

LECTURE 3
SUPPLY AND DEMAND FRAMEWORK

January 28, 2020

I. INTRODUCTION TO MARKETS

- A. Implications of scarcity and the gains from specialization
- B. What is a market?

II. SUPPLY AND DEMAND

- A. Why demand curves slope down
- B. Why supply curves slope up

III. MARKET EQUILIBRIUM

- A. Role of prices
- B. Equilibrium price and quantity
- C. How the market gets to equilibrium
- D. How do markets deal with scarcity and the gains from specialization?

IV. SHIFTS IN THE CURVES

- A. Ceteris paribus
- B. A shift in the supply curve
 - 1. A more costly technology
 - 2. A movement along the curve versus a shift of the curve
 - 3. New equilibrium price and quantity
- C. A shift in the demand curve
 - 1. Adverse change in tastes due to bad news about a product
 - 2. New equilibrium price and quantity

V. PRICE CONTROLS

- A. Definition of a price control and examples of different types
- B. Modeling a price ceiling on bottled water after a natural disaster
- C. Effects of a price ceiling
- D. Revisiting the example of growing water-intensive crops in California

Economics 2
Spring 2020

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LECTURE 3

Supply and Demand Framework



January 28, 2020

Announcements

- Problem Set 1 is due at the beginning of lecture next Tuesday (February 4th).
- You may work together on the problems, but:
 - We strongly recommend working on the problems by yourself first.
 - Your answers must be handwritten and in your own words.
 - You must list other students you worked with at the start of your answers.

Announcements

- **Optional problem set work session:** Thursday, Jan. 30th, 4 – 6 p.m. in 648 Evans Hall.

Components of a Good Problem Set Answer

- Neatness is important.
- Graph is usually essential.
- Explain your answer; give the reasoning or intuition for why something happens.

I. INTRODUCTION TO MARKETS

Two Building Blocks

- **Scarcity:** A situation in which a person, firm, or country faces a constraint.
- **Gains from Specialization:** A group of people can produce and consume more if they specialize and trade than if each is self-sufficient.

Market

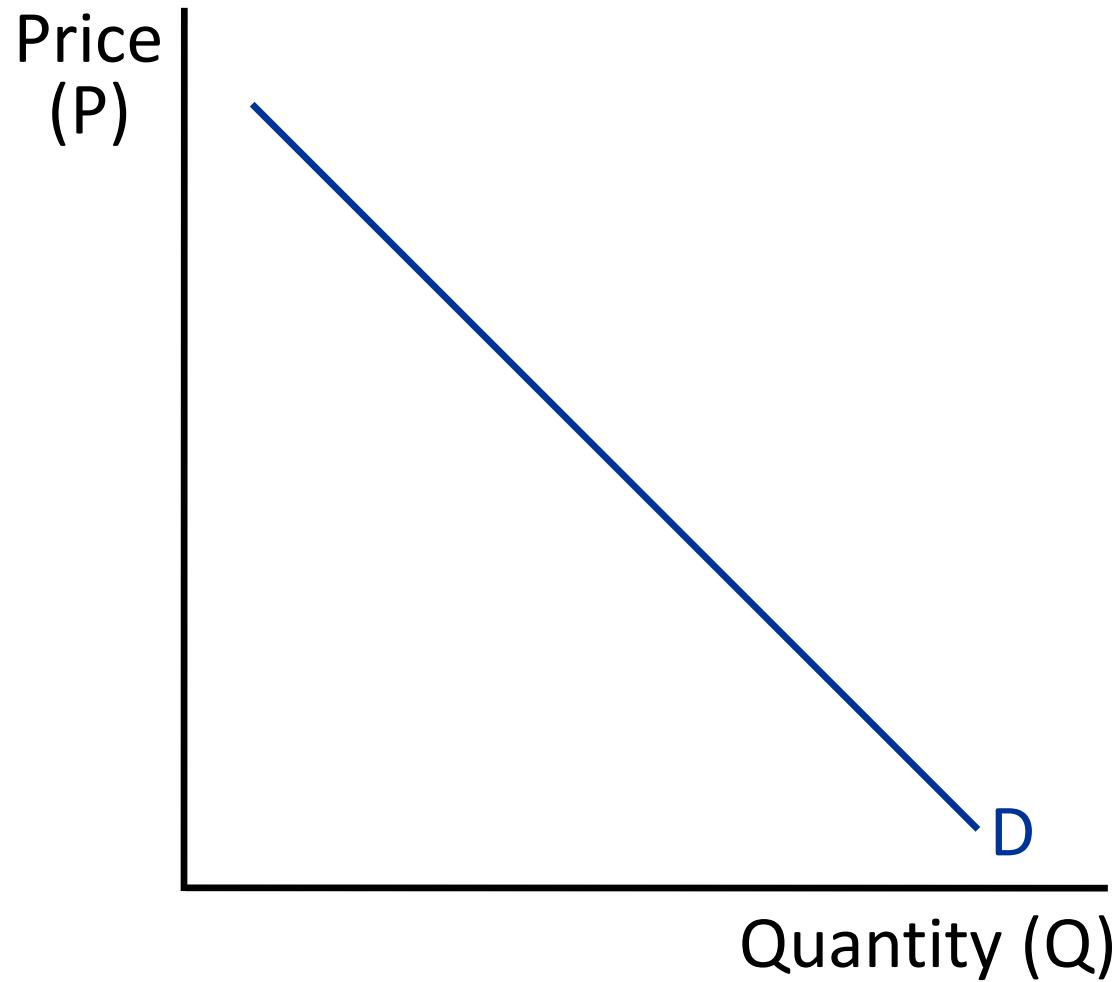
- An arrangement by which economic exchanges between people take place.

