Lecture 2: Demand

September 3, 2024

Overview

Course Administration

1. Ripped from Headlines sign-up cleaned up – please check
   - if you didn't sign up by last night, I signed you up
   - if you can't make the new date see if you can switch with someone
   - email me about change
   - a few of you signed up for the wrong section – I corrected
   - if you can't work something out, let me know

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2. Final exam: poll out – please respond

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4. Ch. 2 End-of-Chapter problems posted as an assignment with no due date
5. Problem Set 2 posted as an assignment

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4. Ch. 2 End-of-Chapter problems posted as an assignment with no due date
5. Problem Set 2 posted as an assignment
6. Any other questions or outstanding issues?

How What You're Learning is Policy-Relevant

Ripped from Headlines presentation(s)

As a reminder, next week

Send the article by Wednesday midnight for approval

Afternoon

Finder	Presenter
Rimsha A.	Katya F.
Max S.	Yemi F.
	Amanda K.

Evening

Finder	Presenter
Adair	Megan
Joseph F.	Kate B.

Today's Ripped from the Headlines

Afternoon

Finder	Presenter
Katya	Max

Evening

Finder	Presenter
Megan	no one!
Tanya	

Today

1. Chapter 1: Interdependence
2. Chapter 2: Demand
   - 2.1 Individual demand
   - 2.2 Decisions and demand
   - 2.3 Market demand
   - 2.4 What shifts demand?
   - 2.5 Shifts vs movements along demand curve

Ch. 1: 4. Interdependence Principle

Interdependence Principle

- Known among economists as "general equilibrium"
- We are interested in both "partial" and "general" equilibrium outcomes

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- Partial equilibrium
  What happens if we change one thing – maybe cap prices – and keep everything else the same?

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- Known among economists as "general equilibrium"
- We are interested in both "partial" and "general" equilibrium outcomes
- Partial equilibrium
  What happens if we change one thing – maybe cap prices – and keep everything else the same?
- General equilibrium
  What happens if we change one thing – maybe cap prices – and allow actors to respond?

Types of Interdependencies

1. Between each of your individual choices

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2. Between people or businesses in the same market

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Types of Interdependencies

1. Between each of your individual choices
2. Between people or businesses in the same market
3. Between markets
4. Through time

Policy Example: Interdependence from Price Controls

Aim to limit prices

- Prices are high or rising
- Politicians suggest capping prices

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Immediate impacts

- Industry price capped

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Interdependent effects?

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Interdependent effects?

- Producers cut production
- Consumers want more than market produces
- Shortage

Policy Example: Interdependence from Price Controls

Aim to limit prices

- Prices are high or rising
- Politicians suggest capping prices

Immediate impacts

- Industry price capped

Interdependent effects?

- Producers cut production
- Consumers want more than market produces
- Shortage
- Or producers cut quality

Ch. 2: 1. Individual Demand

Where We're Going

- Want to understand the role of policy tools to impact
  - individual behavior
  - prices
  - firm behavior
- To do this, we need a theory to predict how consumers and firms will respond
- $\rightarrow$ Describe actions in terms of demand and supply
- Assumptions and framework give us ability to make predictions

Where We're Going

- Want to understand the role of policy tools to impact
  - individual behavior
  - prices
  - firm behavior
- To do this, we need a theory to predict how consumers and firms will respond
- $\rightarrow$ Describe actions in terms of demand and supply
- Assumptions and framework give us ability to make predictions
- Start today with demand
- Lecture 3 is supply, lecture 4 is how they interact

Goal: Describe Demand

How many tomatoes do you want as price changes?

