Supply and Demand

ECO 120: Global Macroeconomics

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1.1 Goals of today's class

Goals

- Specific Goals
  - Learn what demand is and what influences demand.
  - Learn what supply is and what influences supply.
  - Learn how prices and quantities are determined by supply and demand.
  - Use these skills to make predictions about changes in price and quantity.
- Learning Objectives
  - LO 2: Apply the supply and demand model to predict quantity and price outcomes of a number of different markets, including markets for currencies, labor, and loanable funds.
  - GELO 2: Students will be able to construct and use models to analyze, explain, or predict phenomena.

Relevant Reading

- Demand: Module 5
- Supply: Module 6
- Equilibrium: Module 7

2 Determination of Price and Quantity

2.1 Demand

Demand

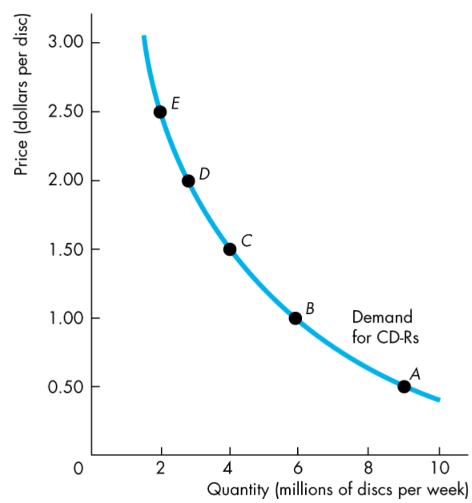
- The **quantity demanded** of a good or service is the amount consumers are willing and able to buy in a given time period at a particular price.
- **Law of demand**: All other things remaining equal, the higher (lower) the price of the good, the smaller (higher) is the quantity demanded.
- **Demand schedule/curve**: a table or graph of different quantities demanded for different prices.
- According to the law of demand, the demand curve should be ________ sloping.
- **Change in quantity demanded**: when there is a change in price causing a movement from one point on the demand curve to another point.

Demand

Demand Schedule

Point	Price	Q_D
A	0.5	9
B	1.0	6
C	1.5	4
D	2.0	3
E	2.5	2

Demand Curve



Income and Substitution effects

- The demand curve is downward sloping because of the income and substitution effect.

- **Substitution effect**: when the price of a good rises, people may buy substitute goods instead.
- **Income effect**: When the price of a good rises, the real purchasing power of your income decreases. When the real value of your income decreases, you buy less of everything.
- Close to correct. More on the income effect later.

2.2 Supply

Supply

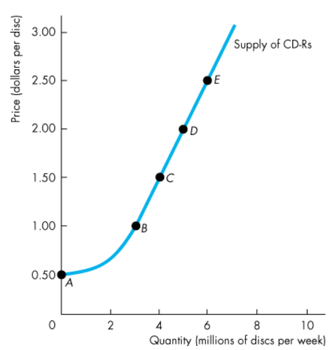
- The **quantity supplied** of a good or service is the amount producers are willing and able to produce and sell in a given time period at a given price.
- **Law of supply**: All other things remaining the same, the higher (lower) is the price of a good, the higher (lower) is the quantity supplied.
- **Supply schedule or curve**: a table or graph of different quantities supplied for different prices.
- According to the law of supply, the demand curve should be ________ sloping.
- **Change in quantity supplied**: when there is a change in price causing a movement from one point on the supply curve to another point.

Supply

Supply Schedule

Point	Price	Q_D
A	0.5	0
B	1.0	3
C	1.5	4
D	2.0	5
E	2.5	6

Supply Curve



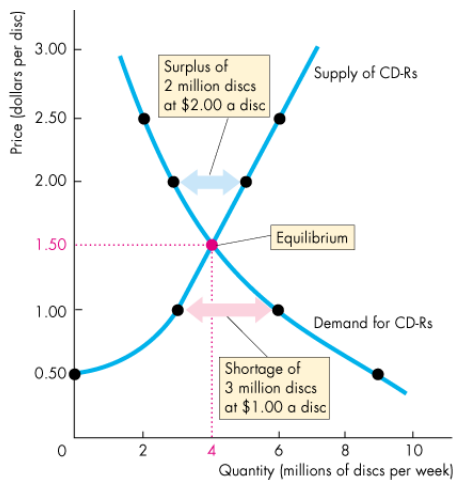
2.3 Equilibrium

Equilibrium

- The **equilibrium price** is the price where the quantity supplied is equal to the quantity demanded.
- The **equilibrium quantity** is the corresponding quantity.
- This is the price and quantity that will prevail in an unregulated market.

Equilibrium

- **Surplus**: away from equilibrium, when $Q_S > Q_D$
- **Shortage**: away from equilibrium, when $Q_D > Q_S$.