II. SUPPLY AND DEMAND

Demand

- The buying side of the market.
- There is a negative relationship between the quantity demanded of a good and its price.
- The relationship reflects optimizing behavior on the part of households.

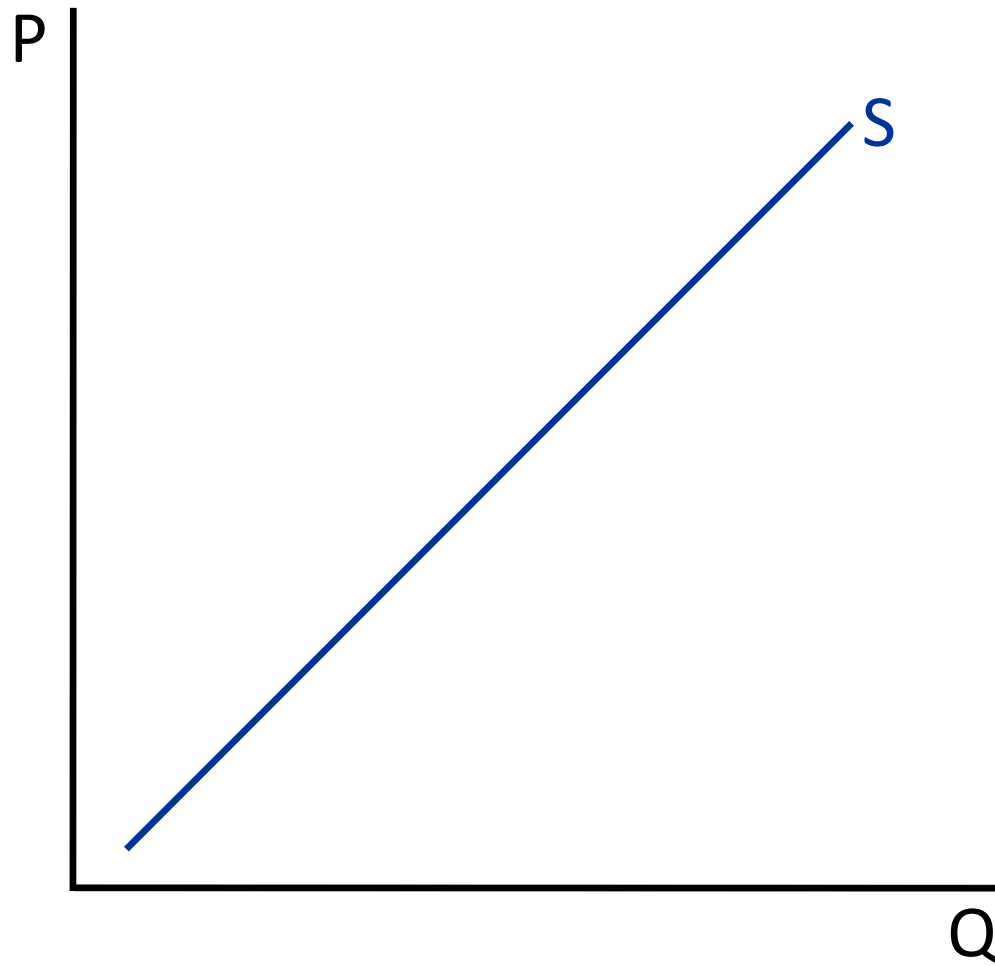
Demand Curve for Blueberries



Supply

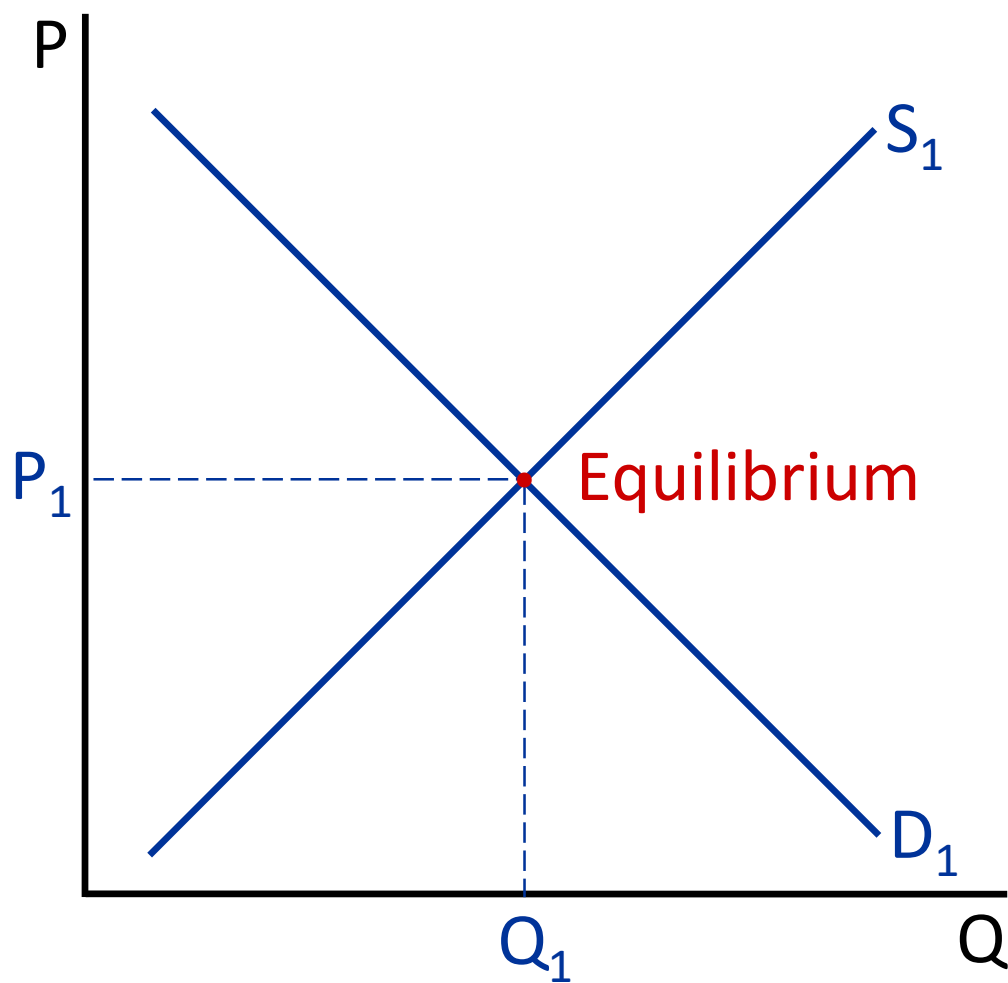
- The selling side of the market.
- There is a positive relationship between the quantity supplied of a good and its price.
- This relationship reflects optimizing behavior on the part of firms.

