

Economics 610

Professor Frank Scott
Department of Economics
University of Kentucky

Modest goals, 6/5 and 6/8

- Introduce myself and the class
- Go over syllabus and reading assignments
- Discuss goals for the course “Tempur-Pedic stock up after report, analysis,” *Lexington Herald-Leader*, July 26, 2012, p. B5:
<https://www.kentucky.com/news/business/article44369544.html>
- Discuss different ways that societies organize their economic systems
- Introduce basic concepts of demand and supply and use them to understand how markets work to allocate society’s scarce resources

Syllabus and Detailed Course Outline

- My webpage:
<http://gatonweb.uky.edu/faculty/scott/>
- Syllabus highlights: textbooks, grading, office hours, reading assignments, exam dates.
- Detailed course outline: specific textbook sections to read, additional resources, optional additional outside readings, alternative resources for textbook material
- Classroom decorum: no passing notes, and no chewing gum!



How to succeed in the MBA program

- Following is an exchange your professor recently had with his granddaughter Margo:
- Granddad: Margo, are they going to promote you to the second grade?
- Margo: of course
- Granddad: Why?
- Margo: Because
 - I take pride in my work
 - I have really good handwriting
 - I listen to my teacher
 - I am well-behaved in class



BUSINESS

FOLLOW US ON TWITTER

THURSDAY, JULY 26, 2012

DOW: 12,676.05 ▲58.73	NASDAQ: 2,854.24 ▼8.75	S&P 500: 1,337.89 ▼0.42	CRUDE OIL: \$88.97 ▲0.47
GOLD: \$1,608.00 ▲32.00	SILVER: \$27.45 ▲0.66	NATURAL GAS: \$3.07 ▼0.12	EURO: \$1.2160 ▲0.0099

Get business updates @heraldleaderbiz

Tempur-Pedic stock up after report, analysis

COMPANY DETAILS PLAN TO MEET COMPETITION

By Scott Sloan

ssloan@herald-leader.com

Shares of Tempur-Pedic stock rose nearly 10 percent Wednesday, a day after the company announced second-quarter earnings and noted it plans to debut a number of new products next week.

The Lexington-based mattress maker saw its stock plunge by more than half its value in early June after executives warned sales and profits would fall year over year in the second quarter. While that was indeed the case, the company appeared to impress

analysts and benefited from a Wednesday morning report by Stifel, Nicolaus & Co. that noted the stock should rebound.

For the quarter, the company had revenue of \$329.5 million, down 4 percent from \$342.2 million a year ago. Earnings were \$29.1 million, or 45 cents a share, down from \$53.1 million, or 76 cents a share.

CEO Mark Sarvary told analysts the decline in sales came because several competitors launched premium products and supported them with

aggressive marketing and incentives. The result was people who would have bought a Tempur-Pedic mattress went with a competitor's offering.

Overall mattress sales declined 4 percent year over year with an 8 percent decline in North America. Pillow sales fell 2 percent globally and 10 percent in North America. The company's international business, which is smaller than its U.S. business, saw sales grow in both categories.

The company has a three-pronged plan to deal with the greater competition. First, it will debut new products at a trade show next week that

have "some compelling attributes that are important to different consumers," chief financial officer Dale Williams told the Herald-Leader.

The other tactics include the company reviewing its pricing to ensure retailers are encouraged to sell its products and to continue to advertise.

The crowded marketplace of products in the second quarter also hurt the debut of the company's Simplicity mattress line, which is priced at \$1,499 and brings the company into a lower-priced portion of the market. Williams said the sales of Simplicity were on the low end of their

expected range.

"You have to just work hard on building the franchise and driving awareness and trying to get it differentiated from everything else that is out there," he said.

To reduce expenses, the company decreased its production in June, cutting hours at its manufacturing plants and laying off some employees there. The company has factories in New Mexico, Virginia and Denmark.

There have been no layoffs at its Lexington headquarters, Williams said. The company is on track to move into its new expanded headquarters

building at Coldstream in October, he said.

Williams said the company's performance of late is not dramatically changing any of its plans here, including its previously stated goal of making 65 new hires locally in the next five years.

Because of the business slowdown, he said, "the growth of the overall head count might be a little bit slower than it would have been, but there's no dramatic change."

Scott Sloan: (859) 231-1447. Twitter: @HeraldLeaderBiz

① How do innovations affect the value of a company?
→ increase profits

② what determines the demand for a product?
→ demand theory

③ what is the competition doing? → how do you compete? → market structure

④ how to price your product? → you can price discriminate pricing w/ market power price discrimination

⑤ how do you determine the value of a company?
→ market structure
→ demand theory
→ how to price your product?

Comparative Economic Systems

- Over time and across the world different countries have fared differently in terms of the well-being of their citizens
- Economic development in four minutes:
<https://www.youtube.com/watch?v=jbkSRLYSojo>
- Examples of different countries and the ways they organize economic activity:
<https://www.cia.gov/library/publications/the-world-factbook/>

Taxonomy of Economic Systems: The Decision-Making Process

All economic systems must answer three basic economic questions:

- 1. What** goods will be produced and in what amounts?
<http://www.ebay.com/>
- 2. How?** What production techniques will be utilized?
<https://www.youtube.com/watch?v=IV-iP1jSMII>
<https://www.youtube.com/watch?v=JM-J8XPQo78>
- 3. For Whom?** Who gets the goods and services that are produced by society?
<https://www.youtube.com/watch?v=9W2jkgs-ugs>

What, how, and for whom? Markets vs. Central Planning

- Command or central planning vs. Markets: will decision-making be centralized or decentralized?
- How do market systems answer the questions what, how, and for whom?
- How does a centrally planned economy answer these questions?
- How does the U.S. economy decide about apples? Leather coats? 3-bedroom houses? Secondary education? Missile submarines?

