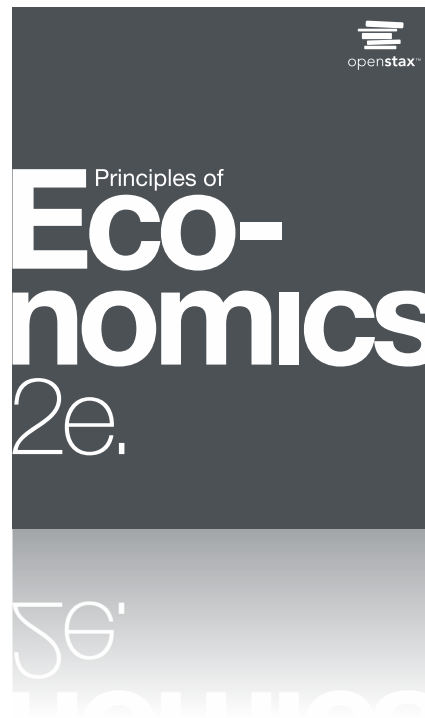


# PRINCIPLES OF ECONOMICS 2e

## Chapter 4 Labor and Financial Markets



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## CH.4 OUTLINE



4.1: Demand and Supply in Labor Markets

4.2: Demand and Supply in Financial Markets

4.3: Markets as a Mechanism for Information

# Other Types of Markets



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People often think of demand and supply in relation to goods, but we can also apply to this analysis labor markets, such as supply and demand in the market for nursing services.

# 4.1 Demand and Supply in Labor Markets

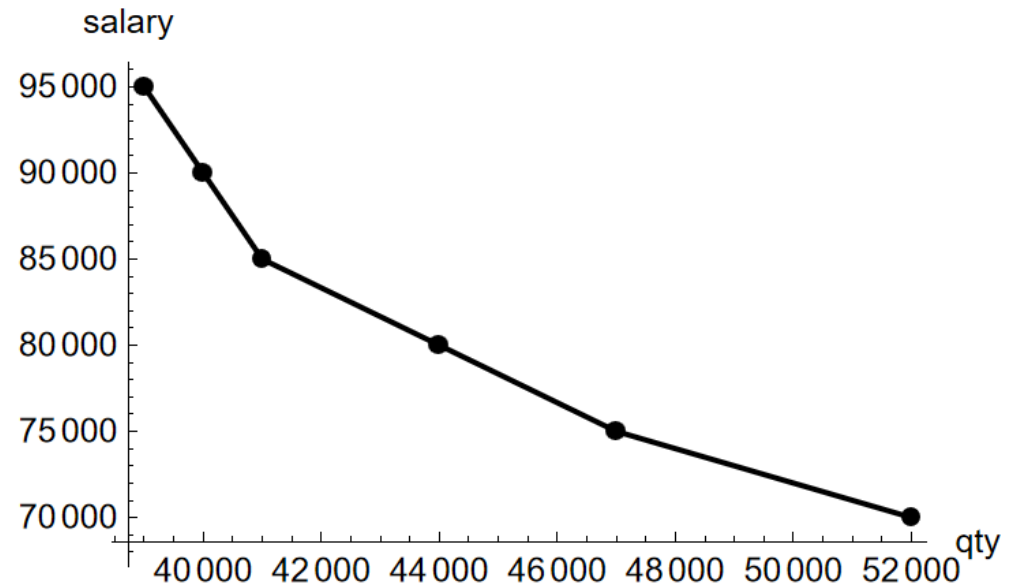


- **Labor market** - the supply and demand for **labor**.
- Law of demand in labor markets:
  - Higher price (salary or wage) in the labor market decreases the quantity of labor demanded by employers.
  - Lower price (salary or wage) increases the quantity of labor demanded.
- Law of supply labor markets:
  - Higher price for labor -> higher quantity of labor supplied.
  - Lower price for labor -> lower quantity supplied.
- **Equilibrium** - the quantity supplied and the quantity demanded are equal.
  - At the equilibrium wage, employers can find workers, and workers can find jobs.