Supply Curve of Blueberries

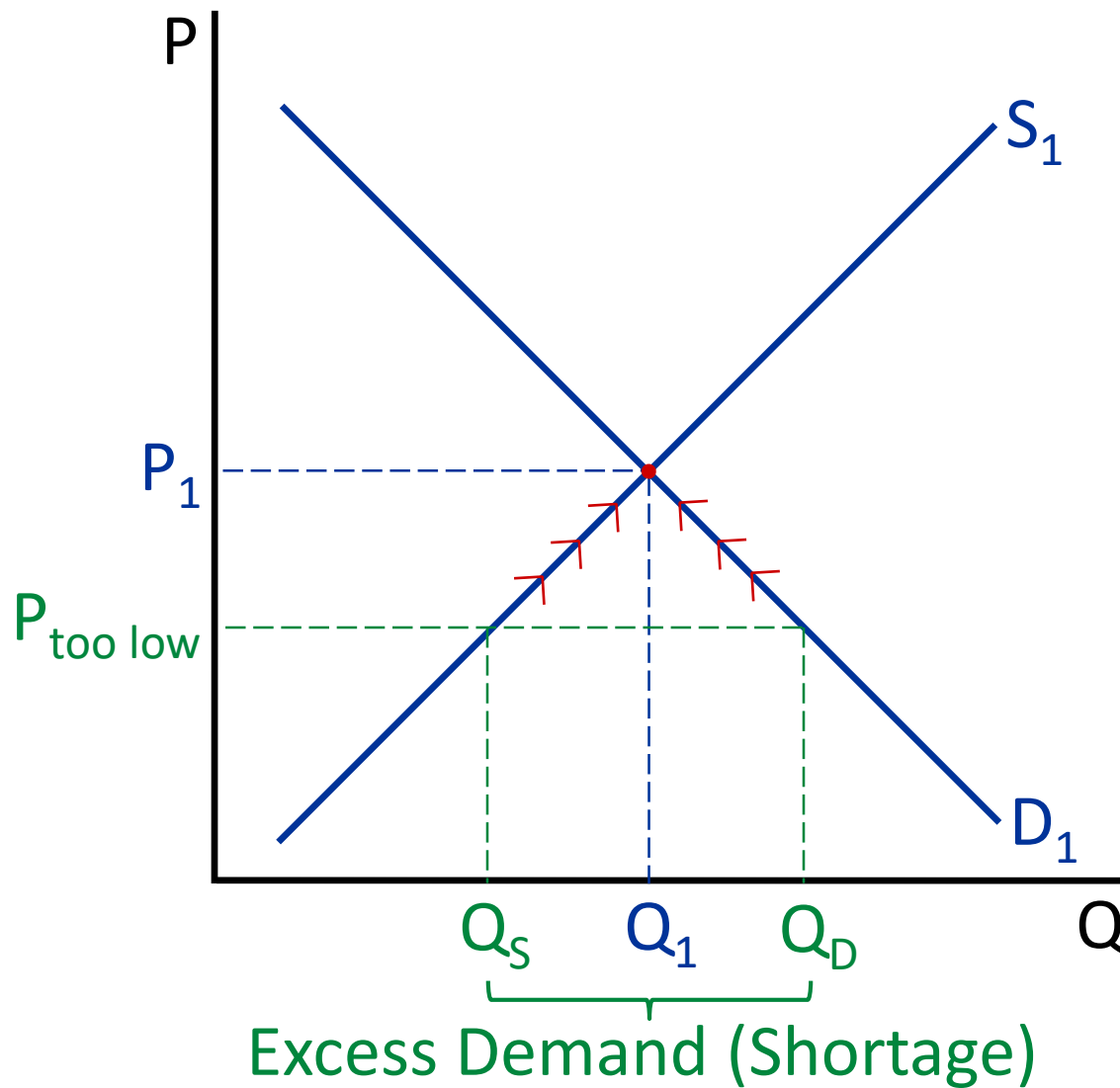


III. MARKET EQUILIBRIUM

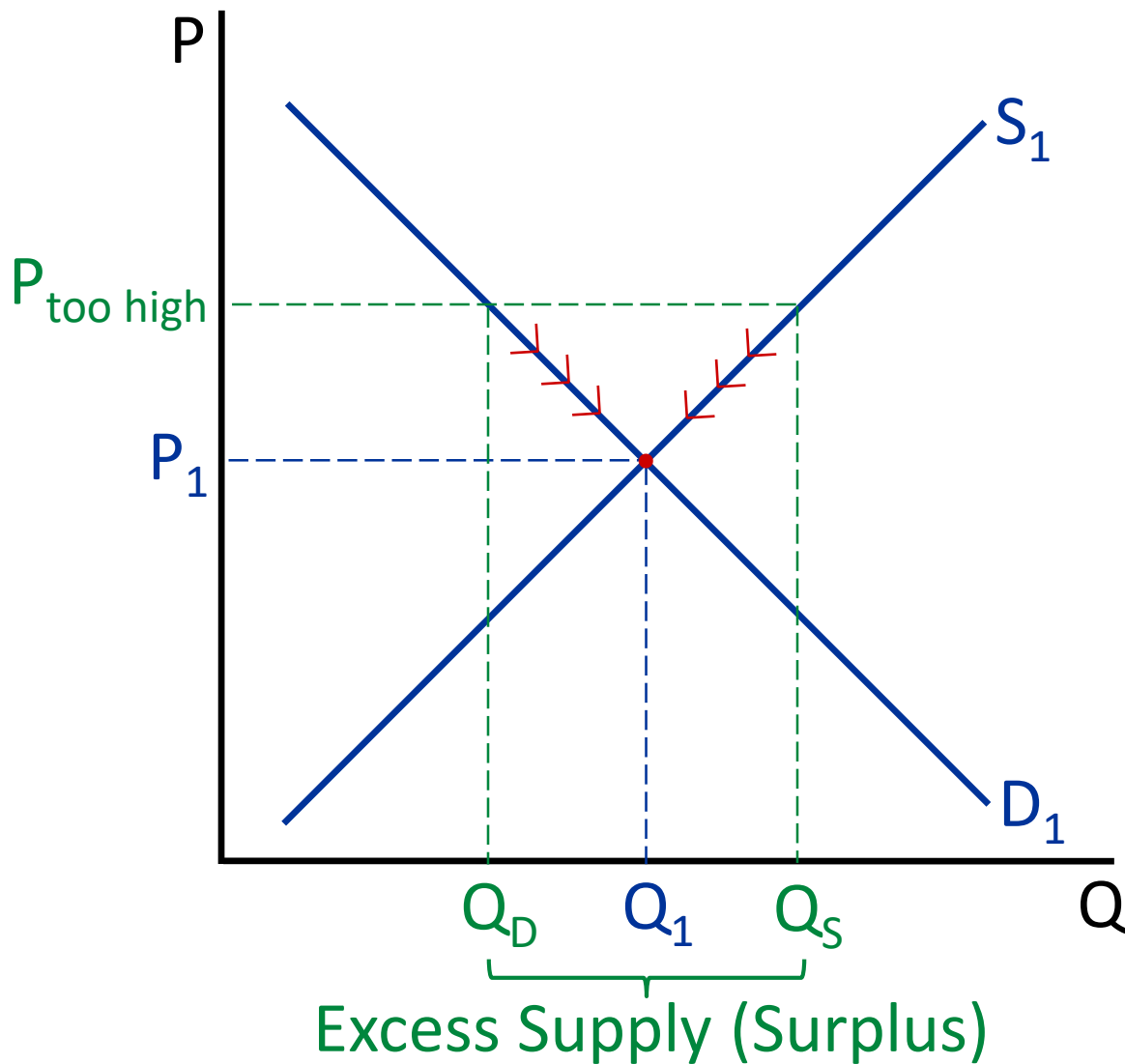
Equilibrium in the Market for Blueberries