Taxonomy of economic systems:

Ownership of Resources

- Are the scarce resources of a society individually owned or commonly owned?
- Capitalism: land, labor, capital are owned by private individuals [so a basic function of government is defining and enforcing property rights]
- Socialism: land, labor, capital are jointly owned by everyone
- In the U.S., who owns farms? Electric power plants? Houses and apartments? Lake Cumberland? Human capital?

Economic Systems around the World

- U.S. economy: most resource allocation decisions are decentralized—made through interactions of buyers and sellers in markets; most resources are privately owned
- China? Decision-making: <https://www.youtube.com/watch?v=m91zBt94LI0> ; ownership of resources: <https://www.youtube.com/watch?v=DMEANuyaKE4>
- Our focus in this course: capitalistic market economies

How do markets work to allocate resources?

- What is a market? Examples?
- How is price determined in a market? Output?
- Theory of consumer behavior—Demand
- Theory of producer behavior—Supply
- Equilibrium in a market exists when everyone who wants to buy the product at the market price is able to do so and when everyone who wants to sell the product at the market price is able to do so.
- What will the price of crude oil be tomorrow? Next month? Next year?
<https://www.macrotrends.net/1369/crude-oil-price-history-chart>

Using Demand and Supply Analysis without Graphs

- Increase in demand: UK beats Florida, Georgia, and Tennessee in football—market for UofL tickets on Stubhub?
- Increase in supply: fracking allows gas producers to extract more gas—market for natural gas?
- Decrease in demand: natural gas prices plummet—market for thermal coal?
- Decrease in supply: drought in Central Valley in California—market for carrots?

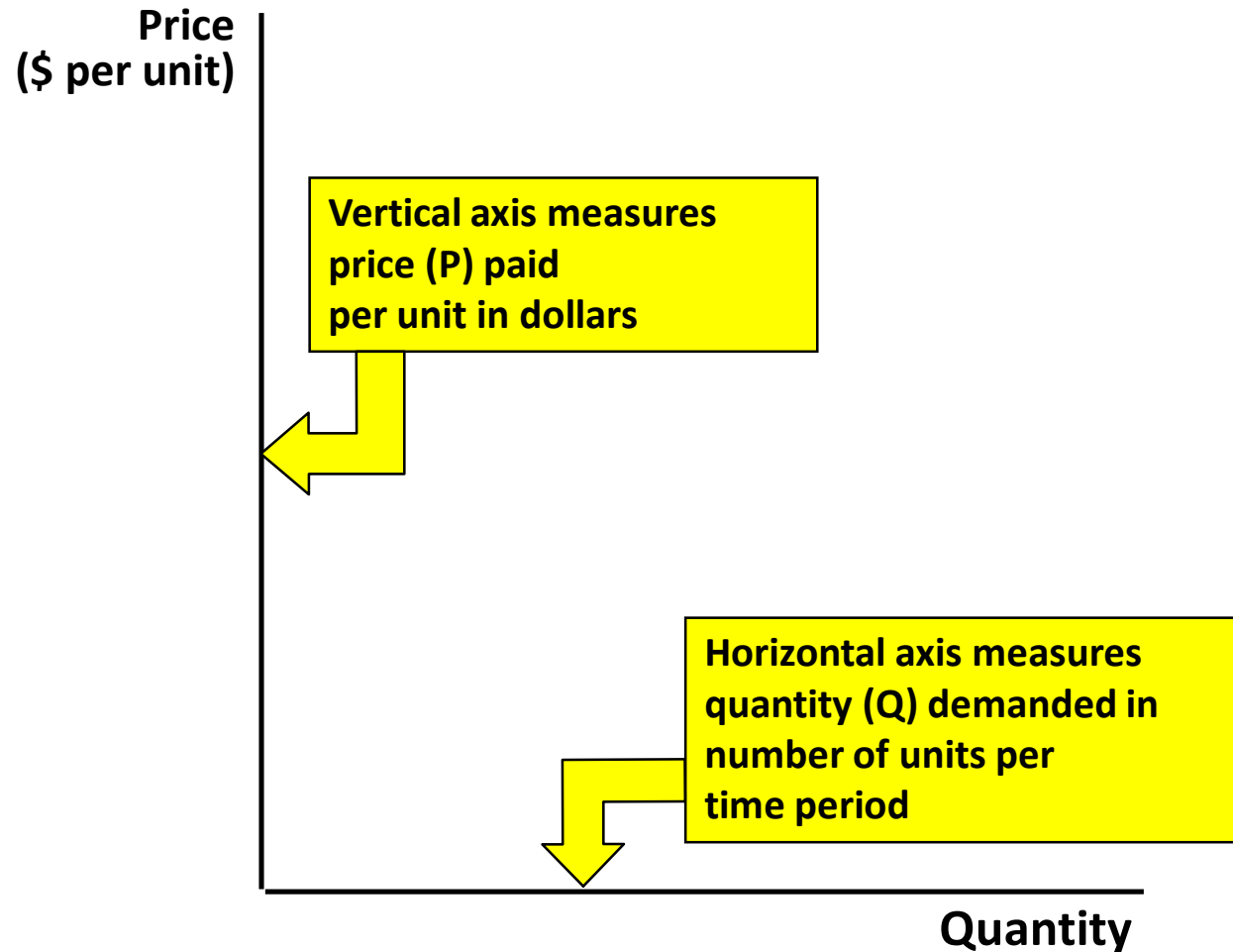
Theory of Demand

- Quantity Demanded (Q_D): total amount of a commodity that all households wish to purchase.
- Factors affecting Q_D :
 1. tastes or preferences
 2. income
 3. price of the product
 4. prices of other products
 - a) substitutes in consumption
 - b) complements in consumption

