

Supply and Demand

## Markets and Competition

- market
- competitive market
- perfectly competitive
  - “price takers”

(Assumptions!)

\_\_\_\_\_ people

- systematically, purposefully try to achieve objectives
- evaluate costs and benefits of \_\_\_\_\_ – incremental adjustments to an existing plan (MB vs MC)
- respond to incentives

\_\_\_\_\_ information

No \_\_\_\_\_

clq

## Demand

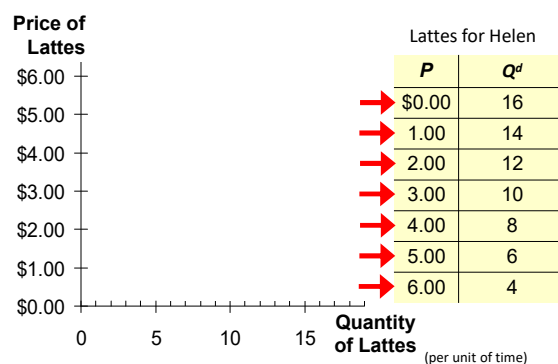
- Demand
  - 1) \_\_\_\_\_
  - 2) \_\_\_\_\_
- Quantity demanded
- Law of demand: the claim that the  $Q^d$  of a good \_\_\_\_\_ when its price ( $P$ ) rises, other things being equal (*ceteris paribus*)

- Demand schedule
- Demand curve

Helen

Price of lattes	$Q^d$ of lattes
\$0.00	16
1.00	14
2.00	12
3.00	10
4.00	8
5.00	6
6.00	4

### Helen's Demand Schedule & Curve



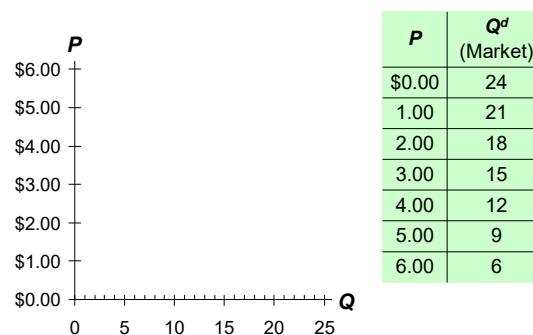
### Market Demand vs Individual Demand

- Market demand**

Assume only two buyers: Helen and Ken

Price	Helen's $Q^d$		Ken's $Q^d$		Market $Q^d$
\$0.00	16	+	8	=	24
1.00	14	+	—	=	21
2.00	12	+	—	=	18
3.00	10	+	5	=	15
4.00	8	+	4	=	12
5.00	6	+	3	=	9
6.00	4	+	2	=	6

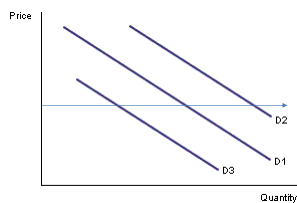
### The Market Demand Curve for Lattes



### Demand Curve Shifters: (non-price determinants)

"...other things equal."

- Number of buyers: population generated changes



### Demand Curve Shifters: (non-price determinants)

"...other things equal."

- Income
  - Normal goods

Income      Demand

### Demand Curve Shifters: (non-price determinants)

"...other things equal."

- Income
  - Inferior goods

Income      Demand

### Demand Curve Shifters:

"...other things equal."

- Prices of related goods
  - Substitutes (in consumption)



Demand  
for

## Demand Curve Shifters:

"...other things equal."

- Prices of related goods
  - 2) Complements (in consumption)



Demand  
for





## Demand Curve Shifters:

"...other things equal."