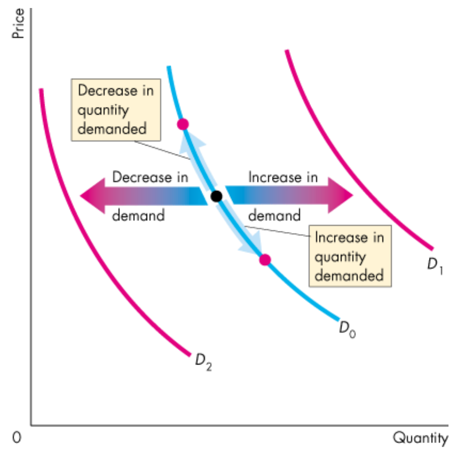
3 Determinants of supply and demand

Determinants of demand

- When something *besides the price of the good* effects demand, we say there is a *change or shift in demand*.
- Something that increases (decreases) demand shifts the demand curve to the right (left).
- Determinants of demand:
  - Changes in prices of related goods.
  - Changes in income.
  - Changes in expected future income.

- Expectations of future price.
- Changes in population.
- Changes in tastes and preferences.

Shifts in demand



3.1 Substitutes and complements

Changes in price of related goods

- **Substitutes**: a substitute good is a good that can be consumed instead of another good.
  - Examples: beef and pork, wine and beer, hamburgers and hot dogs.
- If the price of a substitute for beer increases, this will ________ the demand for beer.
- **Complements**: a complement good is a good that is often consumed together with another good.
  - Examples: Peanut butter and jelly, hamburgers and buns.
- If the price of a complement for buns increases, this will ________ the demand for buns.

3.2 Normal and inferior goods

Changes in income

- **Normal good**: a good whose demand increases when consumers' incomes increase.

- **Inferior good**: a good whose demand decreases when consumers' incomes increase.
- Can you think of examples of an inferior good?

3.3 Expectations

Expectations

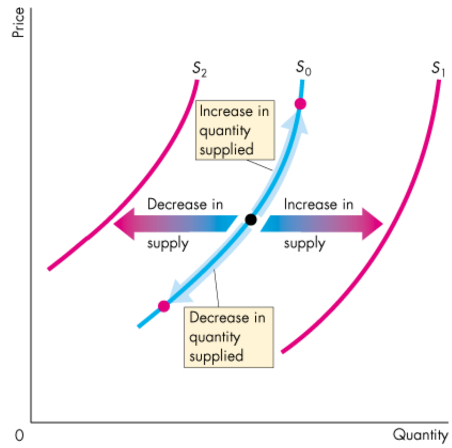
- If people expect the price of the good to increase, this will ______ today's demand for the good.
- If a good is a normal good and people expect to have higher incomes in the future, this will _______ the demand for the good.
- If a good is an inferior good and people expect to have higher incomes in the future, this will _______ the demand for the good.

3.4 Determinants of supply

Determinants of supply

- When something *besides the price of the good* effects supply, we say there is a *change or shift in supply.*
- Something that increases (decreases) demand shifts the supply curve to the right (left).
- Determinants of supply:
  - Changes in the prices of factors of production.
    - When costs increase this ________ supply.
  - Changes in the price of related goods.
  - Expected future prices.
    - If the price is expected to be higher in the future, producers will ________ supply today.
  - Number of suppliers.
  - Changes in technology.

Shifts in supply



Substitutes and complements in production

- Substitute in production: something that can be produced instead of another good.
  - Example: memory cards and computer processors.
- Complement in production: something that is often produced along with another good.
  - Example: Pork chops and bratwurst.

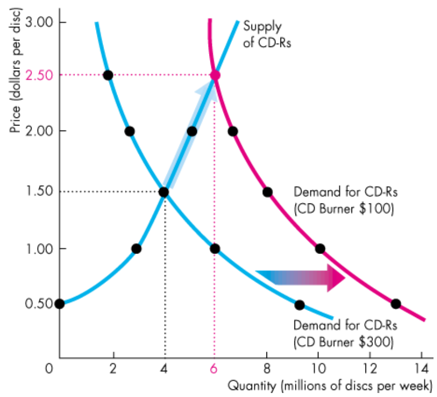
4 Predicting changes in equilibrium

Predicting changes in equilibrium

- Suppose the price of CD burners decreases.
- How will this effect the demand and/or the price of CD-Rs.

Predicting changes in equilibrium

- Price of a complement decreases → shift demand to the right.
- Equilibrium price ________ and equilibrium quantity ________.
- Is this what really happened to the price and quantity of CD-Rs in real life?



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Next Time...

- In class exercise on Supply and Demand.
- Apply our knowledge of supply and demand to look at behavior of exchange rates, currencies, imports, and exports (Module 42).