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- how far the store is
- whether they go with tonight's dinner
- whether you have garlic in the house

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Making a demand curve for tomatoes

P: Price of tomatoes/lb	Q: Lbs of tomatoes
\$5	

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Making a demand curve for tomatoes

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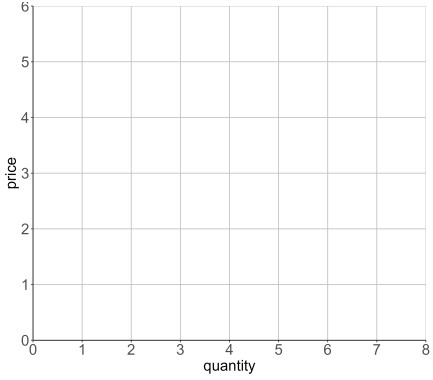
\$3.50	3.25
\$3	3.3
\$2.50	4
\$2	5
\$1.50	5.5
\$1	6.5

Graphing Individual Demand

- Put P on the y axis
- Put Q on the x axis
- No reason, just a rule



Graphing Individual Demand

Demand curve for tomatoes

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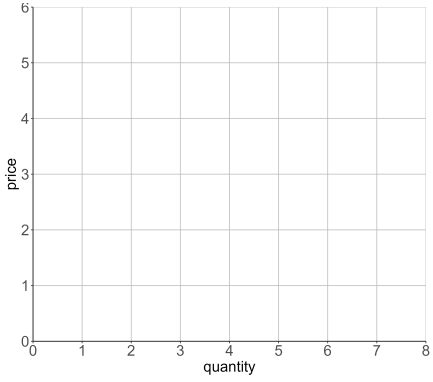
\$1.50	5.5
\$1	6.5

Where does 3 pounds at price of \$5 go?



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\$2.50	4
\$2	5
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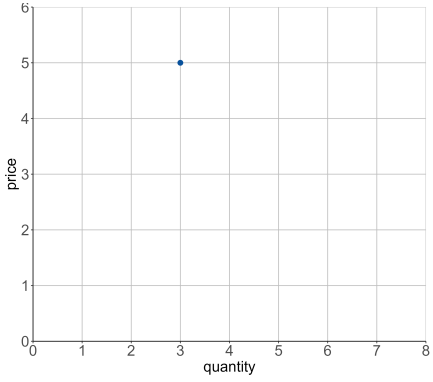
\$1	6.5



Where does 3.1 pounds at price of \$4.50 go?

Graphing Individual Demand

Demand curve for tomatoes

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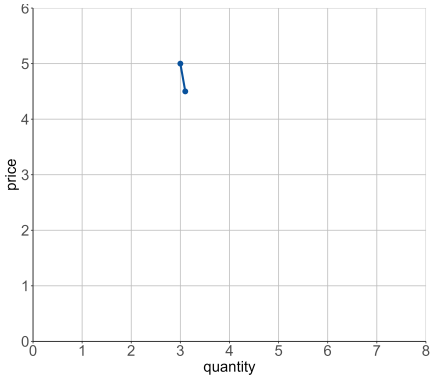
\$5	3
\$4.50	3.1
\$4	3.2
\$3.50	3.25
\$3	3.3
\$2.50	4
\$2	5
\$1.50	5.5
\$1	6.5

And what's the general direction for the rest?



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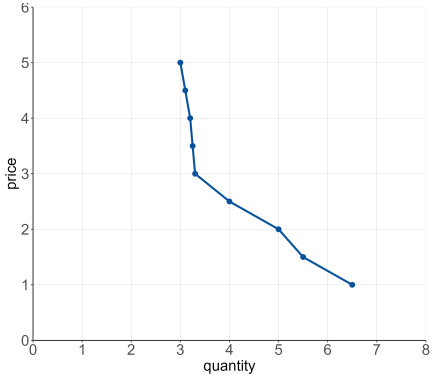

Full demand curve

Two of the Few Truisms in Economics

1. Demand curves slope downward
   - why?

Two of the Few Truisms in Economics

1. Demand curves slope downward
   - why?
2. Law of Demand
   - quantity demanded is higher when price is lower

Ch. 2: 2. Your Decisions and Your Demand Curve

Demand Curve Reveals Marginal Benefits

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  - marginal benefit of third pound of tomatoes may differ from marginal benefit of sixth pound
  - which marginal benefit is larger?