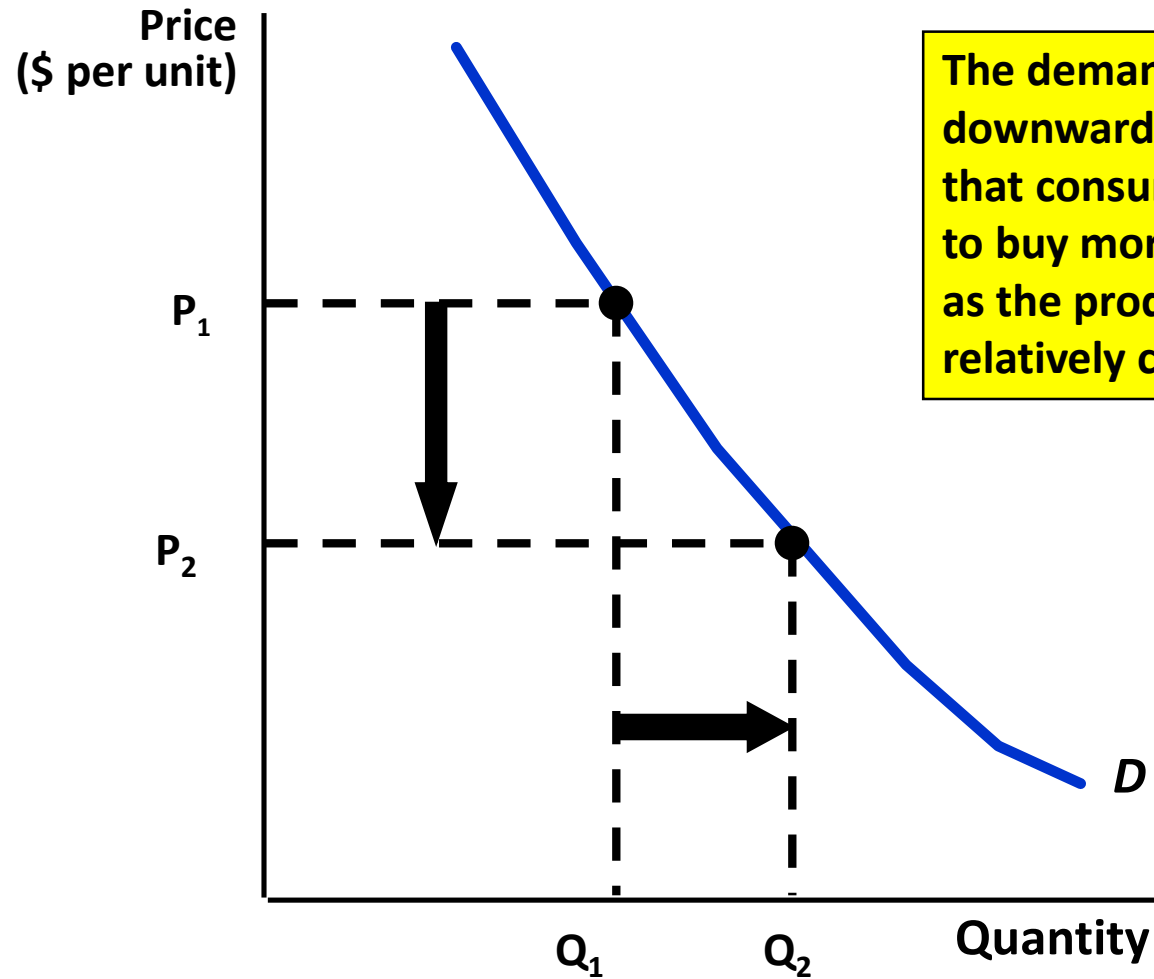
Law of Demand

- Ceteris Paribus (holding other factors constant), as the price of the commodity increases, households will wish to purchase less of it, and vice versa.
- The Law of Demand can be represented graphically in what we call a Demand Curve. The Demand Curve shows how much consumers wish to purchase at each price, holding constant their tastes, incomes, and the prices of other commodities.

Demand Curve



Demand Curve



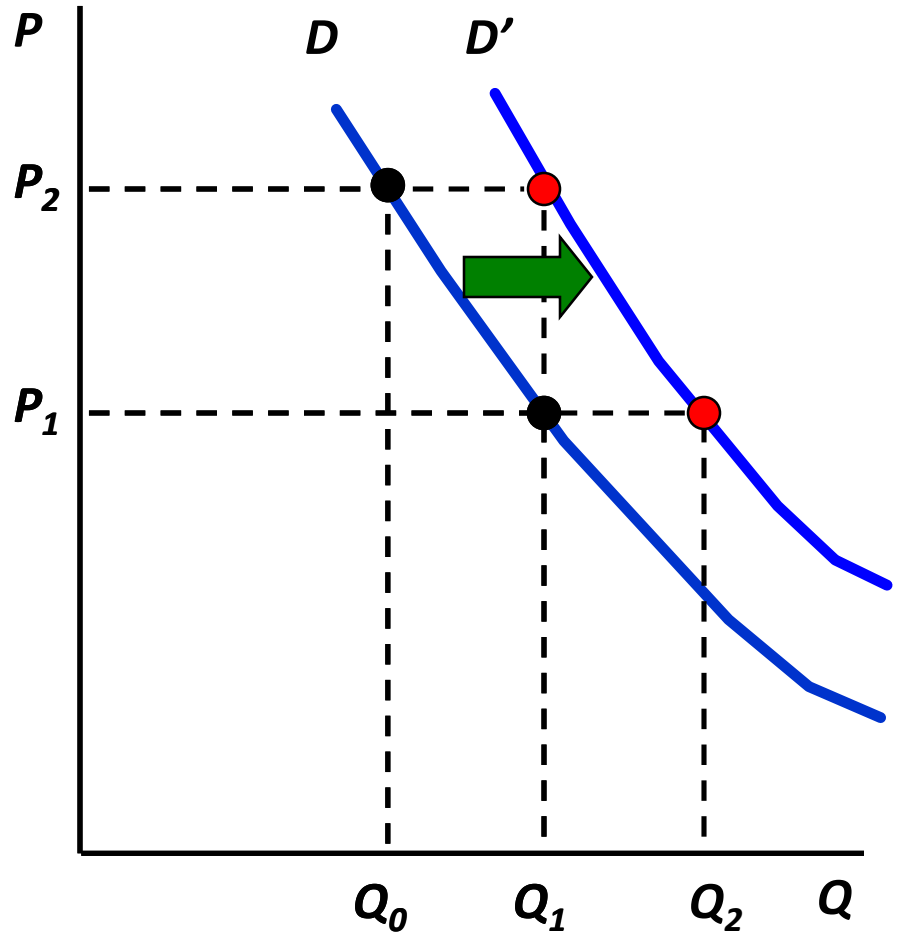
The demand curve slopes downward, indicating that consumers are willing to buy more at a lower price as the product becomes relatively cheaper.