# Demand Schedule and Demand Curve: Nurses in Twin Cities

Demand Schedule for Nurses

salary	qty
70 000	52 000
75 000	47 000
80 000	44 000
85 000	41 000
90 000	40 000
95 000	39 000

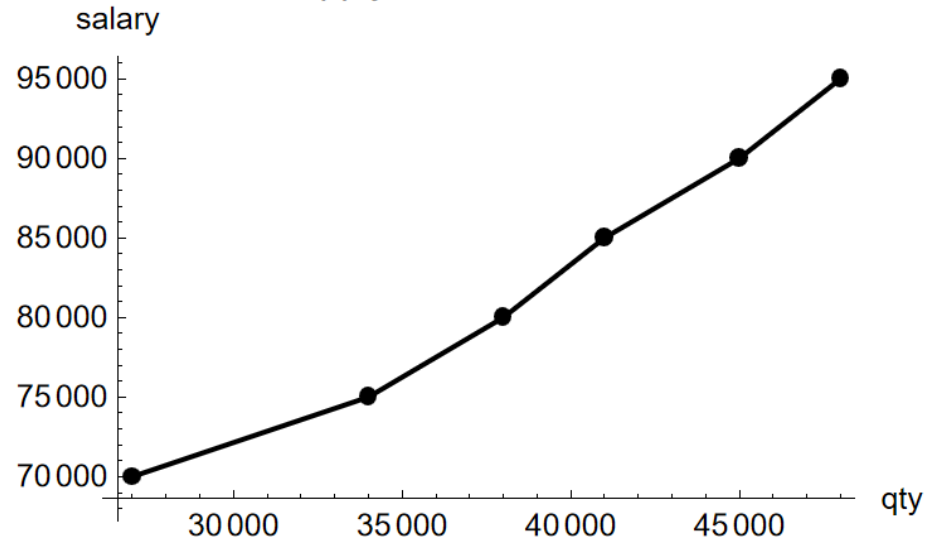


# Supply Schedule and Supply Curve: Nurses in Twin Cities

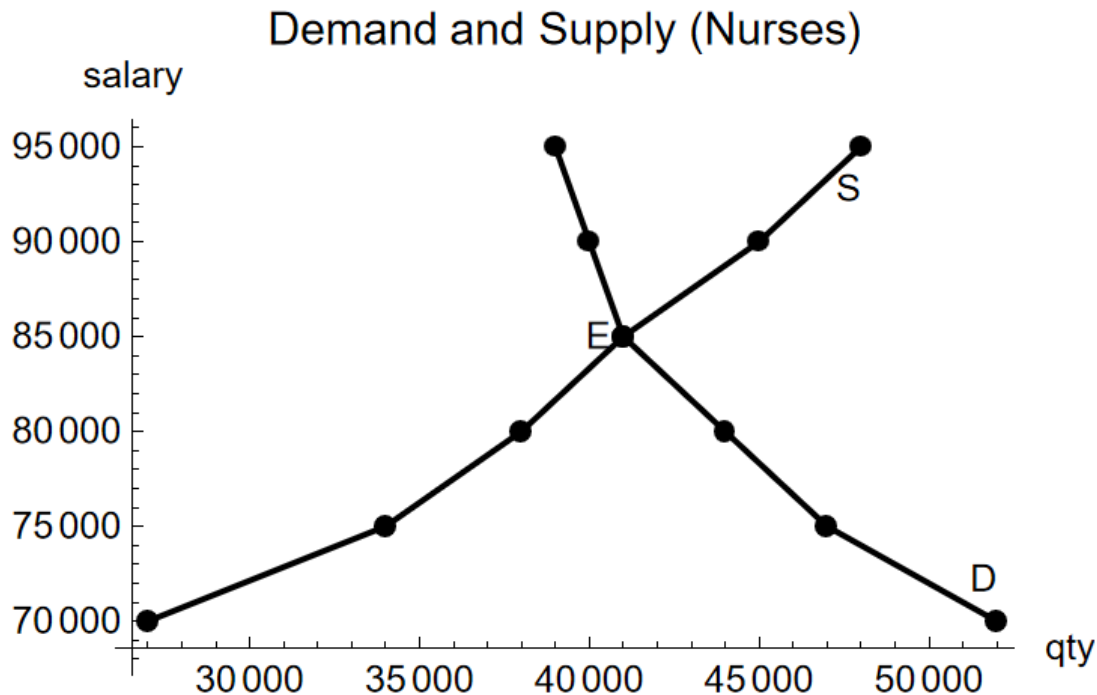
Supply Schedule for Nurses

<u>salary</u>	<u>qty</u>
70 000	27 000
75 000	34 000
80 000	38 000
85 000	41 000
90 000	45 000
95 000	48 000

