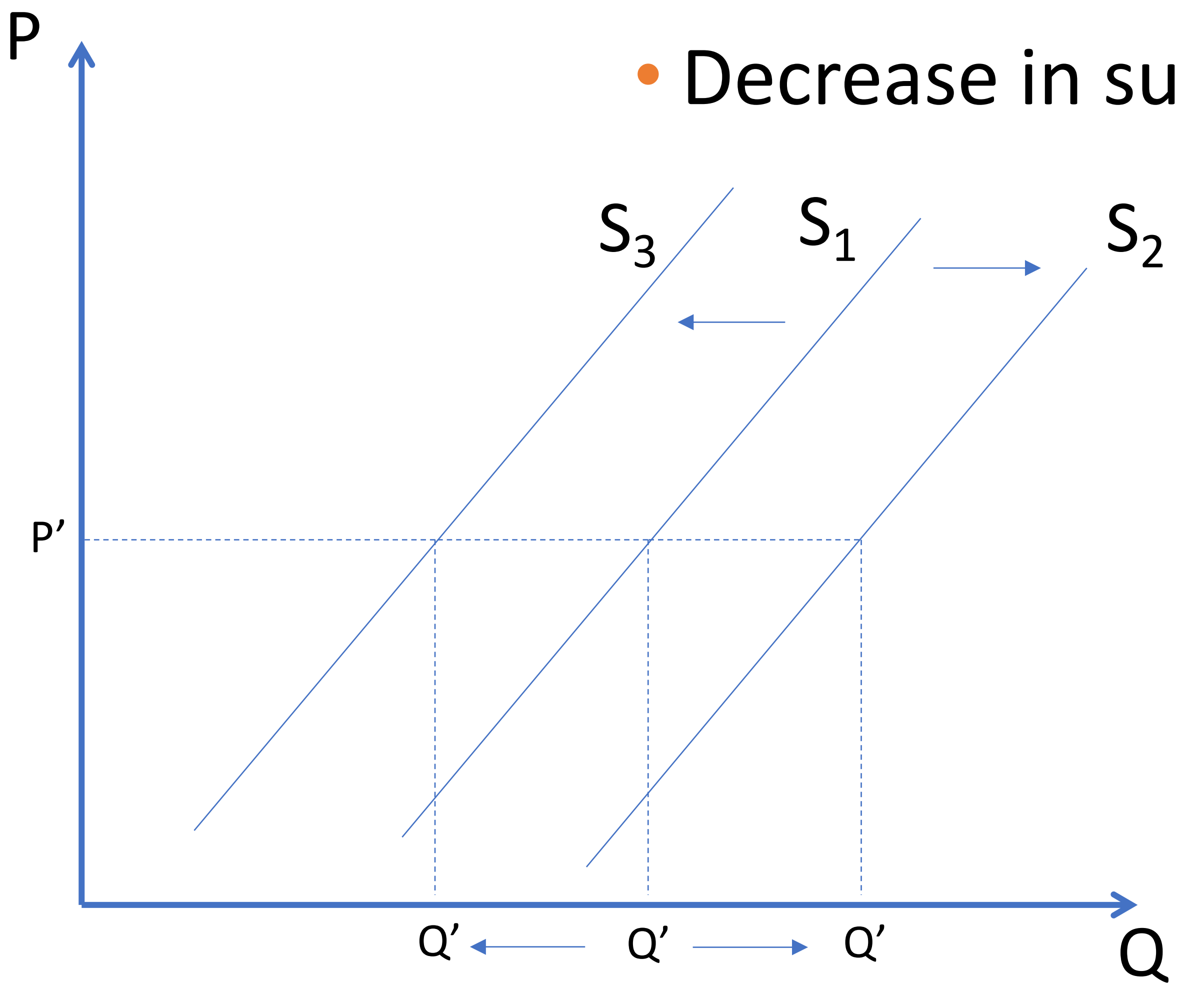
Variables that **Shift** Market Supply

- Many variables **other than price** can influence market supply
  - Change in **exogenous** factors cause supply curve to shift

