

Introduction to Mathematics

Applications of Linear Functions

Learning Outcome

After completion the student can,

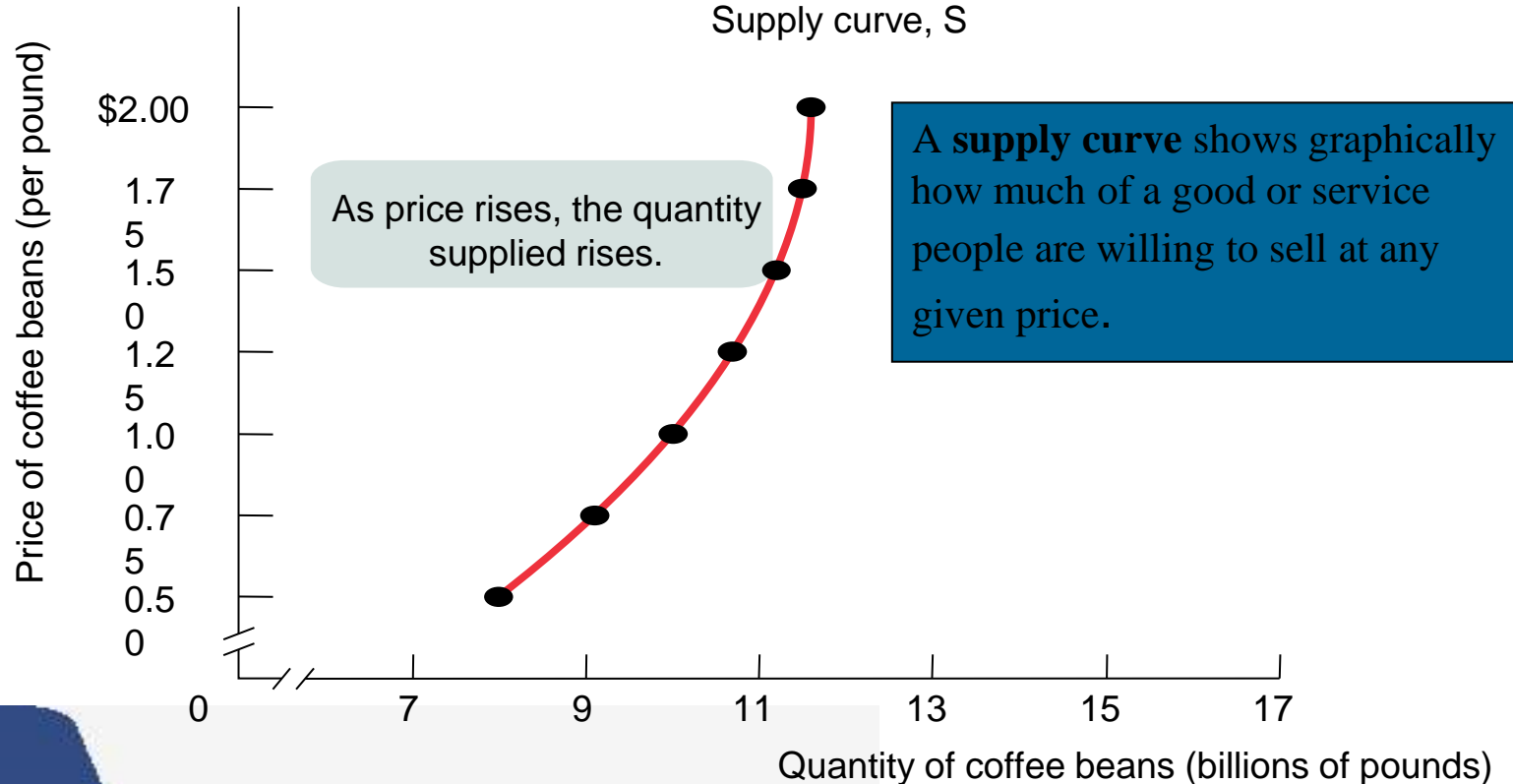
- Discuss the concept of supply and the factors that affects it.
- Discuss the curve of supply and factors to shift it
- Discuss the surplus and shortage

The Supply Schedule

A supply schedule shows how much of a good or service would be supplied at different prices