Supply Curve for Nurses

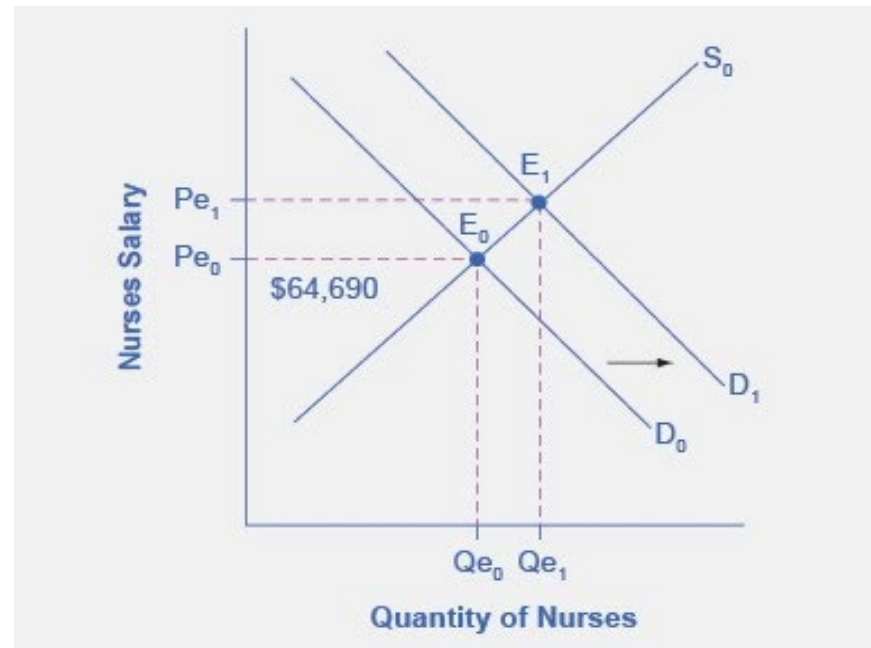


# Labor Market Example: Demand and Supply for Nurses



- The demand curve (D) employers who want to hire nurses intersects with the supply curve (S) of those who are qualified and willing to work as nurses at the equilibrium point (E).
- At an above-equilibrium, quantity supplied increases but the quantity of nurses demanded at the higher pay declines. At an above-equilibrium salary, an excess supply or surplus of nurses would exist.
- At a below-equilibrium salary the quantity supplied declines but the quantity demanded at the lower wage increases. At a below-equilibrium salary, there is excess demand or a shortage.

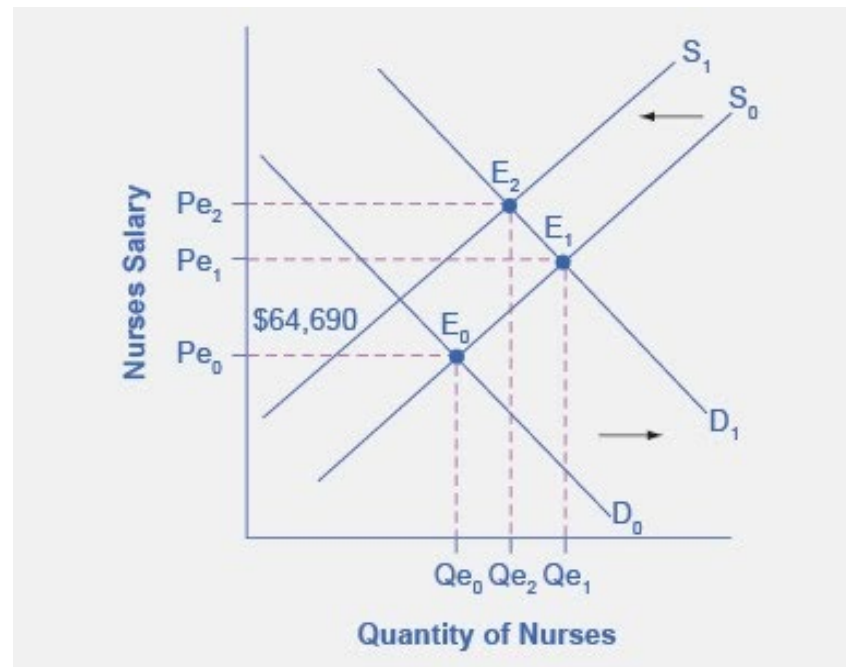
# Baby Boomers Come of Age: The Demand for Nurses



- In 2010, the median salary for nurses was  $\$64,690$ .
- As demand for services increases, the demand curve shifts to the right (from  $D_0$  to  $D_1$ ) and the equilibrium quantity of nurses increases from  $Qe_0$  to  $Qe_1$ .
- The equilibrium salary increases from  $Pe_0$  to  $Pe_1$ .