Change in Demand vs. Change in Quantity Demanded

- When the price of a commodity falls, households demand more of it, which is reflected in the movement from one point to another along the same demand curve.
- What happens when one of the other factors affecting Q_D changes? [tastes or preferences, income, price of a substitute, price of a complement]
- Draw a new diagram? Or . . .

Demand for new cars

- Increase in Income Shifts the Entire Demand Curve
 - D represents demand for new cars among UK MBA students in 2020
 - Students graduate, get good jobs, and experience significant increases in income
 - D' represents demand for new cars among UK MBA alums in 2022—they want to purchase more cars at each possible price



Shifts in Demand

- Increase in Demand (shift to the right of the entire Demand Curve):
 - Change in tastes in favor of the good
 - Increase in income (for a normal good)
 - Increase in the price of a substitute
 - Decrease in the price of a complement
- Decrease in Demand (shift to the left of the entire Demand Curve):
 - Change in tastes away from the good
 - Decrease in income (for a normal good)
 - Decrease in the price of a substitute
 - Increase in the price of a complement

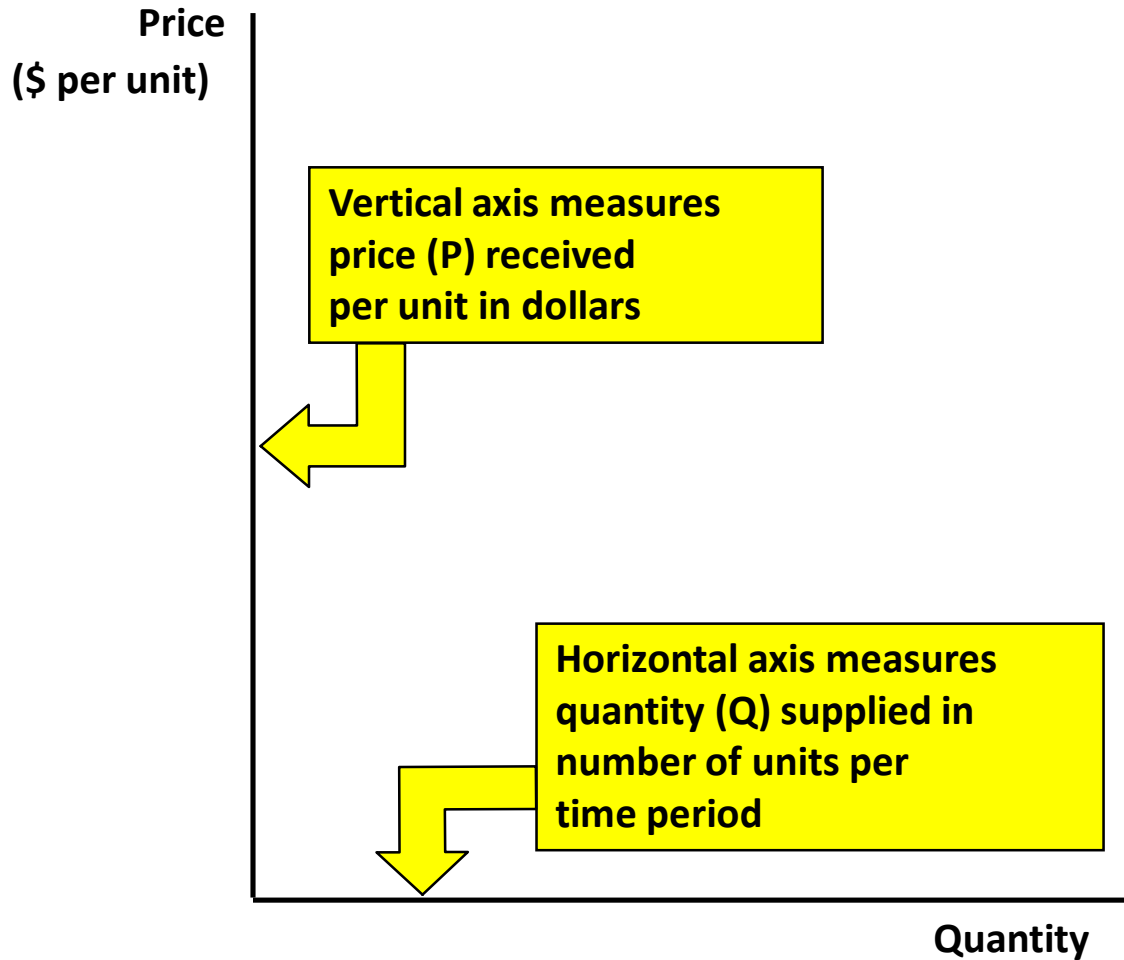
Theory of Supply

- Quantity Supplied (Q_S): total amount of a commodity that all firms wish to produce and sell
- Factors affecting Q_S :
 1. Goals of firm owners
 2. Technology
 3. Input prices
 4. Price of the product
 5. Prices of other products
 - a) substitutes in production
 - b) complements in production