<i>Supply Schedule for Coffee Beans</i>	
Price of coffee beans (per pound)	Quantity of coffee beans supplied (billions of pounds)
\$2.00	11.6
1.75	11.5
1.50	11.2
1.25	10.7
1.00	10.0
0.75	9.1
0.50	8.0

Supply Curve



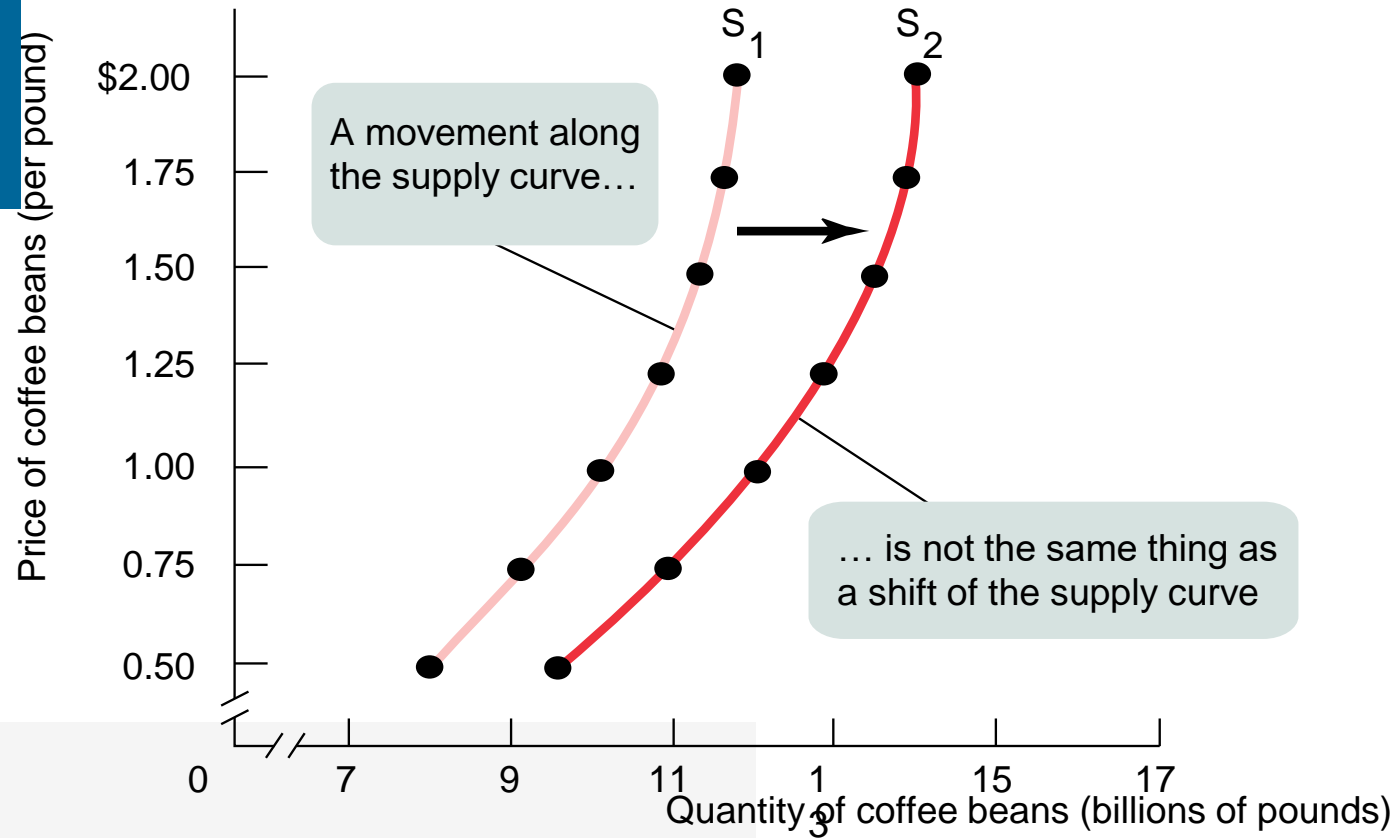
An Increase in Supply

- ❑ The entry of Vietnam into the coffee bean business generated an increase in supply, A rise in the quantity supplied at any given price.
- ❑ This event is represented by the two supply schedules—one showing supply before Vietnam's entry, the other showing supply after Vietnam came in.