What happens if the price is **below** P_1 ?



What happens if the price is **above** P_1 ?



How Do Markets Deal with Scarcity and the Gains from Specialization?

- The existence of markets allows people to specialize along the lines of comparative advantage because they can trade for other goods that they want.
- Markets deal with scarcity by balancing the optimizing behavior of consumers and producers. Prices adjust to equilibrate the two sides of the market.
- The consumers who actually get the good are those who are willing and able to pay the equilibrium price.
- The firms that actually produce the good are those that find it profit-maximizing to produce at the equilibrium price.

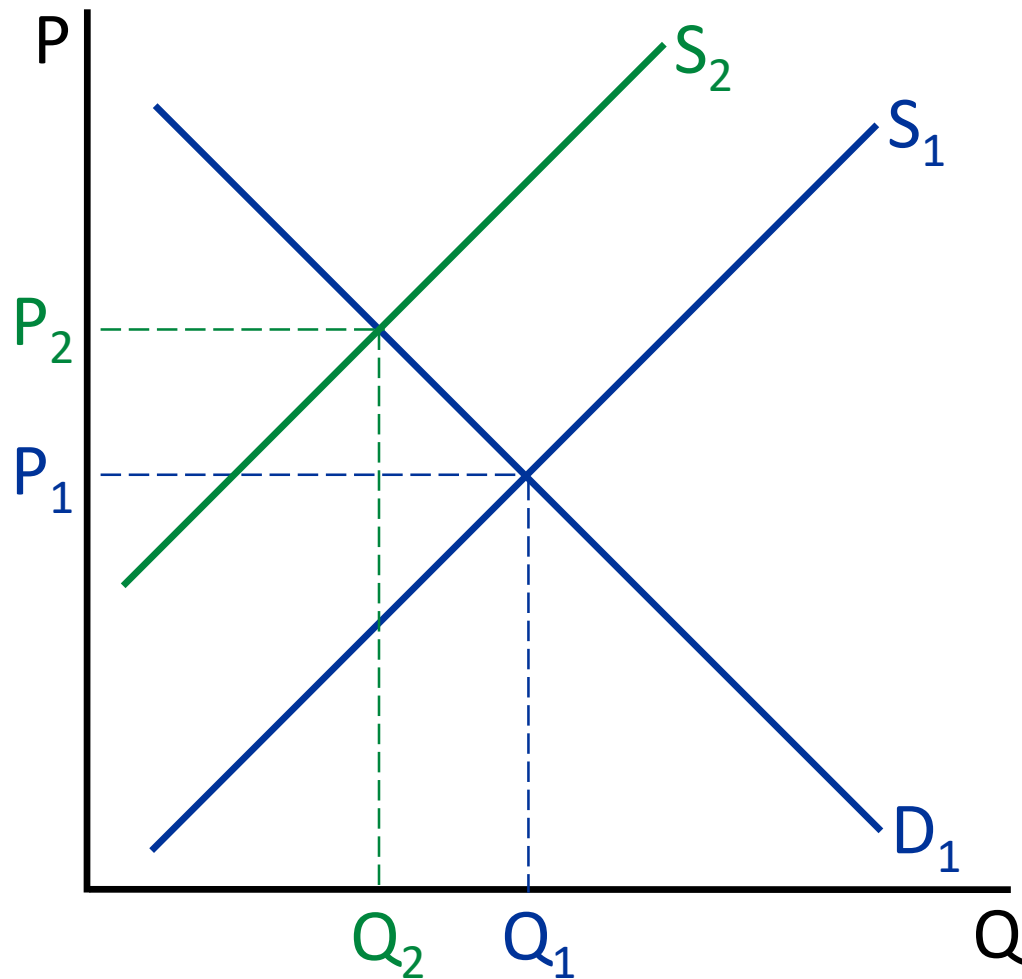
IV. SHIFTS IN THE CURVES

Ceteris Paribus

- “other things being equal”
- All variables other than those being studied are assumed to be constant.