- Tastes
- Expectations

## Terms for Shift vs. Movement Along Curve

### Demand vs. Quantity Demanded

- **Change in** : a shift in the **D** curve
  - non-price determinant changes
- **Change in the** : a movement along a fixed **D** curve
  - occurs when **P** changes

## Summary: Variables that affect Demand

Variable	A change in this variable...
Price	...causes a movement along the <b>D</b> curve
Number of buyers	...shifts the <b>D</b> curve
Income	...shifts the <b>D</b> curve
Price of related goods	...shifts the <b>D</b> curve
Tastes	...shifts the <b>D</b> curve
Expectations	...shifts the <b>D</b> curve

## Supply

- **Supply**
  - 1) \_\_\_\_\_
  - 2) \_\_\_\_\_
- **Quantity supplied**
- **Law of supply**: the claim that the **Q<sup>s</sup>** of a good \_\_\_\_\_ when its **P** rises, *other things equal* (*ceteris paribus*)

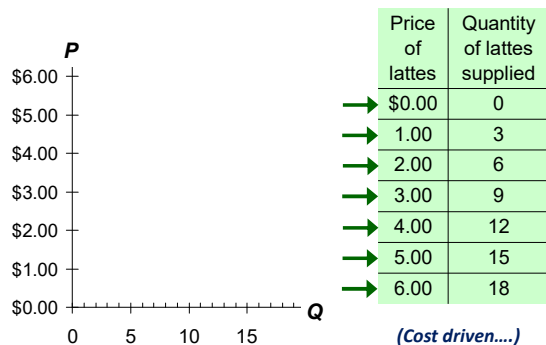
## The Supply Schedule

- **Supply schedule**

- **Supply curve**

Price of lattes	Quantity of lattes supplied
\$0.00	0
1.00	3
2.00	6
3.00	9
4.00	12
5.00	15
6.00	18

### Starbucks' Supply Schedule & Curve



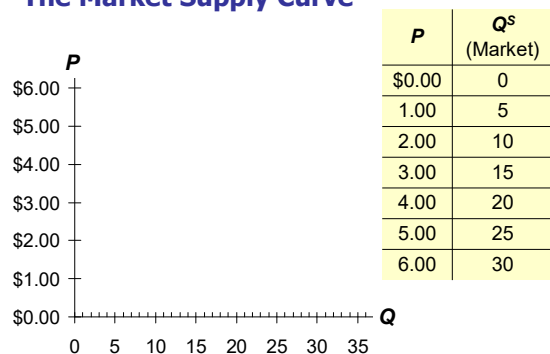
### Market Supply versus Individual Supply

- **Market supply**

- Assume only two sellers – Starbucks and Jitters

Price	Starbucks		Jitters		Market $Q^s$
\$0.00	0	+	0	=	0
1.00	3	+	2	=	
2.00	6	+		=	10
3.00	9	+	6	=	15
4.00	12	+	8	=	
5.00	15	+	10	=	25
6.00	18	+	12	=	30

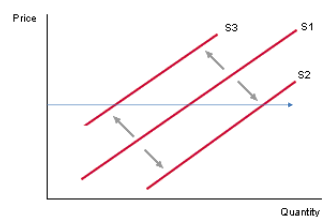
### The Market Supply Curve



### Supply Curve Shifters: (non-price determinants)

"...other things equal."

- Number of sellers



### Supply Curve Shifters: (non-price determinants)

"...other things equal."

- Input prices

- e.g. wages, raw materials

Input prices

Supply (left shift)

### Supply Curve Shifters: (non-price determinants)

"...other things equal."

- Technology

Technology

Supply (right shift)

- Expectations

### Supply Curve Shifters: (non-price determinants)

"...other things equal."

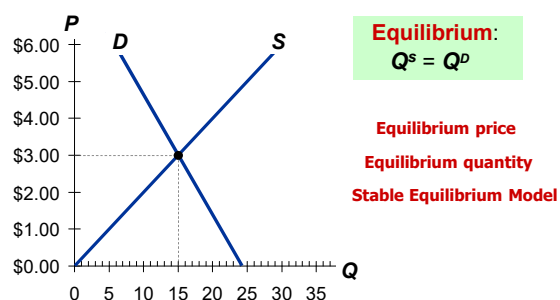
Depending on the definitions of the above,  
some authors include:

- Government \_\_\_\_\_  
• e.g. taxes, subsidies, regulations
- "Natural" Production Conditions
- Prices of Substitutes in Production