- These 5 are the most important:
  - Prices of inputs
  - Technological change
  - Prices of related goods in production
  - Number of firms in the market
  - Expected future prices

Supply Shocks

- Increase in supply: Right shift
- Decrease in supply: Left shift

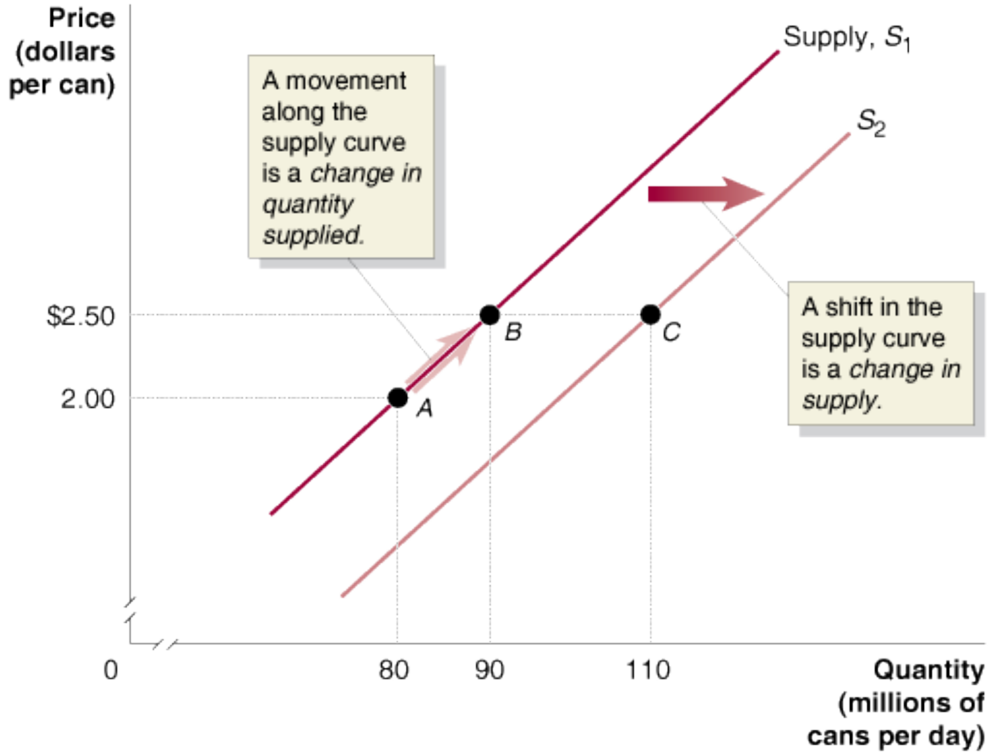


How Variables Shift Market Supply

An increase in …	shifts the demand curve to the…
Price of an input	
Productivity	
Price of a substitute **in** production	
Price of a complement **in** production	
Number of firms in the market	
Expected future prices	

Change in Supply vs Change in Quantity Supplied

- A **movement along** the supply curve is a **change in quantity supplied**
- A **shift** of the supply curve is a **change in supply**