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  - which marginal benefit is larger?
- In general, how does the marginal benefit change as you consume more?
- What is the intuition explaining this?

If We Know Demand Curve and Price, We Can Predict Consumption

- Textbook frames this as "what you should do"
- Perhaps better understood as "what we observe people doing"
- Framework is meant to predict behavior, not encourage behavior

Consumers Apply Marginal Rule to Maximize Surplus

- Suppose that the price of tomatoes is \$3
- How many tomatoes should you buy if you want to set marginal benefit = price?

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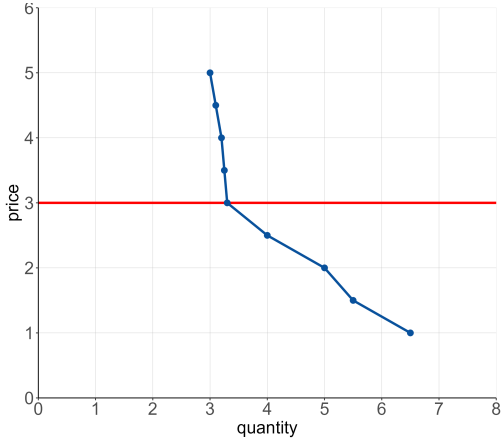

Ch. 2: 3. Market Demand

Market Demand

What is Market Demand?

- total demand by all individuals in the market
- market best defined as
  - product
  - at a point in time

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Who wants to know about market demand?

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- market best defined as
  - product
  - at a point in time

Who wants to know about market demand?

- firms, to price
- firms, to create alternatives
- government, to tax or regulate

How to Plot Market Demand?

1. Find individual demand for a sample of people in the market
2. For each price, add up total quantity demanded
3. Scale up to everyone in the market
4. Plot this scale-up total

Plot Market Demand: Steps 1 and 2

	Mr. 1	Mr. 2	Mr. 3	all surveyed
P: Price of tomatoes/lb	Q_1	Q_2	Q_3	Q_T
\$5	3	0	3	
\$4.50	3.1	0	3	
\$4	3.2	0	3	
\$3.50	3.25	0	3	
\$3	3.3	0	3	
\$2.50	4	0.5	3.5	
\$2	5	0.5	3.5	
\$1.50	5.5	1	3.5	
\$1	6.5	2	4	

Plot Market Demand: Steps 1 and 2

	Mr. 1	Mr. 2	Mr. 3	all surveyed
P: Price of tomatoes/lb	Q_1	Q_2	Q_3	Q_T
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Plot Market Demand: Steps 1 and 2

	Mr. 1	Mr. 2	Mr. 3	all surveyed
P: Price of tomatoes/lb	Q_1	Q_2	Q_3	Q_T
\$5	3	0	3	6

Plot Market Demand: Steps 1 and 2

	Mr. 1	Mr. 2	Mr. 3	all surveyed
P: Price of tomatoes/lb	Q_1	Q_2	Q_3	Q_T
\$5	3	0	3	6
\$4.50	3.1	0	3	

Plot Market Demand: Steps 1 and 2

	Mr. 1	Mr. 2	Mr. 3	all surveyed
P: Price of tomatoes/lb	Q_1	Q_2	Q_3	Q_T
\$5	3	0	3	6
\$4.50	3.1	0	3	6.1

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\$4	3.2	0	3	

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	Mr. 1	Mr. 2	Mr. 3	all surveyed
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\$4.50	3.1	0	3	6.1
\$4	3.2	0	3	6.2
\$3.50	3.25	0	3	6.25
\$3	3.3	0	3	6.3
\$2.50	4	0.5	3.5	8
\$2	5	0.5	3.5	8.5
\$1.50	5.5	1	3.5	10
\$1	6.5	2	4	12.5

Plot Market Demand: Steps 3 and 4

P: Price of tomatoes/lb	Mr. 1 Q_1	Mr. 2 Q_2	Mr. 3 Q_3	all surveyed Q_T	scaler	market Q_M
\$5	3	0	3	6	100	

