

# Econ 330: Urban Economics

## Lecture 1

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# Day One: Welcome!

# Introduction

## Me

**Name:** John Morehouse , **Office:** 430 PLC, **Office Hours:** M 5-6 PM, Th 9 - 9:50 AM, **Email:** jmorehou@uoregon.edu

- Third year Ph.D student. I do research in urban and environmental economics.
- Not school: I like bicycling & travel

## You

- An eager and excited student ready to learn about urban economics
- A student that has passed EC201 and has at-least some recollection of what you have learned

# Schedule

## Today

- 1) **Syllabus**
- 2) **Intro to Urban Economics**

## Upcoming

- EC201 Review Quiz on Canvas
- Letter of Intro on Canvas
- Reading

# Course Policies

All information is on the syllabus, which I **strongly advise** that you read

I want us to discuss the following:

- Grades
- Course Policies

# Syllabus: Grading

There are 500 points total. **Your grade will be determined by:**

- 40%: Final Exam (1x): 200 points
- 27%: Midterm Exam (1x): 135 points
- 24%: HW (4x, 6% each): 30 points each
- 4%: Book Report (1x): 20 points
- 4%: Review Quiz (1x): 20 points
- 1%: Letter of Intro (1x): 5 points

# Syllabus: Grading

**Q:** Is there a curve?

**A:** Maybe

In 300 and 400 level classes, roughly 65% of the class will receive A's and B's. From the syllabus:

Your grade will be determined relative to your peers, so during the course, I will not be able to tell you what your exact letter grade is at any point in time, because it depends on everyone's overall scores of the class.

# Syllabus: Exams

There will be one midterm and one final

- **Midterm:** Feb 11th (week 6)
- **Final:** Wednesday, March 18th @ 12:30
- *Absolutely* **no makeups**
  - However, if approved (by me) you can put **all of the weight from the midterm** on the final (67%) if you must miss the midterm
  - I will only do this in **extraordinary circumstances**<sup>†</sup>

<sup>†</sup> Don't be afraid to ask if you are unsure.



# Syllabus: Triumph of the City

In this class you are required to read *Triumph of the City* by Ed. Glaeser.

- **HW:** Occassional question from assigned reading (in addition to questions from lecture content)
- **Exams:** Ocassional question from the book (*if you do the readings*, the questions will be pretty easy)
- **Book Report:** You are **required** to turn in a book report at the end of the term
  - I will post instructions and rubric for the book report around week 3
  - The syllabus has a reading schedule. You are free to read the book at a quicker rate

# Syllabus: Homework

There will be 4 written assignments throughout the term:

- Each one is worth **6% of your grade**, for a total of 24%
- You **must** write your answer on the space provided for you on the assignment sheet
  - **Automatic 50% deduction** from that assignment's score for first offense, and **100% deduction** for each time after
- **No late homework assignments** will be accepted, and no make - up assignments will be given
- **Start them early**, as they will cover *a lot* of material

# Syllabus: Electronics

## Electronics Policy

- **No cell-phone use during lecture**
  - Only to be used in emergencies
  - Cell phone use in non-emergency situations will result in a **1% deduction** from your **course** grade
- Laptops: allowed, but please sit in the back of the room
- Tablets are allowed for note taking

**My advice:** take hard-copy (or on the tablet) notes. This helps you:

- 1) Stay focused during lecture
- 2) Retain what was done in lecture

# Lecture Notes

As mentioned on Canvas, I will usually post **incomplete** lecture notes within a few hours *before* lectures

- Examples won't be filled in, some definitions might be missing
- I reserve the right to stop doing this if attendance is too low
- **To reiterate:** I believe it is important (for most students) to physically write down definitions, math, and concepts

**Complete** slides will be posted to **GitHub** *sometime* after lecture<sup>†</sup>

<sup>†</sup> This might vary from class to class, but they will be posted within a week of the lecture.

# EC201 Review Quiz

There is an **online review quiz** on canvas due **Monday the 6th @ midnight**.  
You get one try and have a maximum of 1.5 hours to complete it.

## But why?

- Incentivize you to review EC201. **Low stakes**
- Will help you for rest of course

## Details

- We will review on Thursday what I want you to know. Review will be similar to quiz
- Quiz will open Thursday after class

# First Quiz

If you want to start studying early....

1) Be able to **solve** for **equilibrium** price and quantity in a model of linear supply and demand

- Be able to calculate consumer and producer surplus

2) Know the definition of **profit**, **total revenue**, **total cost**

- and how to calculate them (given some information)

3) Know the definition of **elasticity** and how to interpret it

Review on Thursday, I promise. Also: the the quiz will be extremely similar to our review.