# Impact of Decreasing Supply of Nurses Between 2014 and 2024



- Suppose that as the demand for nurses increases, the supply shrinks due to an increasing number of nurses entering retirement and increases in the tuition of nursing degrees.
- This causes a *leftward* shift of the supply curve resulting in even higher salaries for nurses, at  $Pe_2$ .
- While we do not know if the number of nurses will increase or decrease relative to their initial employment, we know they will have *higher* salaries.

# Shifts in Labor Demand

- Factors that can shift the demand curve for labor:
  - Demand for Output
  - Education and Training
  - Technology
  - Number of Companies
  - Government Regulations
  - Price and Availability of Other Inputs

# Shifts in Labor Supply

- Factors that can shift the supply curve of labor:
  - Number of Workers
  - Required Education
  - Government Policies

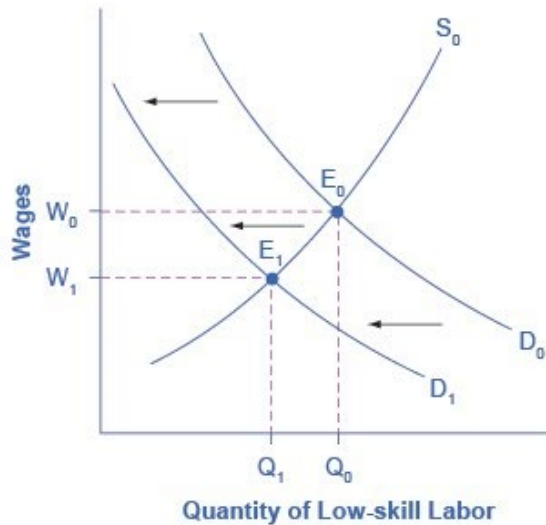
# Technology and Wage Inequality



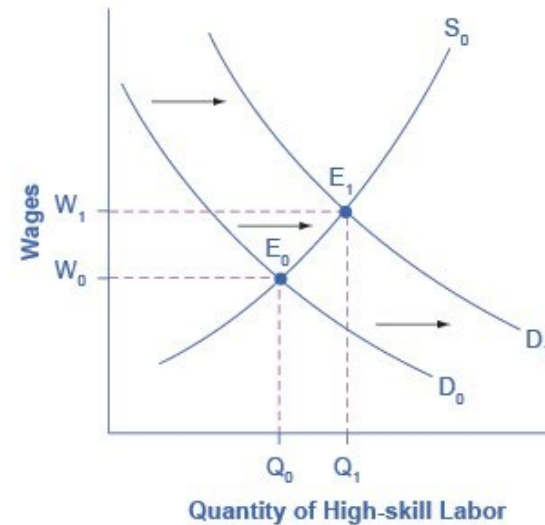
**Discussion Question:** How will new technologies affect the wages of high-skill and low-skill workers?

**Hint** - use the four-step process of analyzing how shifts in supply or demand affect a market.

# Technology and Wages: A Demand and Supply Analysis



(a) Technological change and low-skill labor



(b) Technological change and high-skill labor

- (a) The demand for low-skill labor shifts to the left when technology can do the job previously done by these workers.
- (b) New technologies can also increase the demand for high-skill labor in fields such as information technology and network administration.