### Terms for Shift vs. Movement Along Curve

- **Change in \_\_\_\_\_**: a shift in the **S** curve  
— occurs when a non-price determinant of supply changes (e.g. technology)
- **Change in the \_\_\_\_\_**: a movement along a fixed **S** curve  
— occurs when **P** changes

### Supply and Demand Together



### Using the Supply & Demand Model: Analyzing Events Affecting the Market

To determine the effects of any event,

1. Decide whether event shifts \_\_\_\_\_ curve, \_\_\_\_\_ curve, or \_\_\_\_\_.
2. Decide in \_\_\_\_\_ curve shifts.
3. Use supply-demand diagram to see how the shift changes eq'm **P** and **Q**.

### Ex #1: Hybrid Car Market

**EVENT:**  
Increase in price of gas.

**STEP 1:**

**STEP 2:**

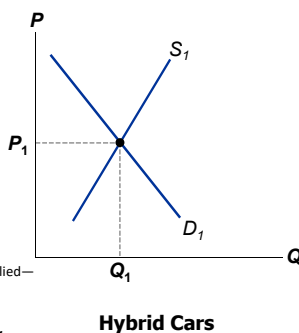
**STEP 3:**

**Result:**

When **P** rises, a larger quantity is supplied—  
but **no** shift in the **S** curve.

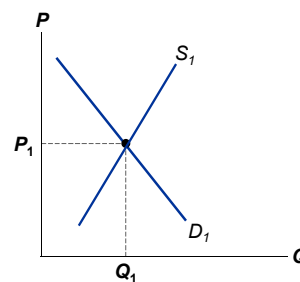
**Watch out!!**

Always distinguish b/w a shift and a movement along...



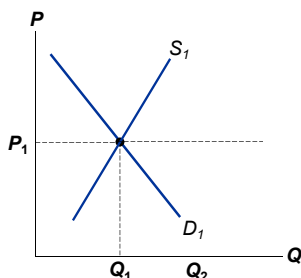
### What About S&D Analysis with More Than One Event?

- Tech change
- Incomes increase (normal good)



### What About More Than One Event?

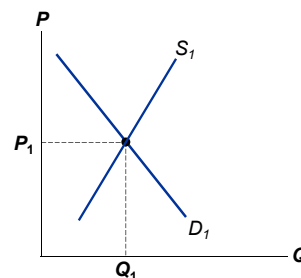
- Tech change
- Incomes increase (normal good)



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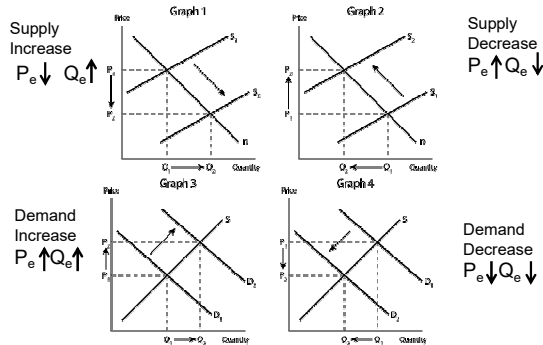
### What About More Than One Event?

- Tech change
- Incomes increase (normal good)



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### Eq. Price & Quantity w/ Supply or Demand Shifts



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"The Westfield Valley Fair Mall straddles two cities. One side of the mall is in Santa Clara, but walk a few feet down the mall, and you're in San Jose. In 2012, San Jose voters agreed to raise the city's minimum wage from \$8 to \$10 an hour. .... On the \$10-an-hour side of the mall, stores like Wetzel's Pretzels have different problems. Suddenly, the shop had to pay the lowest-wage workers more — 25 percent more. That was great for the employees, but a challenge for the owner, Yvonne Ryzak."

- <http://www.npr.org/blogs/money/2014/08/28/343430393/a-mall-with-two-minimum-wages>

- 1) Using the supply and demand model (3 step process), describe graphically what happened to the pretzel market operating on the San Jose side of the mall. (clicker question)
- 2) With a competing pretzel shop operating on the lower-wage side of the mall, what challenges face Ms. Ryzak?

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