# This Course

This class has two fairly distinct halves:

## 1. **Philosophy & Tools**

- Why do cities exist? Why do they grow? Why do they decline?
- Fundamental tools of labor & urban econ (it's all supply and demand)

## 2. **Applications**

- Rent Control & Minimum Wage
- Highways and urban transportation
- Income inequality and environmental issues

# Checklist

1) **Syllabus:** 

2) **Intro to Urban Economics**

- **What is urban economics?**
- **What is a city?**
- **What is a model and why are they useful?**



# Intro to Urban Economics

## What is it?

A mashup between **geography** and **economics**.

**Economics:** Study of how people and firms allocate scarce resources.

- Main framework: utility & profit maximization

**Geography:** Studies effects of location and the environment (hydrology, climate, resources, etc.)

**Economics + Geography :** Study of how individuals and firms choose utility and profit maximizing locations, and consequences of these decisions

# Intro to Urban Economics

We will study how the **distribution** of people & firms across space impacts:

- Crime 
- The Environment 
- Income growth & Inequality \$

We will also examine the efficacy of various **place - based policies**

- Minimum Wage
- Rent Control
- Land Use Restrictions

# Cities

The majority of the US population lives in cities<sup>†</sup>

## Questions:

1. Do you like cities?
2. What are your top 3 favorite cities (and why?)
3. Are cities at odds with the natural world?

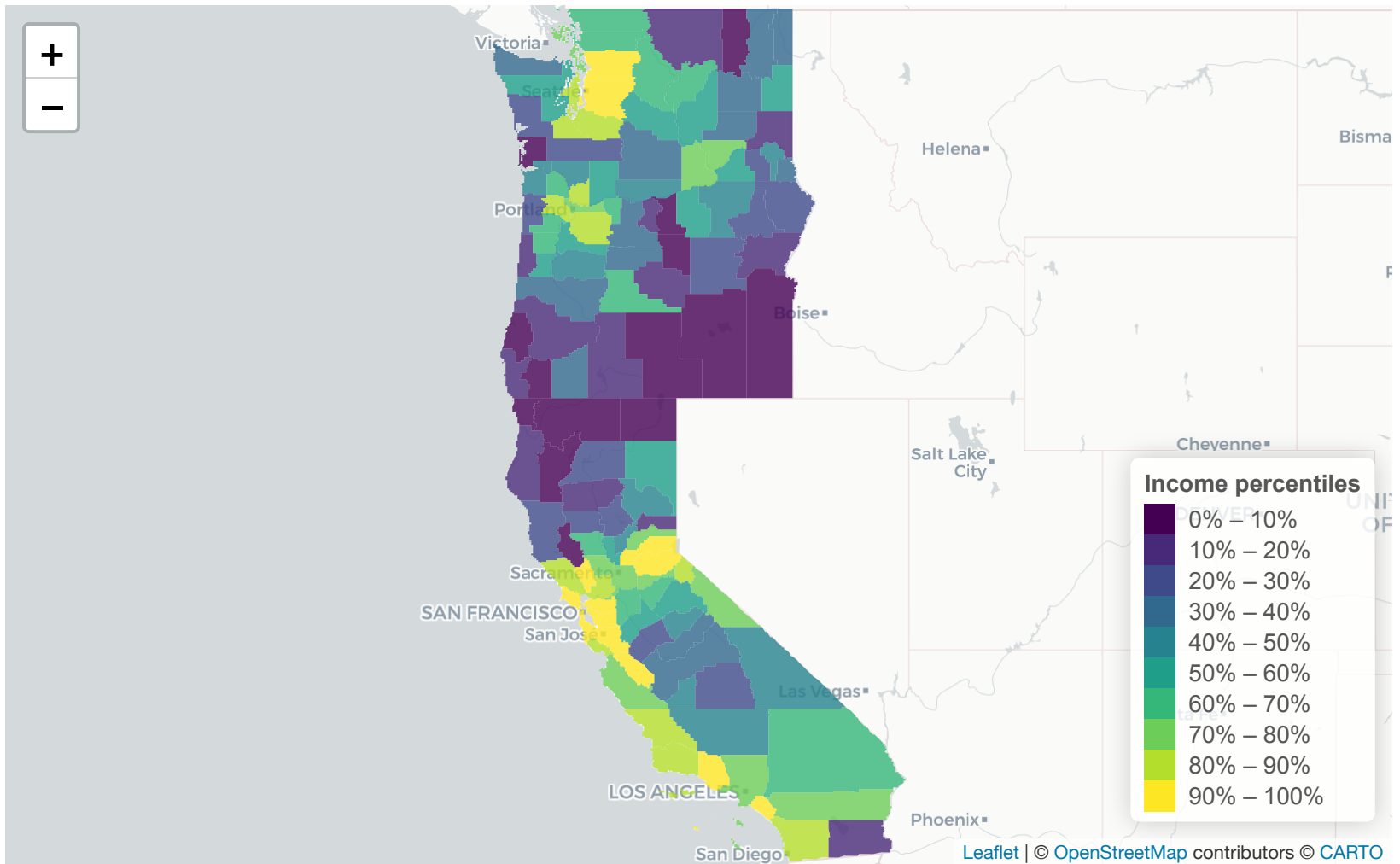
## Claim

Location matters

Not convinced? Let's look at some data