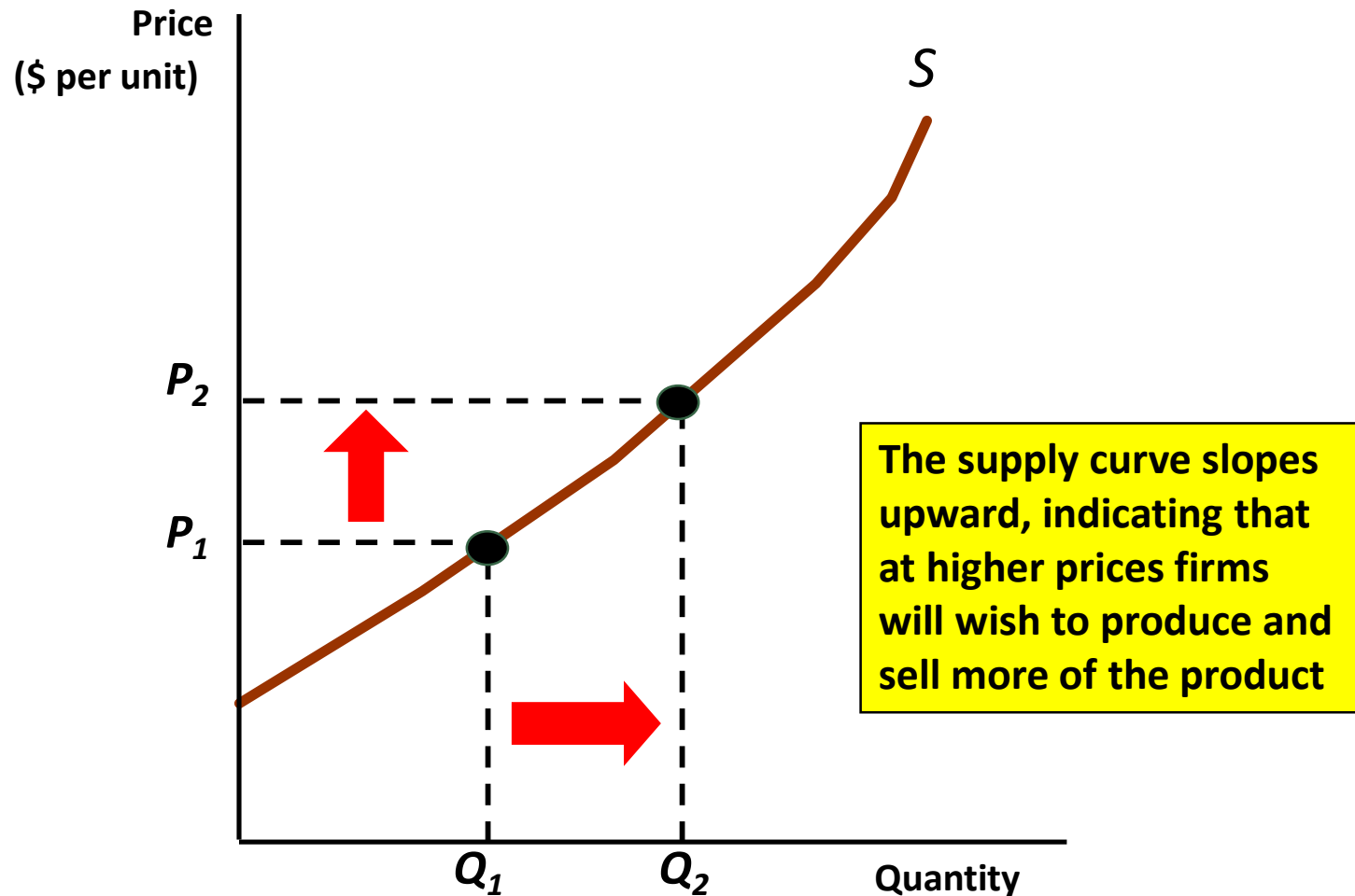
Law of Supply

- Ceteris Paribus (holding other factors constant), as the price of a commodity rises, firms will wish to produce and sell more of it, and vice versa.
- The Law of Supply can be represented graphically in what we call a Supply Curve. The Supply Curve shows how much firms wish to produce and sell at each price, holding constant technology, input prices, and the prices of other commodities.