Market for Blueberries

A More Costly Technology

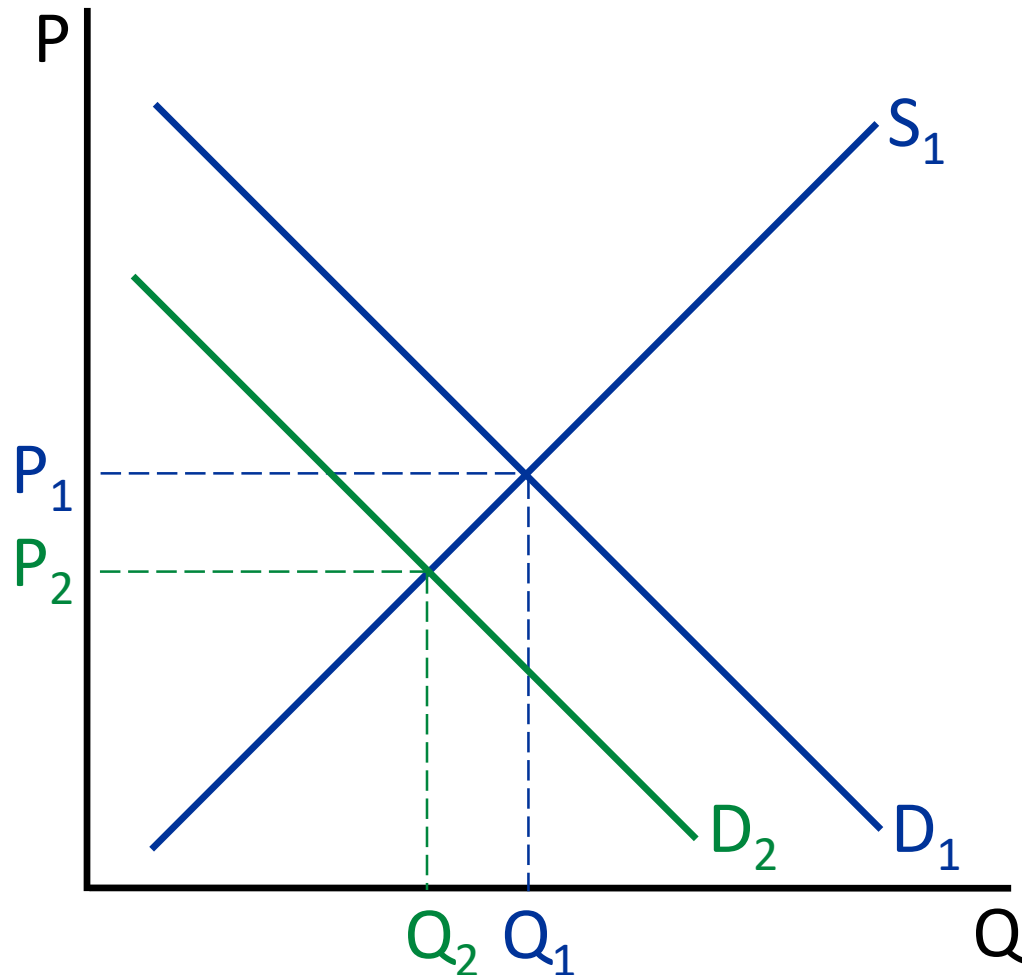


Movements Along vs. Shifts

- A change in the quantity supplied or quantity demanded because the price changed:
Movement along the curve.
- A change in the quantity supplied or quantity demanded at the same price:
Shift of the curve.

Market for Blueberries

Adverse Change in Tastes



V. PRICE CONTROLS

Price Control

- Government sets the price of a good; it is not allowed to go to its equilibrium level.
 - **Price Ceiling:** Maximum price; price is held below its equilibrium level.
 - **Price Floor:** Minimum price; price is held above its equilibrium level.