# Price Floors in the Labor Market

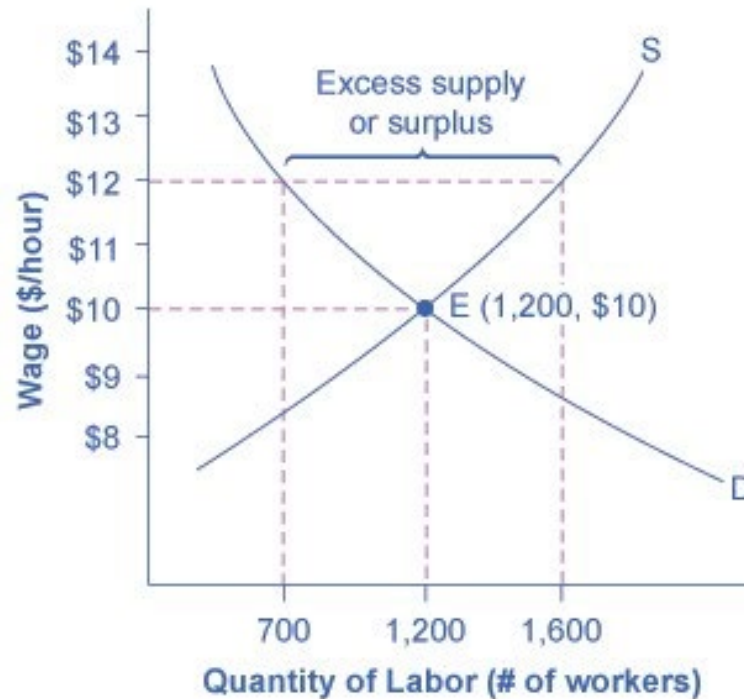


**Salary or wage** - money paid for work or a service.

**Minimum wage** - a price floor that makes it illegal for an employer to pay employees less than a certain hourly rate.

**Living wage** - the amount a full-time worker would need to make to afford the essentials of life: food, clothing, shelter, and healthcare.

# A Living Wage: Example of a Price Floor



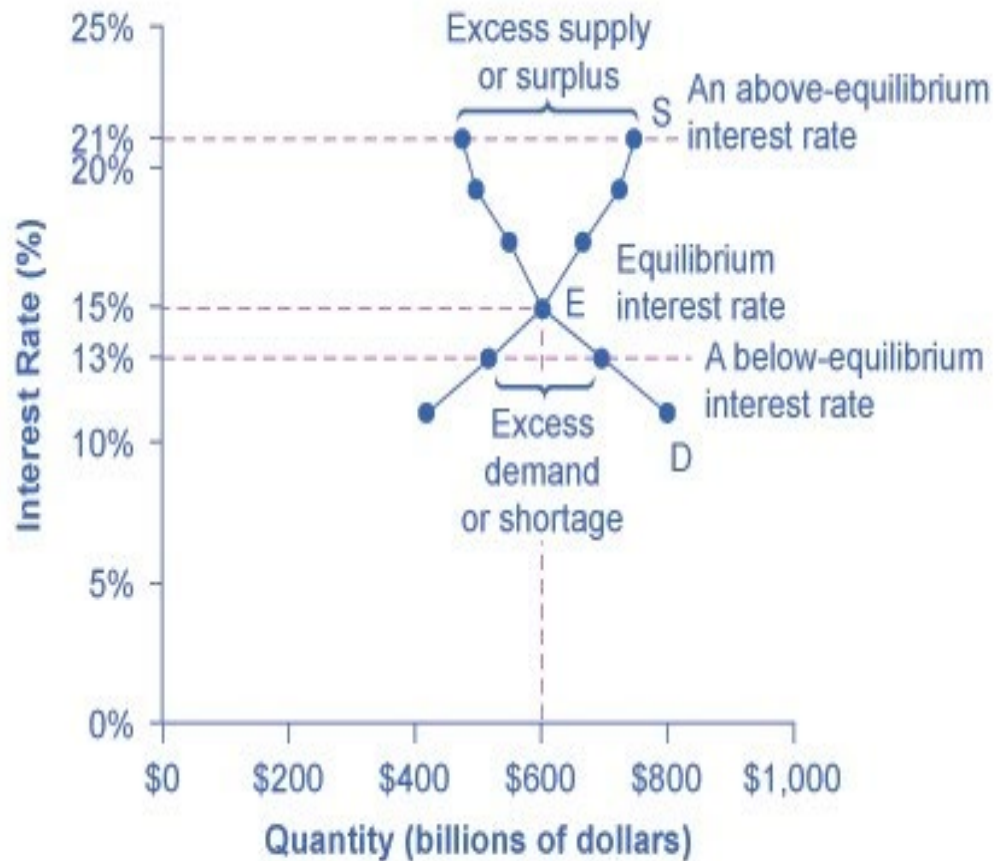
- The original equilibrium in this labor market is a wage of \$10/hour and a quantity of 1,200 workers, shown at point E.
- Imposing a wage floor at \$12/hour leads to an excess supply of labor.
- At that wage, the quantity of labor supplied is 1,600 and the quantity of labor demanded is only 700.

