Demand, Supply, and Equilibrium

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RoadMap

• Introduction to Market
• Demand
• Supply
• Equilibrium
• Equilibrium Change
• Introduction to Market
• Demand
• Supply
• Equilibrium
• Equilibrium Change
What happens in a market? What is a Market?

• You walked into a farmers' market
• There stand a lot of buyers and sellers
• Trading happens, Maybe Cash only!
• **A market** is a group of buyers and sellers of a particular good or service.

• -----As long as you have buyers and sellers, that is market. No matter whether trading happens or not!

• Buyers as a group determine the demand, to purchase this good or service

• Sellers as a group determine the supply of the product, to provide this good or service
What is a market?
What is a market?

- Markets take many forms
- Sometimes, people meet together and negotiate the price, say farmers' mkt
What is a market?

- Counterexample? Gas Store

- But most of the time, we cannot negotiate the price.

- In this kind of market, everyone seems to be a tiny participant, none can move the price alone. Take it or leave it!
Competitive Market

• We call this kind of market, in which we as an individual cannot move the price, to be competitive market.

• Why we or firms cannot move the price?

• There are so many buyers and so many sellers that each has a negligible impact on the market price.

• “Cannot” is a simplified assumption:) You can always find some coupon for discount
What is a competitive market?

- When we really cannot move the price around, we will call this market to be perfect competitive market.

- To reach this perfect competitiveness, a market must have two characteristics. Or we define Competitive market to be a market having following properties:

  - (1) The goods offered for sale are all *exactly the same*, so you evaluate them the same.

  - (2) buyers and sellers are so *numerous* that no single buyer or seller has any influence over the market price.
Counter example to Competitive market?

• ---- *Given we have numerous consumer*,

• Some markets have only one seller, and this seller sets the price. Say, Laclede gas,----we call it to be *monopoly*

• What if there are several, not too many supplier, say, 3? *Oligopoly* --- AT&T, Sprint, T-mobile

• Many supplier but *similar* goods? Samsung, Apple, Huawei, HTC, Moto, Nokia........ *Monopolistic competition*
• Yes, we have many kinds of market structure!

• Despite the diversity of market types we find in the world, assuming perfect competition is a useful simplification and, therefore, a natural place to start and learn how market works.
Demand

• Introduction to Market
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• How shall we think about consumers? How do they represent the purchasing power?

• Intuitively, when I walk into a super market, I saw the price of Cherry, say. $8.99/lb

• Then I will decide how much cherry to purchase.

• Give me a price, I will decide how many/much to buy------- *It is a Plan!*
The quantity demanded (corresponding to a price) of any good is the amount of the good that buyers are willing and able to purchase at this price.

Law of demand: Other things being equal, when the price of a good rises, the quantity demanded of the good falls, and when the price falls, the quantity demanded rises.

I may decide to buy 2 lb at the price of $8.99, maybe 3 at the price of $6.
Law of Demand: Example

• **Law of demand**: when the price falls, the quantity demanded rises

• In English, when the price of some good falls, Nothing else changes! People will have more intend to purchase.

• Black Friday..................

• Cyber Monday..............
Appendix: How to plot a point on x-y plane

• How we are to plot a point on x-y plane, say (3,2)?
• Question: *Is there any deep reason underlying law of demand?*

• *One answer is in our Note.*
1. A decrease in price ... 
2. ... increases quantity of cones demanded.
Market Demand and individual Demand

- To analyze how markets work, we need to determine the *market demand*, the *sum* of all the individual demands for a particular good or service.
• Introduction to Market
• Demand

• **Supply**
• Equilibrium
• Equilibrium Change
Supply

• Similar to Demand, Producer will decide how much/many to produce given the price.

• The **quantity supplied** (**corresponding to a price**) of any good is the amount of the good that buyers are willing to produce and sell **at this price**.

• *Give me a price, I will decide how many to produce**** Also a plan*

• **Law of supply** (**Property of this plan**): Other things being equal, when the price of a good rises, the quantity supplied of the good also rises, and when the price falls, the quantity supplied falls as well.
Supply

• Why are suppliers willing to produce more when price is higher?

• Check out the note
1. An increase in price...
2. ...increases quantity of cones supplied.
Market Supply and individual Supply

• Just as market demand is the sum of the demands of all buyers, market supply is the sum of the supplies of all sellers.
• Introduction to Market
• Demand
• Supply
• **Equilibrium**
• Equilibrium Change
Equilibrium

When we put Demand (plan) and Supply (plan) Together
• Notice that there is one point at which the supply and demand curves intersect.

• This point is called the market’s equilibrium. The price at this intersection is called the *equilibrium price*, and the quantity is called the *equilibrium quantity*.
Equilibrium

• Why is it named to be equilibrium?

• Equilibrium means Balance

• Balance means none would like to move away from it!

• What if.......
Disequilibrium

(a) Excess Supply

(b) Excess Demand

Price of Ice-Cream Cone

Surplus

$2.50

2.00

$2.00

1.50

Quantity demanded

Quantity supplied

Quantity supplied

Quantity demanded

Quantity of Ice-Cream Cones

Quantity of Ice-Cream Cones
Equilibrium Change

- Introduction to Market
- Demand
- Supply
- Equilibrium
- Equilibrium Change
Equilibrium Change

• Case 1: Demand moves

• Case 2: Supply moves
Equilibrium Move: When Demand curve shift

- What if Demand Curve moves?
- In another word, what if we got a new demand curve?
- For example what if it shift to right?

What will happen to Equilibrium?
Next question would be: why did it get moved? Who or what kind of factors can change our demand curve?

Intuitively, what does a curve shift mean?

I means *given the price*, you would like to consume more or less

Then, Why?
Equilibrium Move: why Demand curve shift

- Or let's label the demand curve: **Blue** is your preference in yesterday.
- **Red** is your current preference.

- **Given the price, you would like to consume more goods today.**

- Our original question would become: “why would you like to consume more than yesterday?”
• An intuitive answer would be: you like it more or you are now able to afford it.

• Given that it is sunny today, you may not want to purchase an umbrella at price $5.

• How about it is showering now? Would you like to purchase one at price $5?

• How about you are holding a Macbook Pro?
Equilibrium Move: factors moves demand curve

• Income, Normal goods
  • How? Remember the price our classmates are willing to give?
  • They are counting, comparing the price of diamond to their income.

• Price of other goods, complements/ Substitutes
  • More consumption of Substitute will decrease your evaluation to the goods (i.e. one would be enough)
    • Coca v.s Pepsi
  • More consumption of Complement will increase your evaluation. (i.e. they have to be used together)
    • gasoline and automobiles
• Case 1: Demand moves

• Case 2: Supply moves
Equilibrium Move: When Supply curve shift

• What if Supply Curve moves?

What will happen to Equilibrium?
• Supply curve represents the willing of production

• If production can bring more profit?

• If production can bring less profit?

• For example what if cost of production change?
Equilibrium Move: Why Supply curve shift

- If people has better technology to produce
  - Michelle: $2
  - Katty: $3
  - King: $4
  - Katharina: $3.5
  - Blake: $2.5
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Equilibrium Move: Why Supply curve shift

- If people has better technology to produce

  - Michelle: $2 \rightarrow $1.5
  - Katty: $3 \rightarrow $2.5
  - King: $4 \rightarrow $3.5
  - Katharina: $3.5 \rightarrow $3
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