Supply Curve



Supply Curve



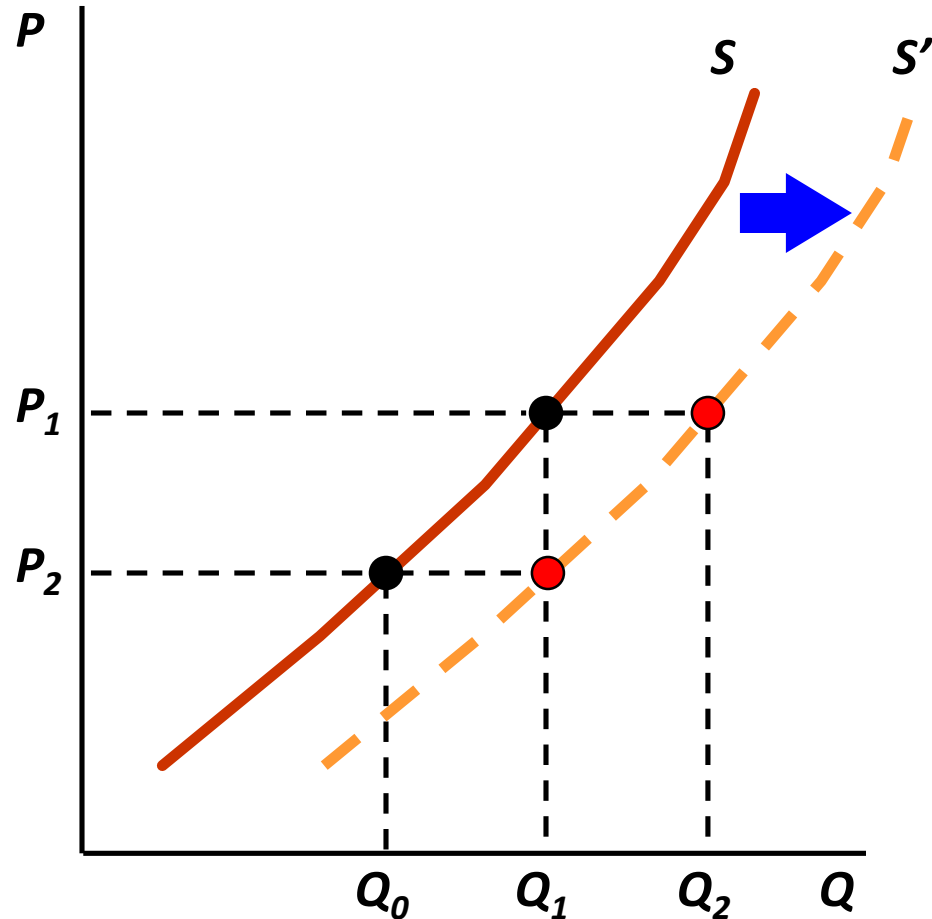
Change in Supply vs. Change in Quantity Supplied

- When the price of a commodity rises, firms supply more of it, which is reflected in the movement from one point to another along the same supply curve.
- What happens when one of the other factors affecting Q_s changes? [technology, input prices, price of a substitute in production, price of a complement in production]
- Draw a new diagram? Or . . .

Supply of natural gas

➤ Change in technology shifts entire Supply Curve

- S represents supply decisions of firms before fracking revolution.
- Technology of extracting natural gas changes
- S' represents supply decisions of firms after technology changes. Since they can extract more gas at lower costs, they wish to supply more natural gas at every possible price.



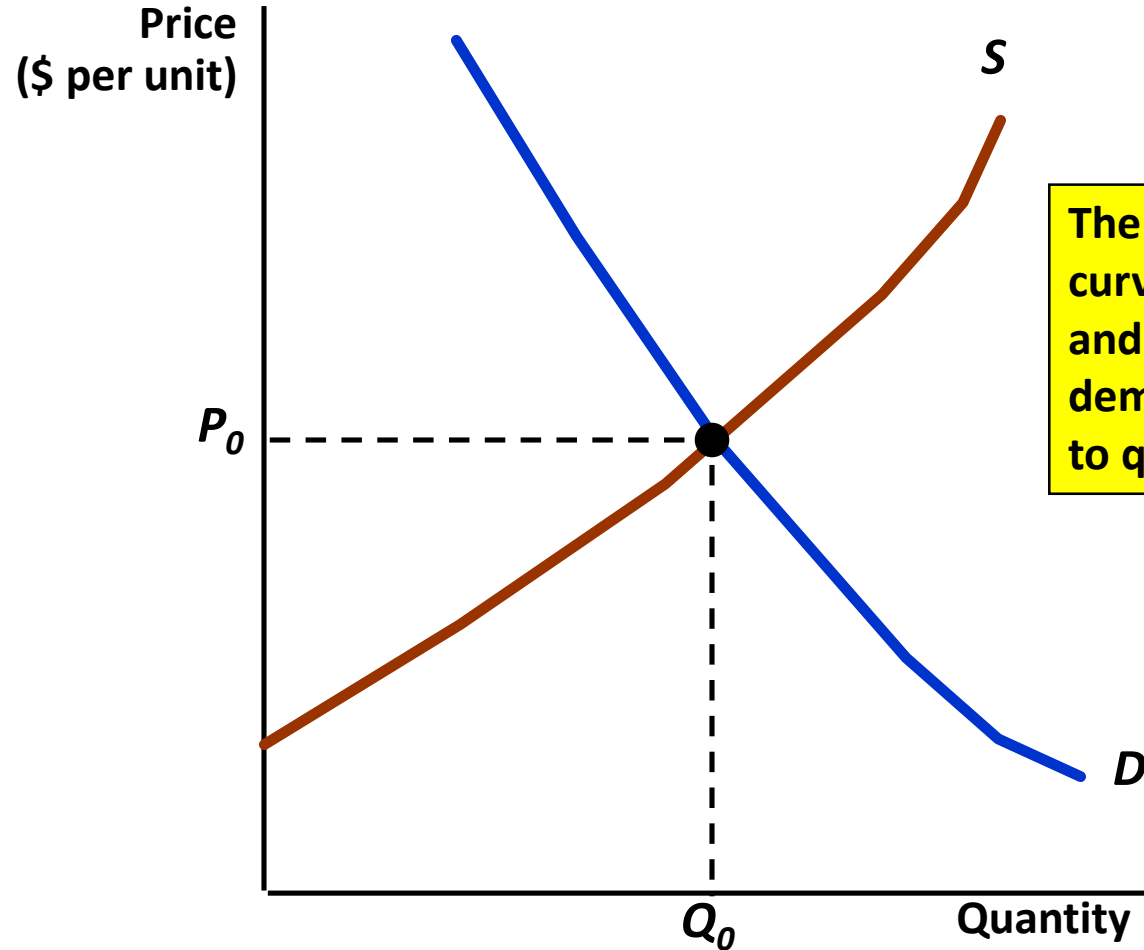
Shifts in Supply

- Increase in Supply (shift to the right of the entire Supply Curve):
 - Change in technology
 - Decrease in input prices
 - Decrease in the price of a substitute in production
 - Increase in the price of a complement in production
- Decrease in Supply (shift to the left of the entire Supply Curve):
 - Increase in input prices
 - Increase in the price of a substitute in production
 - Decrease in the price of a complement in production

Market Equilibrium

- How are price and output determined in a market? Interactions of buyers and sellers exchanging the commodity.
- We say a market is in **equilibrium** when the quantity demanded equals the quantity supplied
- There are no market forces acting to change this outcome, since there are no frustrated buyers or sellers.