## 4.2 Demand and Supply in Financial Markets

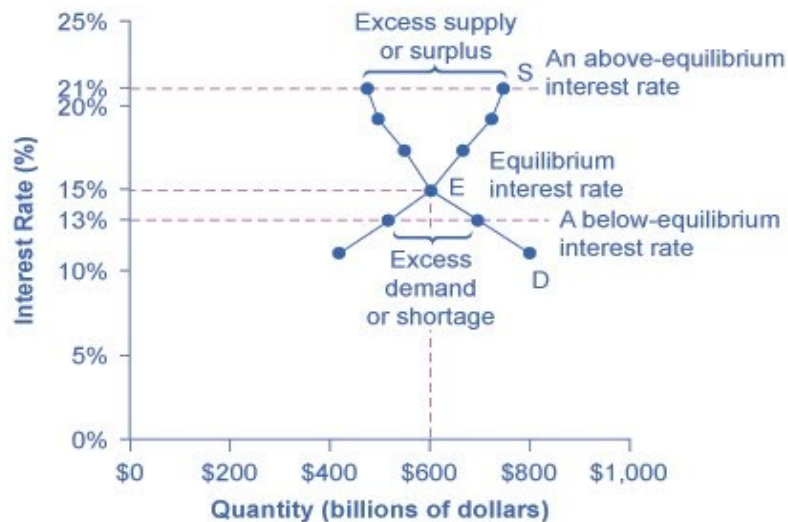
- Savings = supply of financial capital
- Borrowing = demand for financial capital
- **Financial capital** - economic resources measured in terms of money.
- **Interest rate** - the “price” of borrowing in the financial market; a rate of return on an investment.
- **Usury laws** - laws that impose an upper limit on the interest rate that lenders can charge.