Plot Market Demand: Steps 3 and 4

P: Price of tomatoes/lb	Mr. 1 Q_1	Mr. 2 Q_2	Mr. 3 Q_3	all surveyed Q_T	scaler	market Q_M
\$5	3	0	3	6	100	600

Plot Market Demand: Steps 3 and 4

P: Price of tomatoes/lb	Mr. 1 Q_1	Mr. 2 Q_2	Mr. 3 Q_3	all surveyed Q_T	scaler	market Q_M
\$5	3	0	3	6	100	600
\$4.50	3.1	0	3	6.1	100	

Plot Market Demand: Steps 3 and 4

P: Price of tomatoes/lb	Mr. 1 Q_1	Mr. 2 Q_2	Mr. 3 Q_3	all surveyed Q_T	scaler	market Q_M
\$5	3	0	3	6	100	600
\$4.50	3.1	0	3	6.1	100	610

Plot Market Demand: Steps 3 and 4

P: Price of tomatoes/lb	Mr. 1 Q_1	Mr. 2 Q_2	Mr. 3 Q_3	all surveyed Q_T	scaler	market Q_M
\$5	3	0	3	6	100	600
\$4.50	3.1	0	3	6.1	100	610
\$4	3.2	0	3	6.2	100	

Plot Market Demand: Steps 3 and 4

P: Price of tomatoes/lb	Mr. 1 Q_1	Mr. 2 Q_2	Mr. 3 Q_3	all surveyed Q_T	scaler	market Q_M
\$5	3	0	3	6	100	600
\$4.50	3.1	0	3	6.1	100	610
\$4	3.2	0	3	6.2	100	620

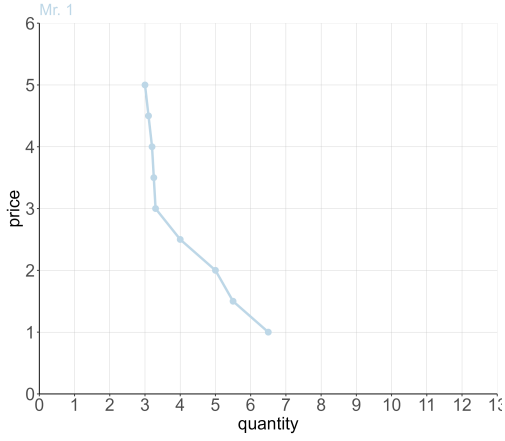
Plot Market Demand: Steps 3 and 4

	Mr. 1	Mr. 2	Mr. 3	all surveyed		market
P: Price of tomatoes/lb	Q_1	Q_2	Q_3	Q_T	scaler	Q_M
\$5	3	0	3	6	100	600
\$4.50	3.1	0	3	6.1	100	610
\$4	3.2	0	3	6.2	100	620
\$3.50	3.25	0	3	6.25	100	625
\$3	3.3	0	3	6.3	100	630
\$2.50	4	0.5	3.5	8	100	800
\$2	5	0.5	3.5	8.5	100	850
\$1.50	5.5	1	3.5	10	100	1,000
\$1	6.5	2	4	12.5	100	1,250

Graphing Mr. 1's Demand

	Mr. 1	Mr. 2	Mr. 3	
P:	Q_1	Q_2	Q_3	Q_T
\$5	3	0	3	6
\$4.50	3.1	0	3	6.1
\$4	3.2	0	3	6.2
\$3.50	3.25	0	3	6.25
\$3	3.3	0	3	6.3
\$2.50	4	0.5	3.5	8
\$2	5	0.5	3.5	8.5
\$1.50	5.5	1	3.5	10
\$1	6.5	2	4	12.5

What does Mr. 2's demand look like?