<i>Supply Schedule for Coffee Beans</i>		
Price of coffee beans (per pound)	Quantity of beans supplied (billions of pounds)	
	Before entry	After entry
\$2.00	11.6	13.9
1.75	11.5	13.8
1.50	11.2	13.4
1.25	10.7	12.8
1.00	10.0	12.0
0.75	9.1	10.9
0.50	8.0	9.6

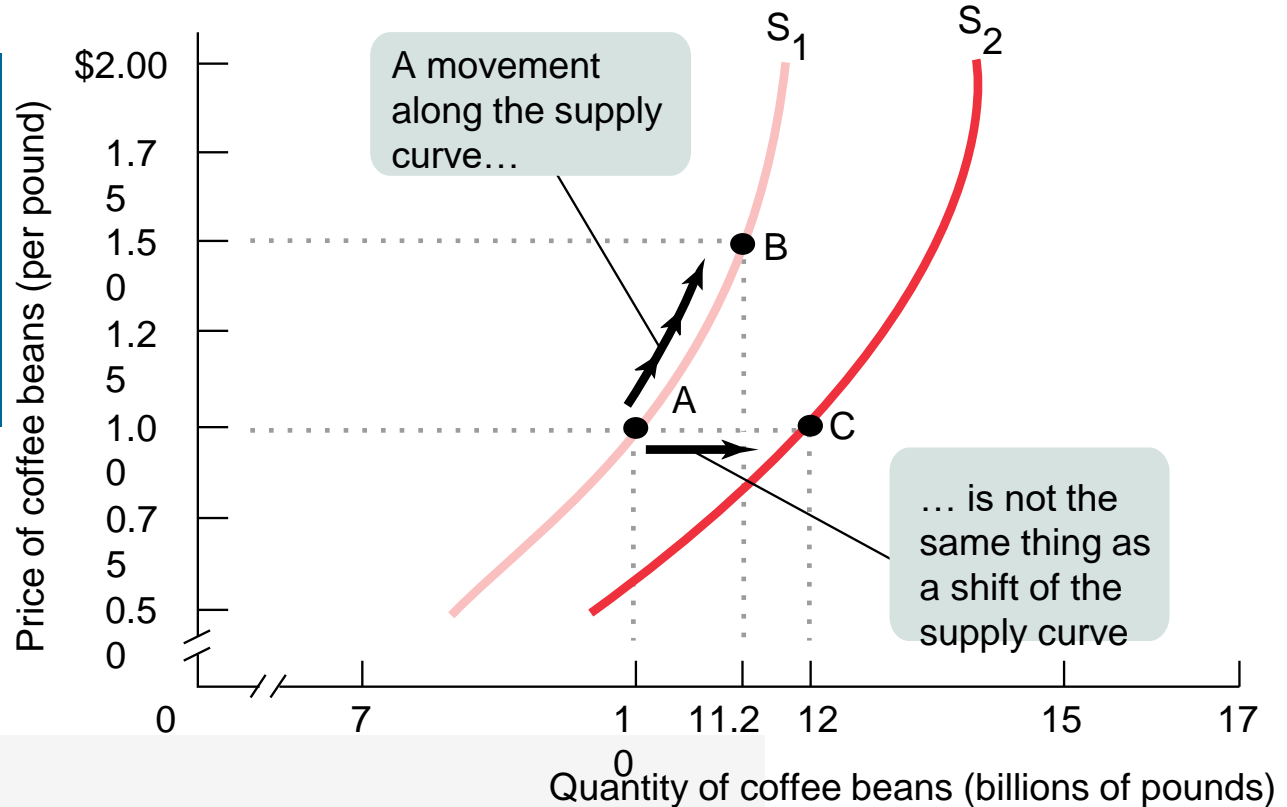
An Increase in Supply

A shift of the supply curve is a change in the quantity supplied of a good at any given price.



Movement Along the Supply Curve

A movement along the supply curve is a change in the quantity supplied of a good that is the result of a change in that good's price.