# Demand and Supply for Borrowing Money with Credit Cards

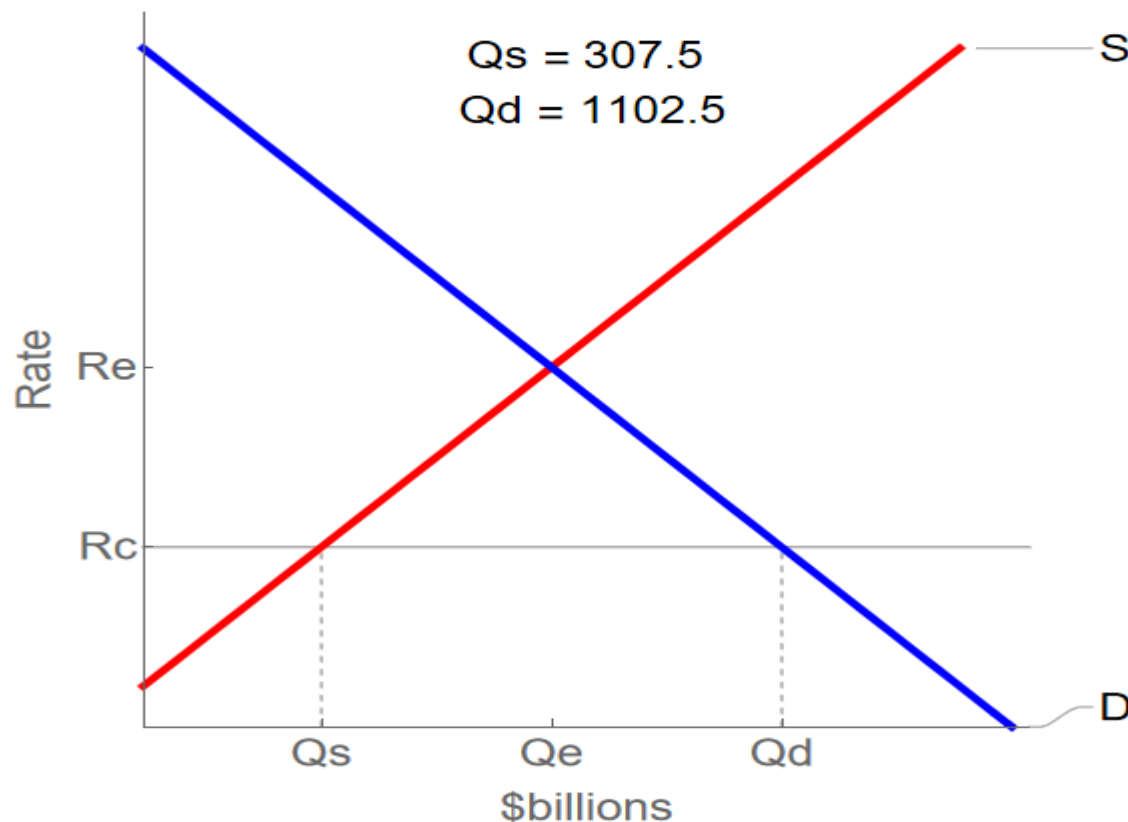


# Demand and Supply Analysis: Borrowing Money with Credit Cards



- Demand curve (D) for borrowing financial capital and supply curve (S) for lending financial capital.
- At the equilibrium (E), the interest rate (the “price” in this market) is 15% and the quantity of financial capital being loaned and borrowed is \$600 billion.
- At an above-equilibrium interest rate like 21%, the quantity supplied of financial capital increases to \$750 billion, but the quantity demanded decreases to \$480 billion.
- At a below-equilibrium interest rate like 13%, the quantity demanded of financial capital increases to \$700 billion, but the quantity supplied decreases to \$510 billion.

# Credit Card Interest Rates: Another Price Ceiling Example



- The original intersection of demand D and supply S occurs at equilibrium ( $Q_e, R_e$ ).
- Next, a price ceiling is set at the interest rate  $R_c$ ,
- this is *below* the equilibrium interest rate  $R_e$ : the interest rate cannot rise to the equilibrium.
- At the price ceiling, the quantity demanded,  $Q_d$ , exceeds the quantity supplied,  $Q_s$ .
- There is excess demand, also called a shortage.

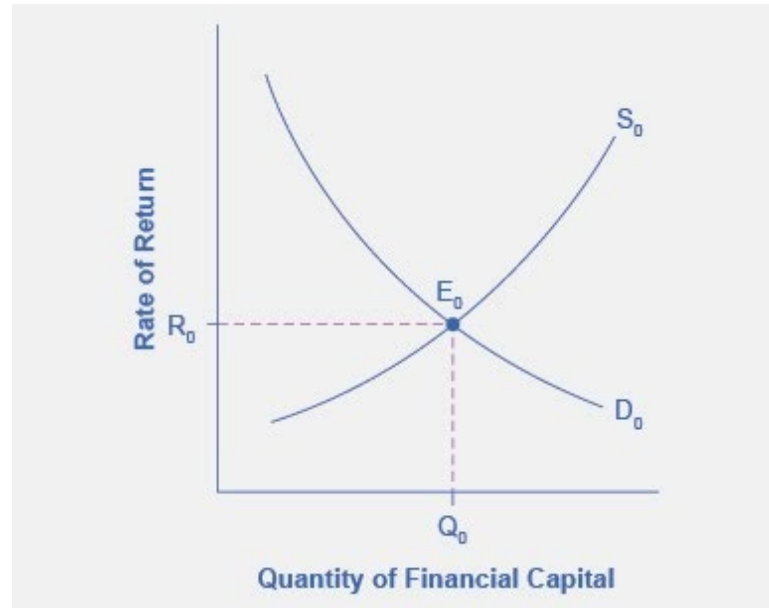
# Financial Decisions Across Time



**Intertemporal decision making** - deciding when to consume goods: now or in the future.

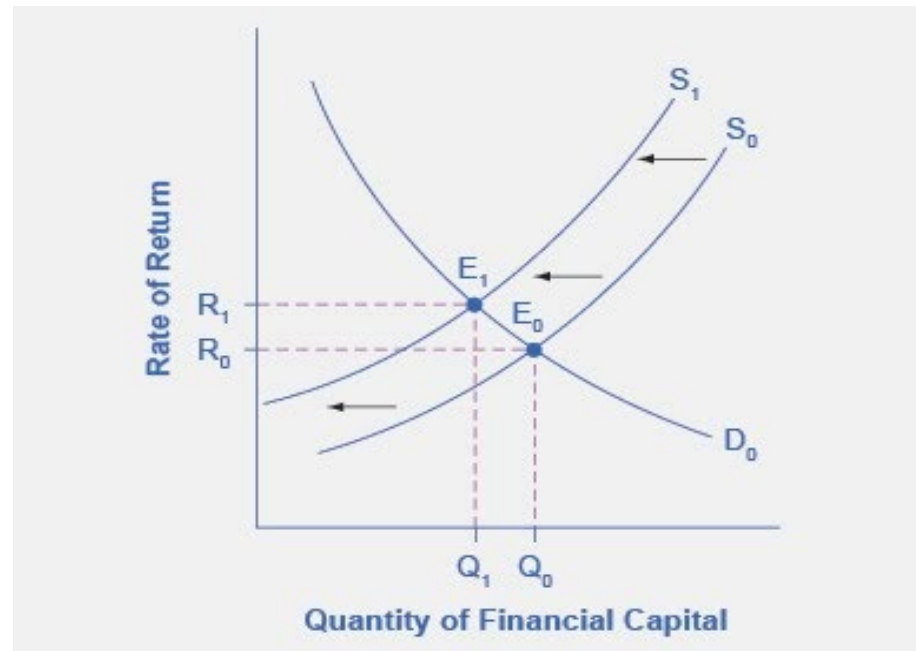
Discussion question: What are examples of intertemporal decision making?