Adding Mr. 2's Demand

	Mr. 1	Mr. 2	Mr. 3	
P:	Q_1	Q_2	Q_3	Q_T
\$5	3	0	3	6
\$4.50	3.1	0	3	6.1
\$4	3.2	0	3	6.2
\$3.50	3.25	0	3	6.25
\$3	3.3	0	3	6.3
\$2.50	4	0.5	3.5	8
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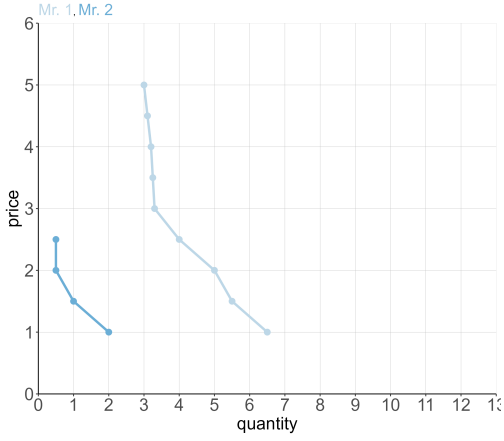

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	Mr. 1	Mr. 2	Mr. 3	
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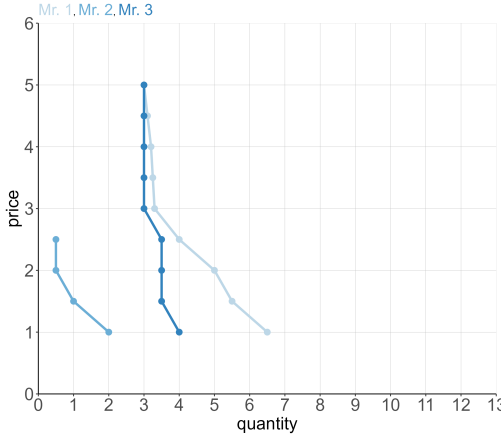
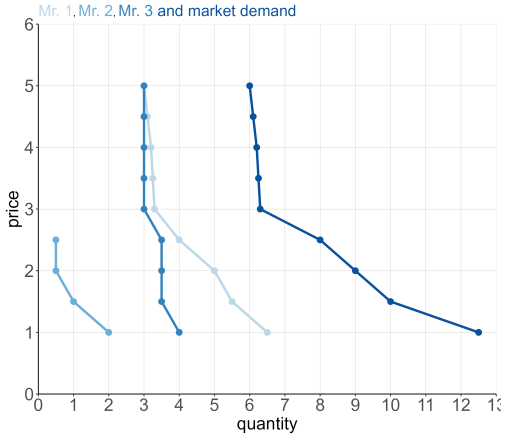
\$4	3.2	0	3	6.2
\$3.50	3.25	0	3	6.25
\$3	3.3	0	3	6.3
\$2.50	4	0.5	3.5	8
\$2	5	0.5	3.5	8.5
\$1.50	5.5	1	3.5	10
\$1	6.5	2	4	12.5

And market demand?



Market Demand

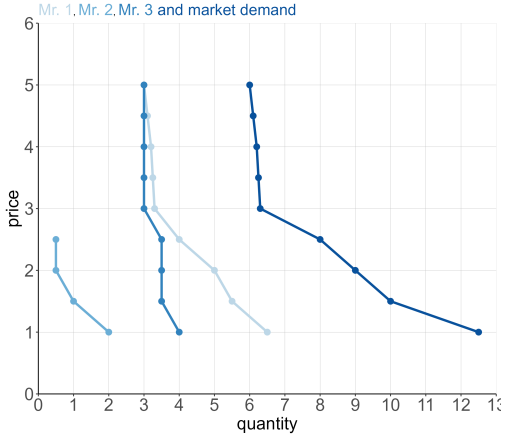
	Mr. 1	Mr. 2	Mr. 3	
P:	Q_1	Q_2	Q_3	Q_T
\$5	3	0	3	6
\$4.50	3.1	0	3	6.1
\$4	3.2	0	3	6.2
\$3.50	3.25	0	3	6.25
\$3	3.3	0	3	6.3
\$2.50	4	0.5	3.5	8
\$2	5	0.5	3.5	8.5
\$1.50	5.5	1	3.5	10
\$1	6.5	2	4	12.5



How do we add up to market demand?