<sup>†</sup>. 80 - ish percent, according to the Census Bureau

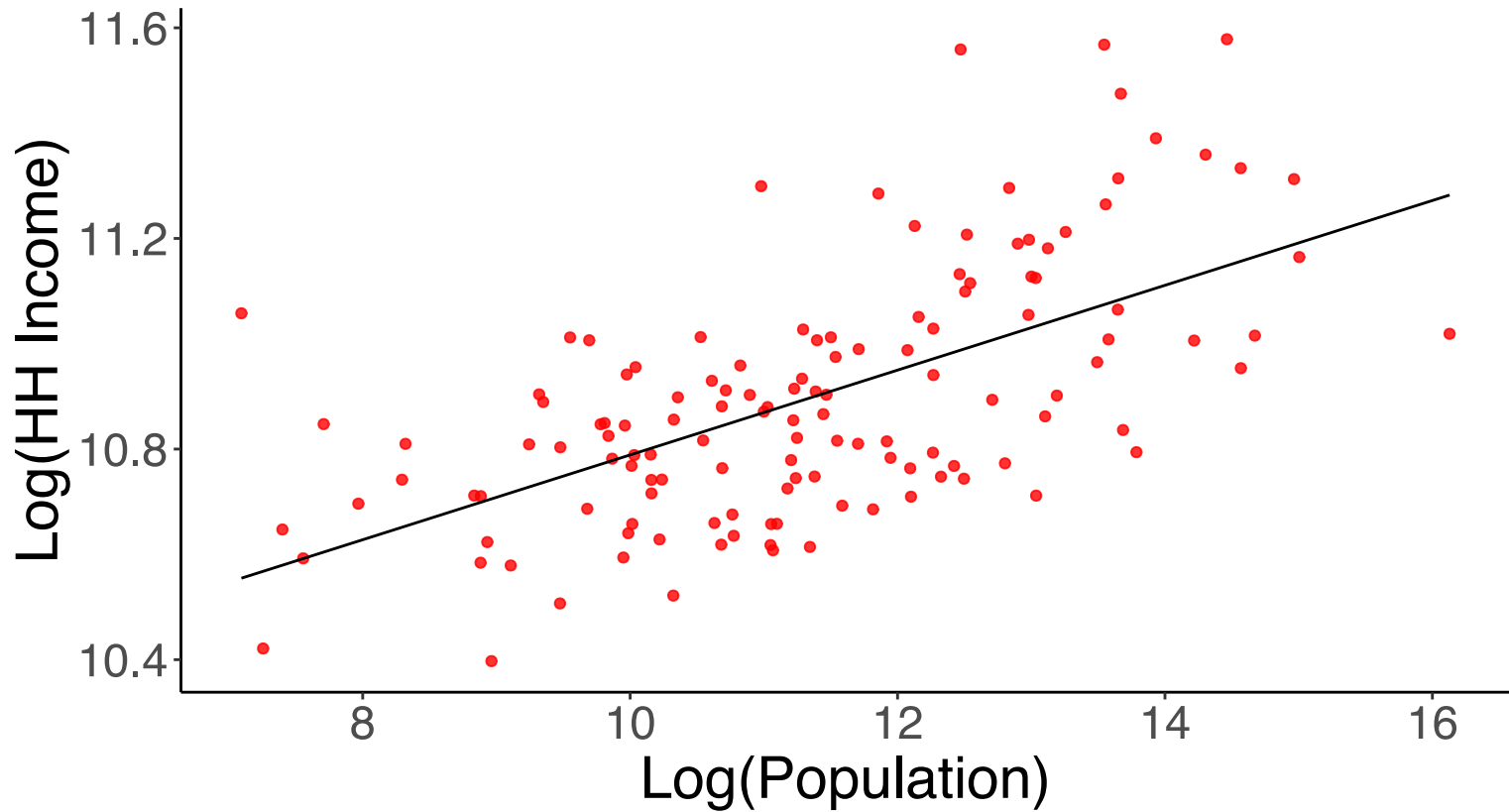
# Wage Dispersion



# Income & Population

West Coast HH Income and Population

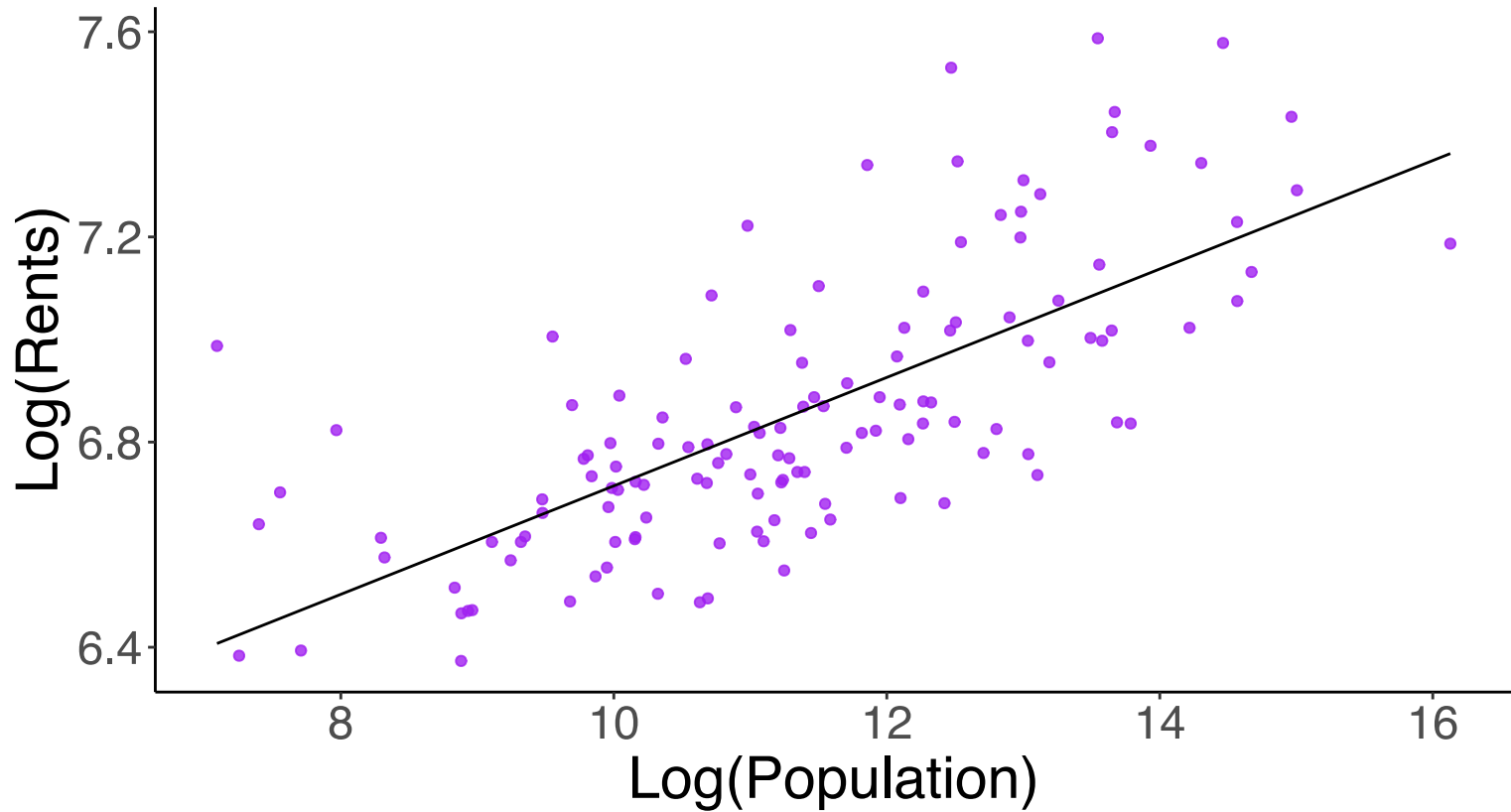
Data: American Community Survey



# Rent and Population

West Coast Rent and Population

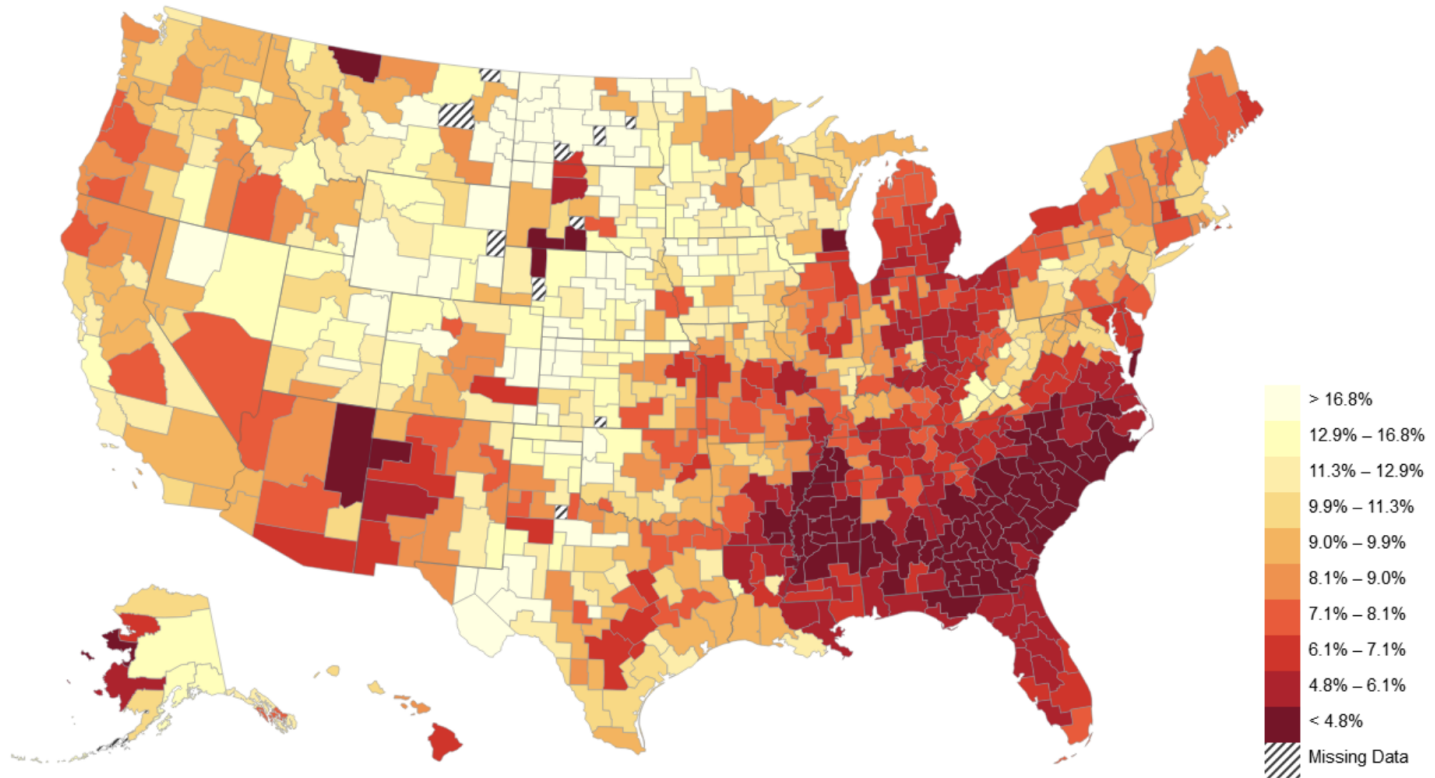
Data: American Community Survey



# Economic Opportunity

## The Geography of Upward Mobility in America

Children's Chances of Reaching Top 20% of Income Distribution Given Parents in Bottom 20%