Supply Curve Shifters

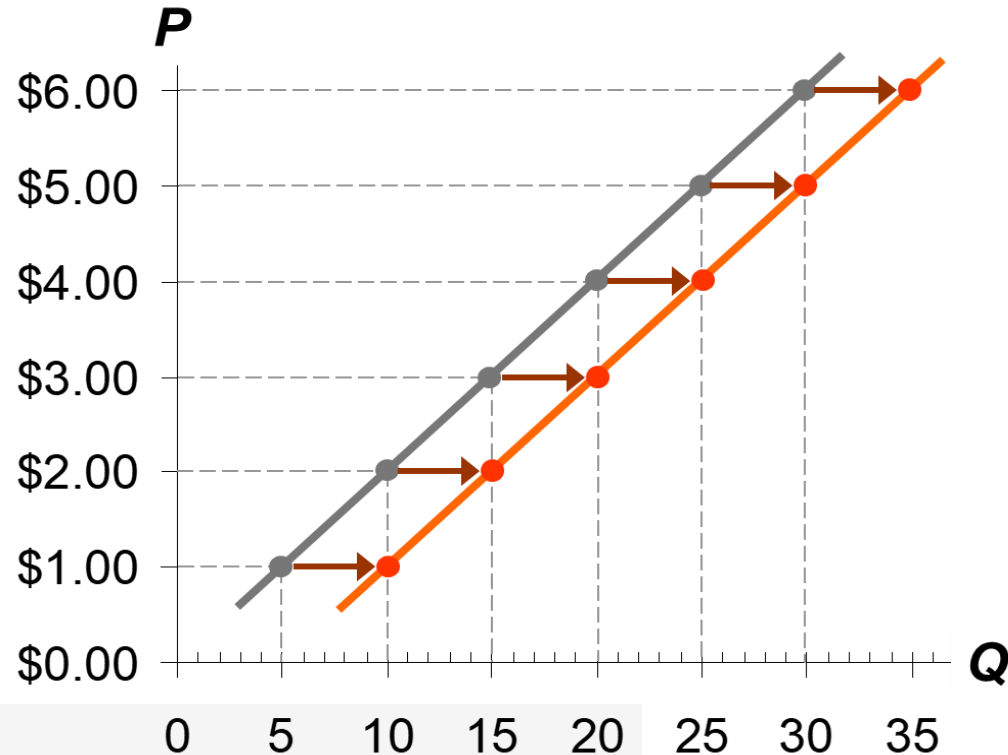
- ☐ The supply curve shows how price affects quantity supplied, other things being equal.
- ☐ These “other things” are non-price determinants of supply.
- ☐ Changes in them shift the S curve...

Supply Curve Shifters (Input Prices)

- ❑ Examples of input prices: wages, prices of raw materials.
- ❑ A fall in input prices makes production more profitable at each output price, so firms supply a larger quantity at each price, and the S curve shifts to the right.

Supply Curve Shifters (Input Prices)

Suppose the price of milk falls at each price, the quantity of Lattes supplied will increase (by 5 in this example).



Supply Curve Shifters (Technology)

- ❑ Technology determines how much inputs are required to produce a unit of output.
- ❑ A cost-saving technological improvement has the same effect as a fall in input prices shifts S curve to the right.

Supply Curve Shifters (No. of Sellers)

- ☐ An increase in the number of sellers increases the quantity supplied at each price, shifts S curve to the right.

Supply Curve Shifters (Expectations)

- ☐ Events in the Middle East lead to expectations of higher oil prices.
- ☐ In response, owners of Texas oilfields reduce supply now, save some inventory to sell later at the higher price.
- ☐ S curve shifts left.
- ☐ In general, sellers may adjust supply* when their expectations of future prices change. (*If good not perishable)

Variables that Influence Sellers

Price ...causes a movement
along the **S** curve

Input Prices ...shifts the **S** curve

Technology ...shifts the **S** curve

No. of Sellers ...shifts the **S** curve

Expectations ...shifts the **S** curve

YouTube Link

https://www.youtube.com/watch?v=yPELwXY_wbY

Thank you

Question Answers Session

IQRA UNIVERSITY