Inelastic vs Elastic Supply Curves

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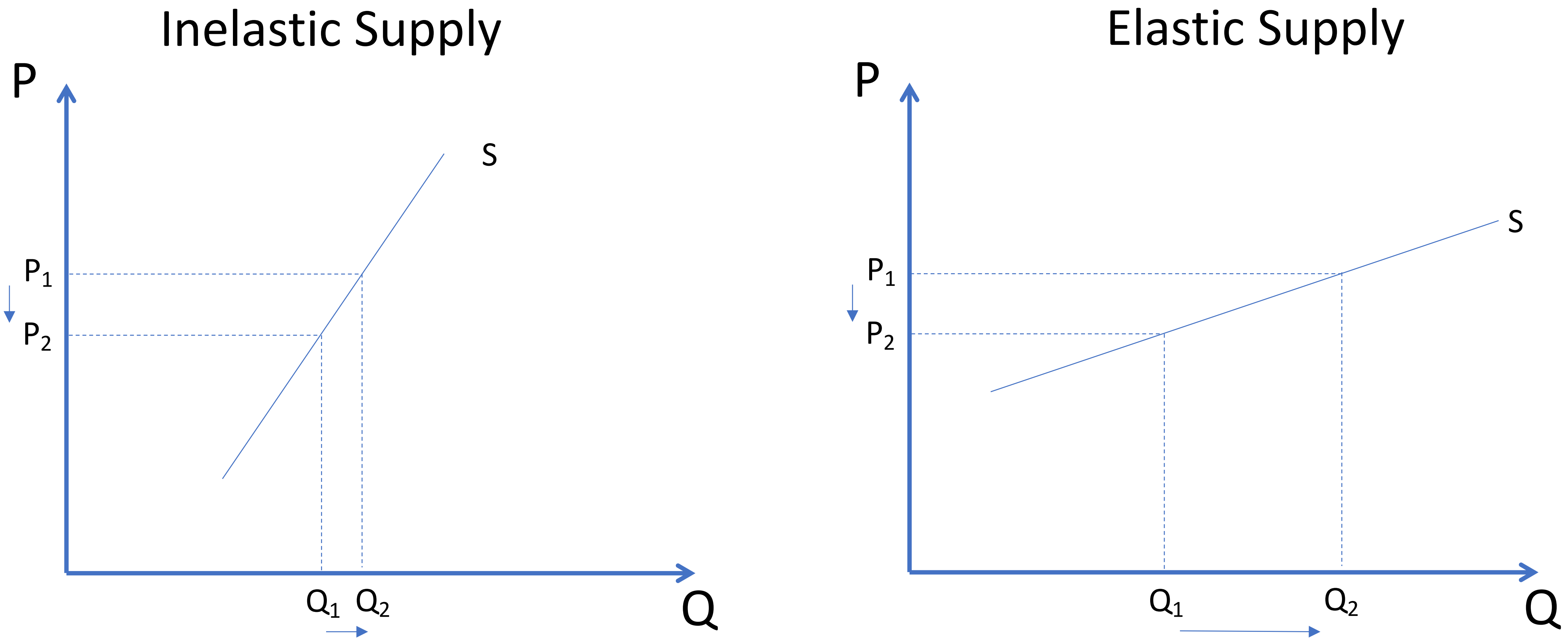

Perfectly Inelastic and Elastic Supply Curves

- Supply curves can also be vertical and horizontal lines

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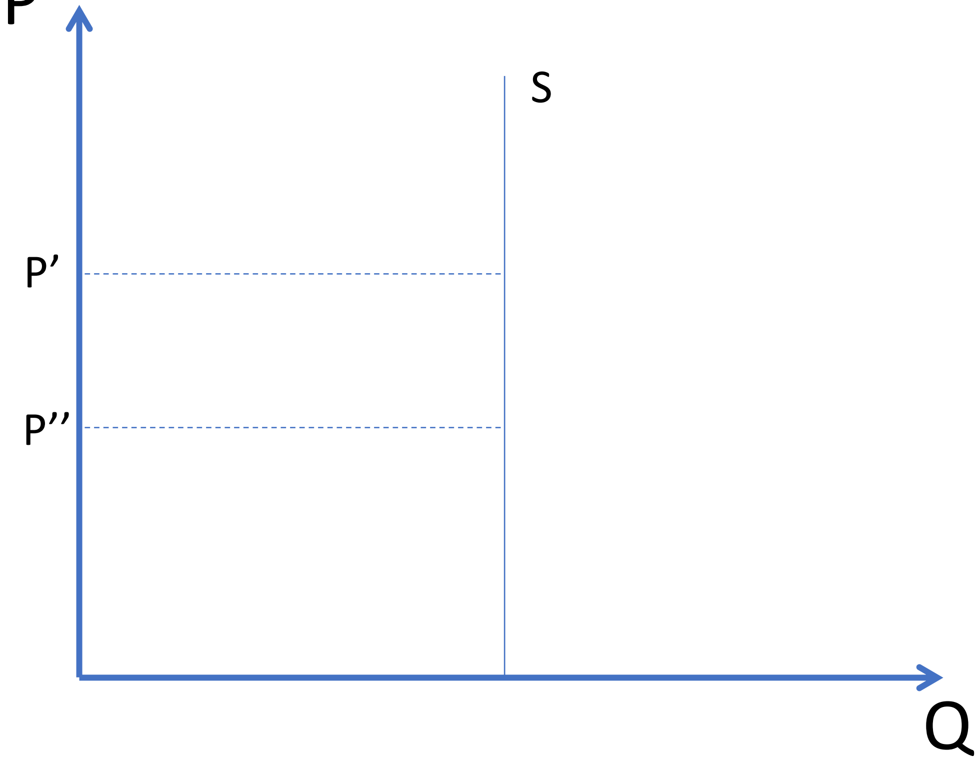