Source: The Equality of Opportunity Project

# Carbon Emissions

CBSA	Rank	Emissions (1000 lbs)	Gas Emissions (1000 lbs)	Fuel Emissions (1000 lbs)	Electricity Use (MwH)	Electricity Conversion (1000 lbs/MwH)	Electricity Emissions (1000 lbs)
<b>Lowest</b>							
Honolulu, HI	1	9.65	0.30	0.07	6.10	1.52	9.29
Oxnard, CA	2	11.14	5.29	0.11	7.18	0.80	5.75
San Diego, CA	3	11.28	4.65	0.15	8.10	0.80	6.48
Los Angeles, CA	4	11.31	4.95	0.08	7.85	0.80	6.28
San Jose, CA	5	12.27	5.70	0.11	8.08	0.80	6.46
San Francisco, CA	6	12.50	5.94	0.13	8.04	0.80	6.43
<b>Middle</b>							
Austin, TX	33	20.96	3.87	0.13	16.71	1.01	16.96
Charlotte, NC-SC	34	21.05	4.91	0.24	15.36	1.04	15.90
Houston, TX	35	21.81	3.92	0.10	17.52	1.01	17.78
Virginia Beach, VA	36	21.98	4.51	0.43	16.46	1.04	17.04
Richmond, VA	37	22.08	4.39	0.69	16.41	1.04	16.99
Dallas, TX	38	22.33	3.89	0.13	18.04	1.01	18.31
<b>Highest</b>							
Tulsa, OK	65	27.61	7.54	0.16	15.67	1.27	19.92
Detroit, MI	66	27.99	14.97	0.28	11.53	1.11	12.75
Kansas City, MO-KS	67	28.90	8.77	0.18	15.69	1.27	19.95
Omaha, NE	68	29.96	13.02	0.26	13.66	1.22	16.68
Oklahoma City, OK	69	30.46	7.21	0.19	18.14	1.27	23.06
Memphis, TN-MS-AR	70	30.66	6.70	0.15	23.00	1.04	23.81



# Location, Location, Location...

So, where you live has implications for

- Your contribution to **global carbon emissions**
  - *Why does this vary across cities?*
- Your **wage** and **rent**
  - *Why does this vary across cities?*
- Your **economic mobility**
  - *Why does this vary across cities?*

# Cities

So what is a city? (Pick one of the following)

1. This only a question academics would think about
2. It's complicated
3. It's not complicated. Just a lot of people living close together
  - The absence of space between people

# The Census Bureau Says...

- **Urban Area:** a **densely settled geographical area** with:
  - Minimum population of **2,500**
  - Minimum density of **500 people per square mile**
- **Urban Population:** people living in **urban areas**
- **Metropolitan Area:** an urbanized area with at - least **50k population**
- **Micropolitan Area:** an urbanized area with at least **10k** but not as many as **50k** people
- **MSA:** handy abbreviation for both **metropolitan** and **micropolitan** statistical area
- **Principal City:** the **largest municipality in an MSA**

# Our Toolkit

In this class we will make use of various **mathematical models**

1. What is a **mathematical model**?

- A model is a description of a system using .... **math**
- Useful to help **explain** and **predict** behavior

## The Canonical Example

$$\text{Supply : } P(Q_s) = 10 + 5 * Q_s$$

$$\text{Demand : } P(Q_d) = 20 - 2 * Q_d$$

This model allows us to make predictions about prices and quantities (from the supply & demand side), *and* the **equilibrium** price and quantity

# Models

## 1. What are the **pros** of models?

- Allows for us to be very precise with our language
- Gives us the ability to **predict** the various aspects of the economy
- Can shed insight on **mechanisms** through which processes interact

## 2. **Cons** of models?

- They require assumptions
- Claim: **Almost** all assumptions are wrong
- **Follow up** : Not all wrong assumptions are useless

The ability of the model to **predict data** and **understand mechanisms** determines how useful it is

# Models Part II

Did we make assumptions our supply/demand model? **Discuss**

$$\text{Supply : } P(Q_s) = 10 + 5 * Q_s$$



$$\text{Demand : } P(Q_d) = 20 - 2 * Q_d$$

1. **Marginal values** are diminishing and **marginal costs** are increasing<sup>†</sup>
  - Generates downward demand and upward supply
2. Demand and Supply are **linear**
3. Demand and Supply are **deterministic**

Are these reasonable? **Discuss**

<sup>†</sup>: Marginal = Change

# Checklist

1. **Syllabus:** 
2. **Intro to Urban Economics:** 
  - **What is urban economics?**
  - **What is a city?**
  - **What is a model and why are they useful?**

# Planning

## Next Class:

- EC201 Review
- 5 Axioms of Urban Economics

## Due Soon:

- Review Quiz (**Monday the 13th** @ Midnight)
- Letter of Intro (**Tuesday the 14th** @ Midnight)
  - Instructions on canvas. Basically free points



Thanks!

🔥 We survived our first day of class! 🔥

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## Intro to Urban Economics

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