Market Equilibrium

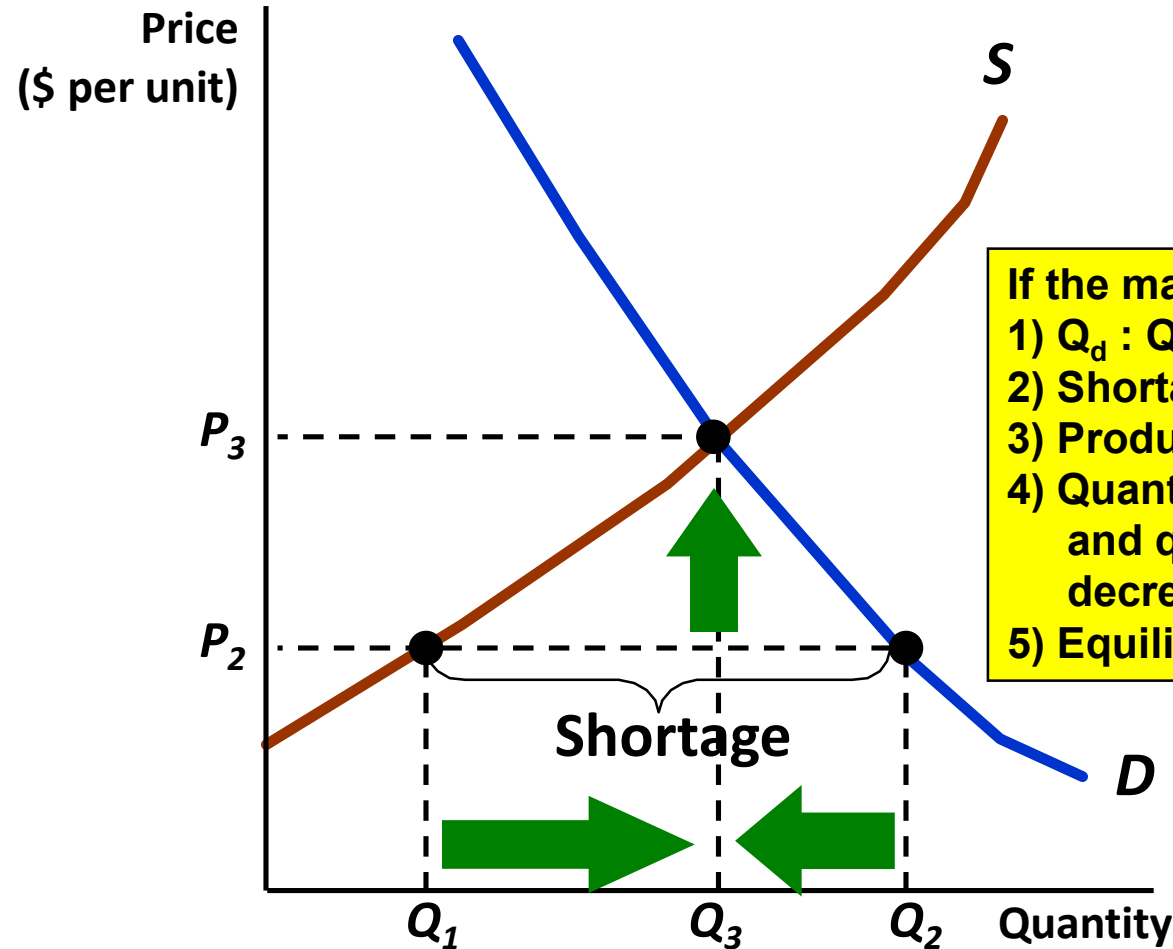


The Demand and Supply curves intersect at P_0 and Q_0 . At P_0 quantity demanded is equal to quantity supplied.

Disequilibrium

- Suppose at the current market price, buyers want to purchase more of the commodity than sellers wish to produce and sell?
- Alternatively, suppose at the current market price, sellers want to produce and sell more of the commodity than buyers wish to purchase?
- There will be frustrated buyers or sellers, and price will tend to change.