# The Effect of Growing U.S. Debt



- The graph shows the demand for financial capital from and supply of financial capital into the U.S. financial markets by the foreign sector before the increase in uncertainty regarding U.S. public debt.
- The original equilibrium ( $E_0$ ) occurs at an equilibrium rate of return ( $R_0$ ) and the equilibrium quantity is at  $Q_0$ .

# The Effect of Growing U.S. Debt Uncertainty



- When the enthusiasm of foreign investors for investing their money in the U.S. economy diminishes, the supply of financial capital shifts to the left ( $S_1$ ).
- This leads to a new equilibrium,  $E_1$ , which occurs at the higher interest rate,  $R_1$ , and the lower quantity of financial investment,  $Q_1$ .

## 4.3 The Market System as an Efficient Mechanism for Information

- **Demand and supply models -**
  - Demand and supply curves explain existing levels of, and how economic events will cause changes in, prices and quantities.
- The horizontal axis shows the different measures of quantity of :
  - a good or service, or
  - labor for a given job, or
  - financial capital.
- The vertical axis shows a measure of the price of:
  - a good or service, or
  - the wage in the labor market, or
  - the rate of return (like the interest rate) in the financial market.

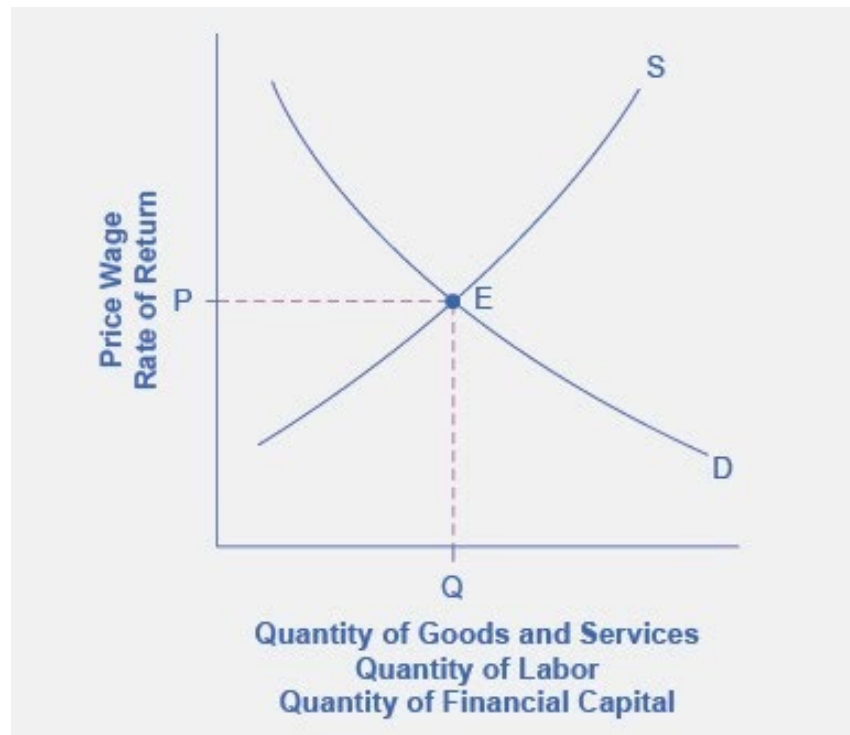
# Effects of price controls on the equilibrium prices and quantities



- Changes in demand and supply reveal themselves through consumers' and producers' behavior.
- Price controls may deprive everyone in the economy of this critical information.
- Without this information, it becomes difficult for buyers and sellers to react as changes occur throughout the economy.



# A Generic Demand and Supply Curve



- The horizontal axis shows the different measures of quantity.
- The vertical axis shows a measure of price.
- The demand and supply curves can be used to explain how economic events will cause changes in prices, wages, and rates of return.

END