Key Issues in Market Demand

- Market demand is downward sloping
- Change in prices change quantity demanded for new and old customers
- Changes in price cause movement **along** demand curve



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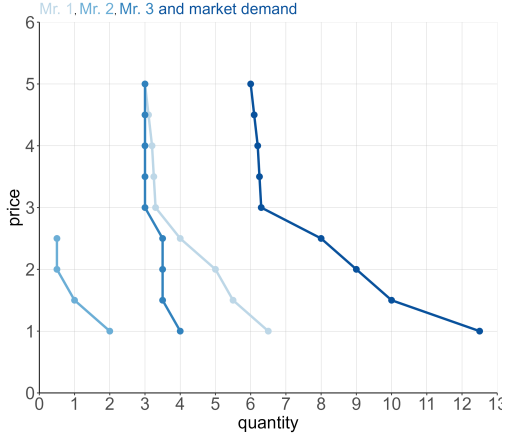


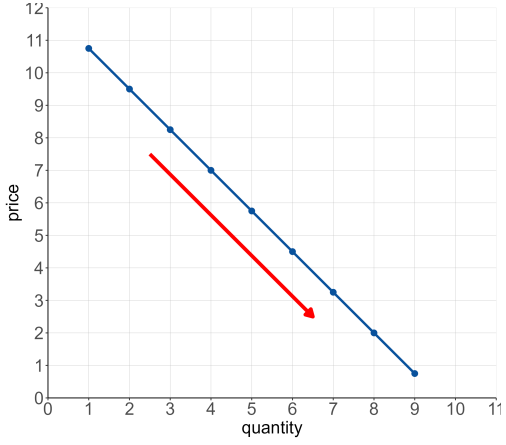
"A change in price causes a **movement along the demand curve**, yielding a **change in the quantity demanded**."

Ch. 2: 4. What Shifts Demand Curves?

Before Shifting the Demand Curve

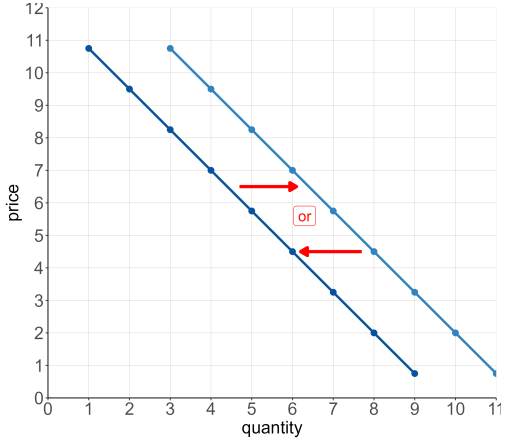
Until now

- We held everything else constant
- We asked what happened when price changes
- This is a movement **along** the demand curve



What Shifts Demand Curves?

Now: what shifts the demand curve?



What Shifts Demand Curves?

What if we don't hold everything else constant? What might change your demand for tomatoes?

What Shifts Demand Curves?

What if we don't hold everything else constant? What might change your demand for tomatoes?

1. income
2. preferences
3. prices of related goods
4. expectations
5. congestion and network effects
6. type and number of buyers

Types of Economic Goods

- Normal good
  - Good you consume more of as your income increases

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- Inferior good
  - Good you consume less of as your income increases
- Complementary good
  - Good that you consume with another good
- Substitute good
  - Good that is a replacement for another good

Ch. 2: 5. Recap: Shifts vs. Movements Along the Demand Curve

Recap: Shifts vs Movements

Change in Quantity Demanded

Change in Demand Itself

Recap: Shifts vs Movements

Change in Quantity Demanded

Change in Demand Itself

Recap: Shifts vs Movements

Change in Quantity Demanded

Change in Demand Itself

For Next Class

- Do problem set 2
- Work with classmates, me or TA on problems
- Check Ripped from Headlines assignments
- Article finders email me by Wednesday midnight
- Read Chapter 3

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I will

- post these lecture notes on my webpage
- post link to lecture recording on Blackboard
- anything else?