At least 1.4 million people in North Carolina experiencing drinking water shortage, uncertainty after hurricane

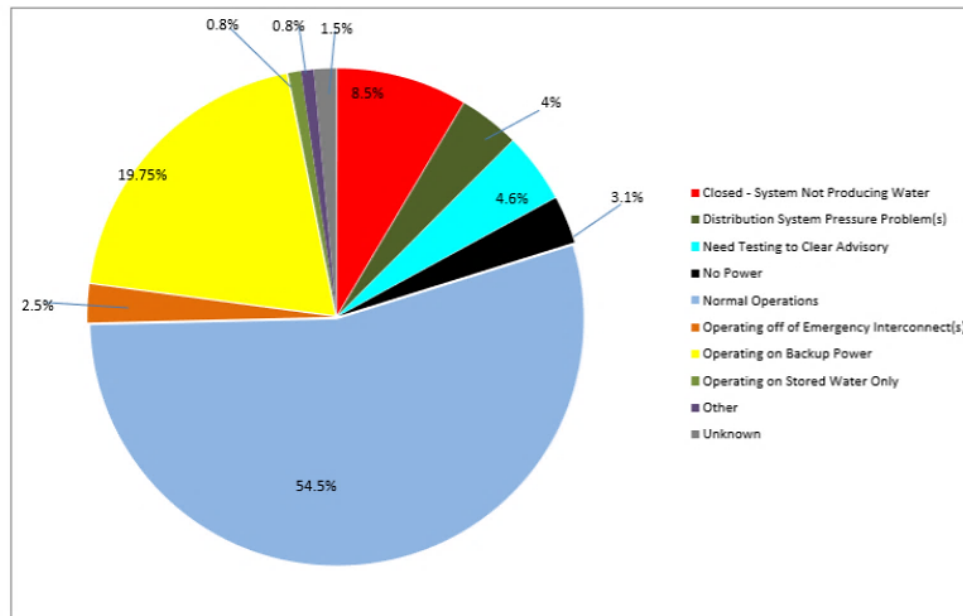


By [Lisa Sorg](#) · September 18, 2018 · In [Environment, public health](#)