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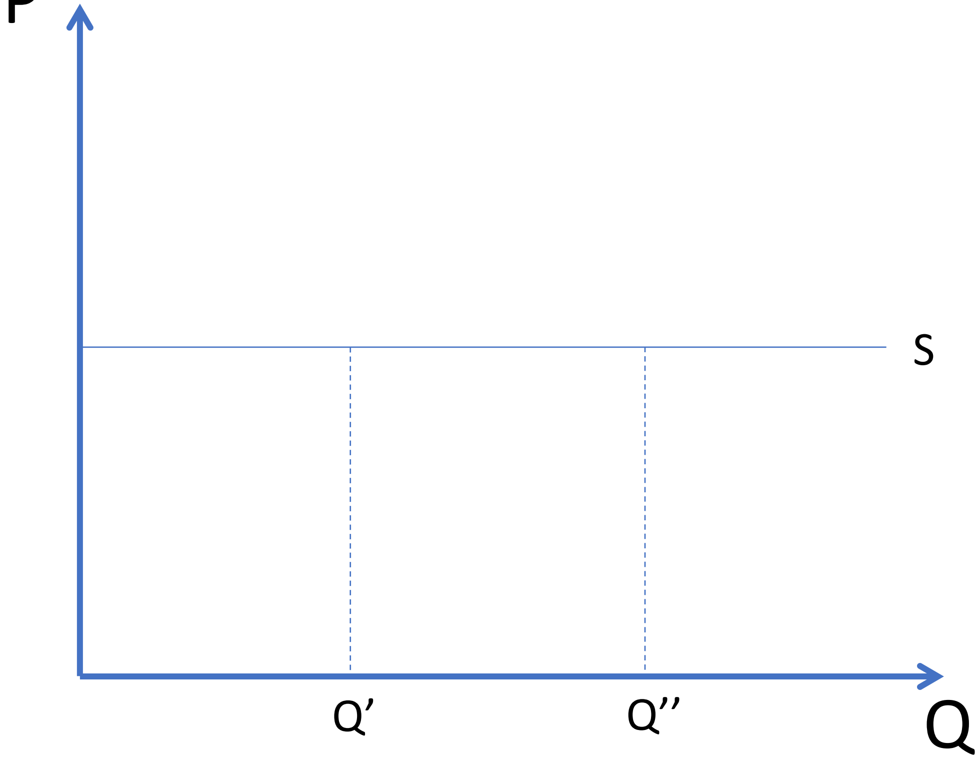

Elasticity

- **Elasticity**: Measure of the sensibility of the quantity demanded (or supplied) to one of its determinants
  - **Price** elasticity

$$\frac{\%\ Change\ in\ Quantity}{\%\ Change\ in\ Price} = \frac{\Delta Q / Q}{\Delta P / P}$$

  - Which industry is likely to have a more elastic **demand**, jets or food?
  - Is the **demand** for gasoline more elastic in the short run or the long run?
  - Example: Linear **supply** curve defined by points A=(2,3) and B=(6,15). What is the price elasticity at A?