

## 1 Demand

**Quantity Demanded** The amount of a good consumers are willing and able to buy at a given price, holding everything else constant.

⇒ A change in quantity demanded is a movement *along* the demand curve.

**Demand Curve** The quantity demanded at each possible price, holding everything else constant.

What affects the demand for a good?

1. Price of substitutes
2. Price of complements
3. Income of consumers

A change in these factors *shifts* the demand curve.

**Price Elasticity of Demand** The percent change in quantity demanded of a good due to a percent change in the price of that good.

$$\varepsilon = \frac{\partial Q}{\partial p} \frac{p}{Q}$$

**Income Elasticity** The percent change in quantity demanded of a good due to a percent change in the consumer's income.

$$\xi = \frac{\partial Q}{\partial Y} \frac{Y}{Q}$$

**Cross-Price Elasticity** The percent change in quantity demanded of a good due to a percent change in the price of another good.

$$\text{Substitutes: } \frac{\partial Q}{\partial p_0} \frac{p_0}{Q} > 0 \quad \text{Complements: } \frac{\partial Q}{\partial p_0} \frac{p_0}{Q} < 0$$

## 2 Supply

**Quantity Supplied** The amount of a good producers are willing to sell at a given price, holding everything else constant.

⇒ A change in quantity supplied is a movement *along* the supply curve.

**Supply Curve** The quantity supplied at each possible price, holding everything else constant.

**Aggregate Supply Curve** The horizontal sum of individual supply curves.

⇒ For each given price, add up the quantity supplied by each firm.

What affects the supply of a good?

1. Price of inputs
2. Capacity

A change in these factors *shifts* the supply curve.

**Supply Elasticity** The percent change in quantity supplied of a good due to a percent change in the price of that good.

$$\eta = \frac{\partial Q}{\partial p} \frac{p}{Q}$$

### 3 Exercises

1. (a) Find the aggregate supply curve for the following economy:

$$q_1(p) = \frac{100p - 500}{2}$$

$$q_2(p) = \frac{100p - 200}{4}$$

$p$	$q_1$	$q_2$	$Q$
1	0	0	0
2	0	0	0
3	0	25	25
4	0	50	50
5	0	75	75
6	50	100	150
7	100	125	225
8	150	150	300

- (b) Graph the aggregate supply curve.