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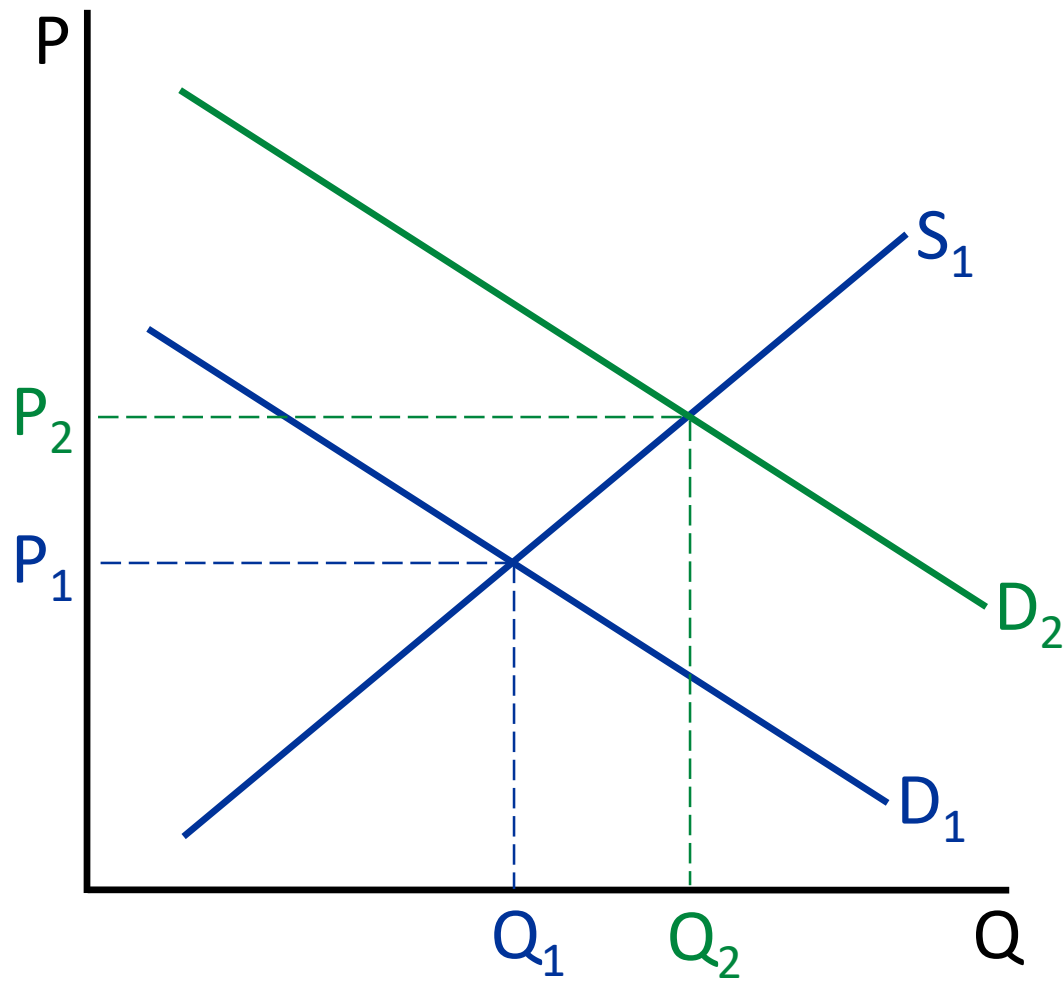
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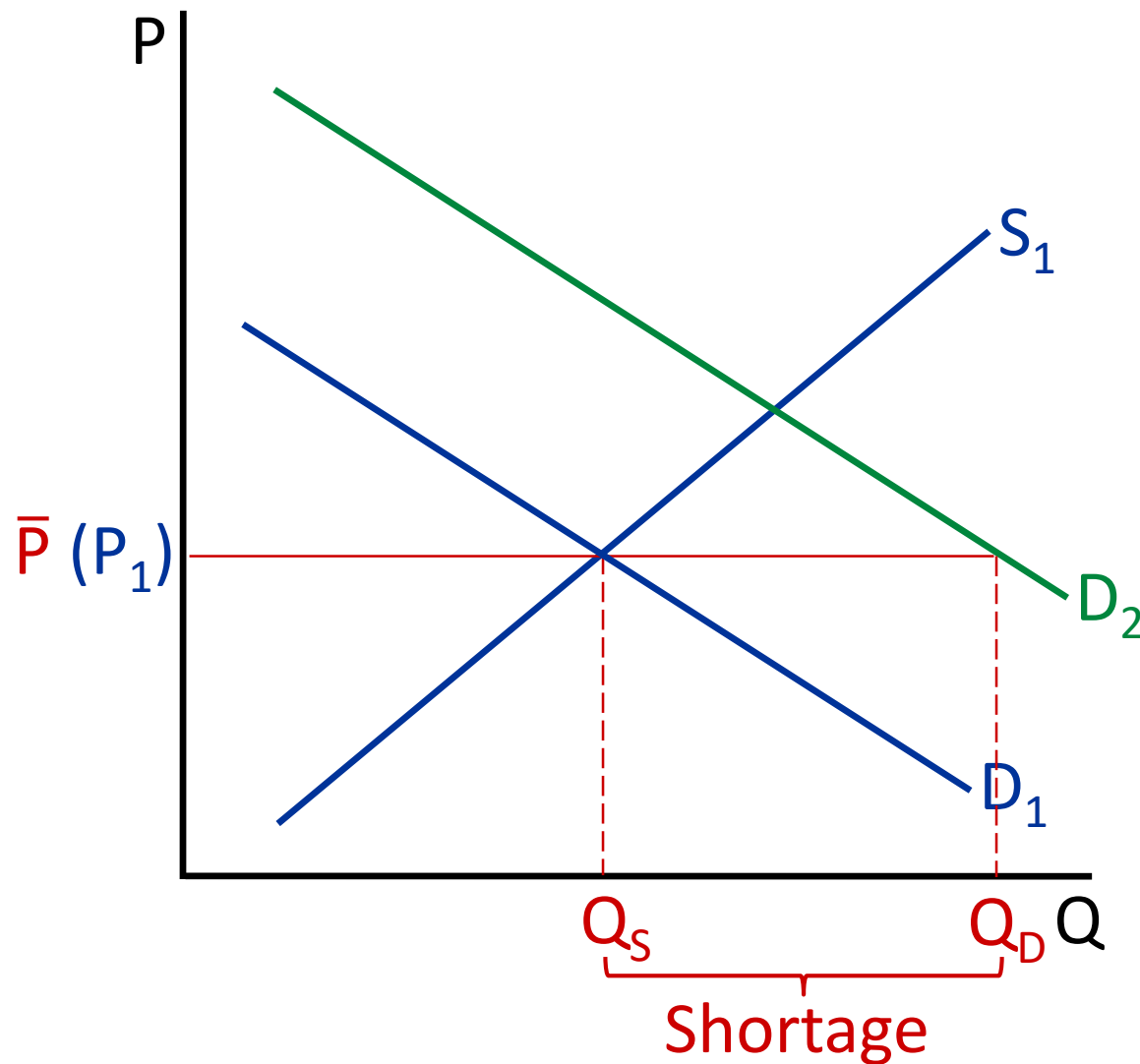


More than 1.4 million people on public and community water systems don't have reliable drinking water, as of Tuesday afternoon. The problems are plaguing 219 of the state's 481 permitted systems. Source: Department of Public Safety

Bottled Water after a Disaster



Bottled Water after a Disaster with a Price Ceiling



Effects of a Price Ceiling

- Will lead to a shortage.
- Good will have to be allocated in some way other than by price.
- Discourages the decrease in quantity demanded and increase in quantity supplied that automatically occur as the price rises.

Why does California produce some water-intensive crops?

- Part of the answer is that much of our irrigation water is provided at a controlled price that is below the equilibrium level.
- As a result, there is a shortage of water.
- Water must be allocated by means other than price, and so some farmers do not feel the full opportunity cost of the water they use.