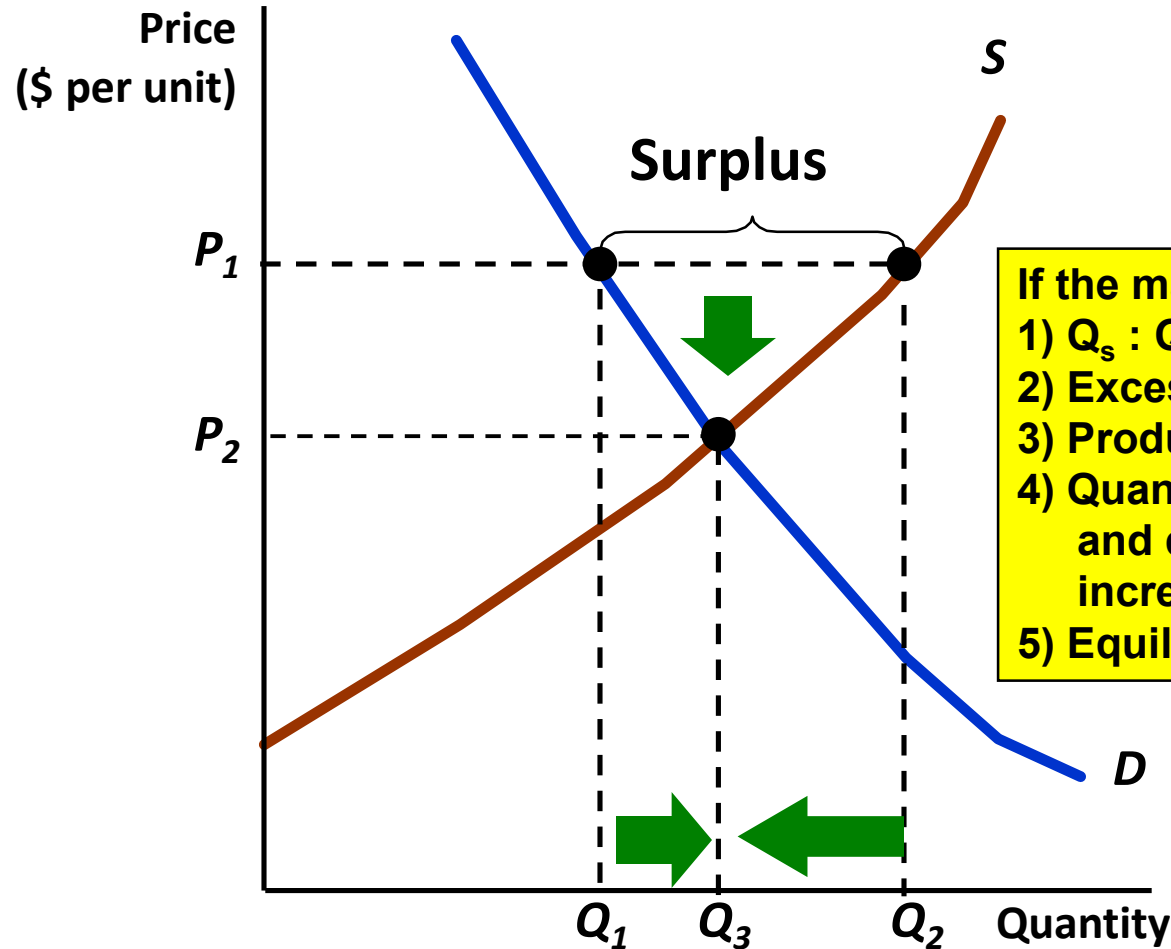
Market price below the equilibrium price—Shortage



If the market price is P_2 , then:

- 1) $Q_d : Q_2 > Q_s : Q_1$
- 2) Shortage is $Q_2 - Q_1$.
- 3) Producers raise price.
- 4) Quantity supplied increases and quantity demanded decreases.
- 5) Equilibrium at P_3, Q_3

Market price above the equilibrium price—Surplus



- If the market price is P_1 , then:
- 1) $Q_s : Q_2 > Q_d : Q_1$
 - 2) Excess supply is $Q_2 - Q_1$.
 - 3) Producers lower price.
 - 4) Quantity supplied decreases and quantity demanded increases.
 - 5) Equilibrium at P_2, Q_3

Shifts in Demand and/or Supply

- Increase in demand: UK beats Florida, Georgia, and Tennessee in football—market for UofL tickets on Stubhub?
- Increase in supply: fracking allows gas producers to extract more gas—market for natural gas?
- Decrease in demand: natural gas prices plummet—market for thermal coal?
- Decrease in supply: drought in Central Valley in California—market for carrots?

Price Ceilings

- Suppose government imposes a maximum price on a commodity below the equilibrium price.
- Buyers want to buy more than firms want to sell, so a shortage of the commodity will occur.
- Normally when there is a shortage, price rises and the shortage disappears. But when price is legally constrained from rising, the shortage will persist.

Price Floors

- Suppose government imposes a minimum price on a commodity above the equilibrium price.
- Sellers want to sell more than buyers want to buy, so a surplus of the commodity will occur.
- Normally when there is a surplus, price falls and the surplus disappears. But when price is legally constrained from falling, the surplus will persist.

Other aspects of market economies

- Role of prices in conveying information
- Role of profits in signaling the need for resource shifts
- Incentives for efficient use of scarce resources
- Whose preferences matter most in directing economic decision-making?
- Why do firms exist in a market economy?

Required Readings

- “Tempur-Pedic stock up after report, analysis,” *Lexington Herald-Leader*, 7/26/12, p. B5:
<http://www.kentucky.com/2012/07/25/2270718/tempur-pedic-stock-up-after-2q.html>
- “As Economy Grows, North Korea’s Grip on Society is Tested,” *New York Times*, 5/1/17.
<http://search.proquest.com.ezproxy.uky.edu/docview/1893439516/6B98A8736BF04FEAPQ/2?accountid=11836>
- “Lawmakers struggle to define gasoline price ‘gouging,’” *WSJ*, 11/9/05.
<http://ezproxy.uky.edu/login?url=http://search.proquest.com/docview/398991187?accountid=11836>
- “Venezuela is Starving—Hobbled by Economic Policies, Latin America’s Once-Richest Country Can No Longer Feed its People,” *WSJ*, 5/6/17.
<http://search.proquest.com.ezproxy.uky.edu/docview/1895499247/5CF40B45C8B34BBDPQ/1?accountid=11836>
- “Corn’s Rally Sends Ripples,” *WSJ*, 1/18/07.
<http://ezproxy.uky.edu/login?url=http://search.proquest.com/docview/398983538?accountid=11836>