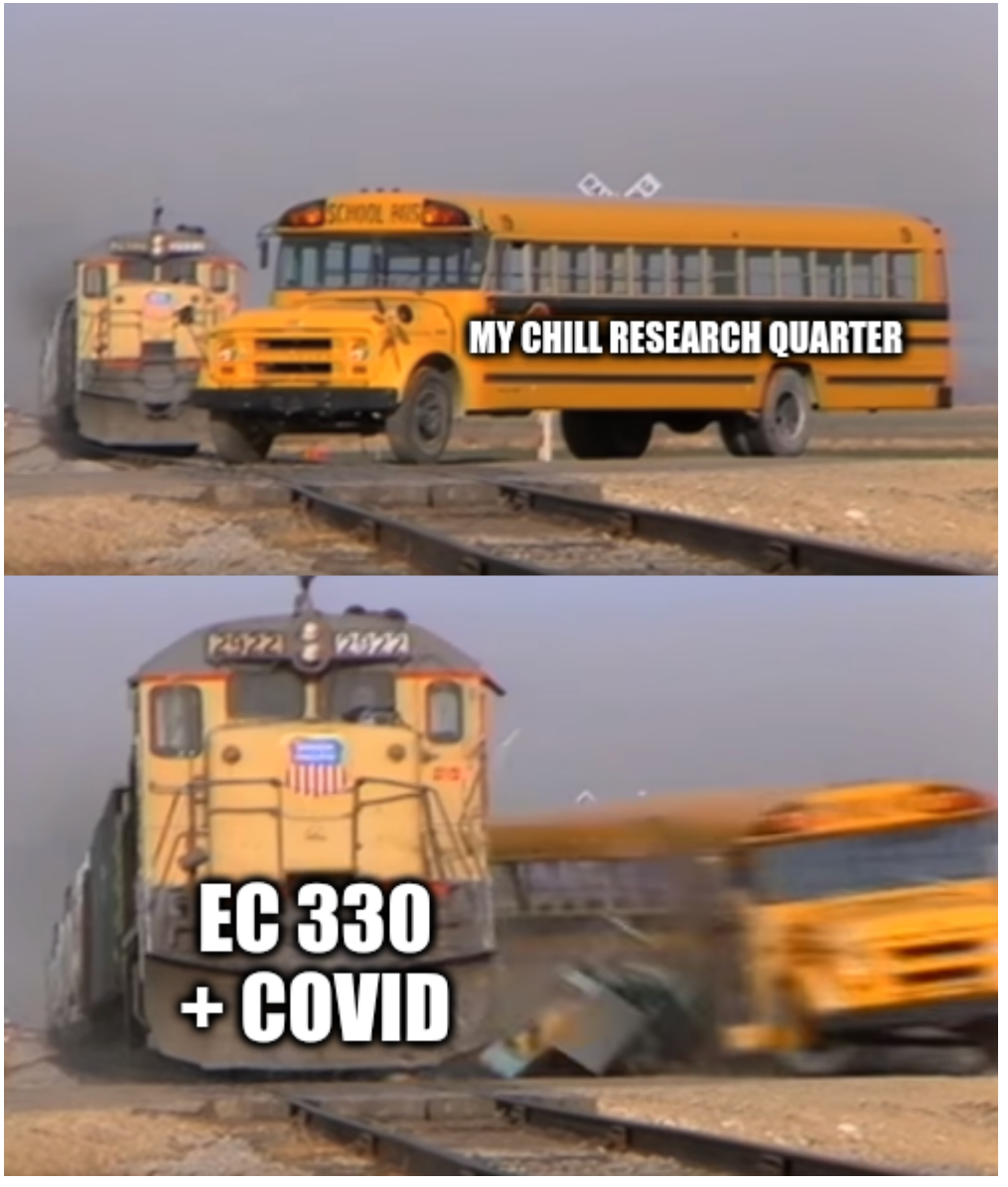
Econ 330: Urban Economics

Lecture 01

Andrew Dickinson
04 October, 2021

Day ~~One~~ Two: Welcome!


MY CHILL RESEARCH QUARTER
EC 330
+ COVID

Introduction: About me

Name: Andrew Dickinson (please call me Andrew)

- Office: PLC 417, Office Hours: TBD†, Email: adickin3@uoregon.edu
- Third year PhD student researching:
  - Applied micro topics related to environmental economics
  - Causal inference, ML, and data science

Not school:

- From San Diego, CA
- I enjoy spending time outside 👇
  - 🏃, 🐿, 🧗, 🏄, ⛷, 🛶, 🚵, etc.

†: I will hold office hours on Monday starting at 10 am. Not the official time yet

Introduction: About you

I hope that you:

- Are an eager student ready to learn about urban econ
- Have passed EC-201 with at least **some recollection** of the material
- Excited to be back in class in person
- Own plenty of masks for the remainder of the quarter

Schedule

Today:

(i). Syllabus + Course Policies

(ii). General Economics Discussion

(iii). Intro to Urban Economics

Upcoming:

- **EC201 review**
- **Reading**
- **PS01**

All information is on the syllabus

- Please read the syllabus and consult it first before sending emails!

I want to discuss the following:

(i). Course policies

(ii). Grades and grading

Syllabus: Zoom ground rules

(i). Turn your camera on

(ii). Mute mics when not talking

(iii). Do not share images or recordings

(iv). Feel free to interupt me or "raise hand"

(v). Keep the chat open and use it

(vi). If there is any technical difficulties tell me

No passwords are turned on for now but we will see if we get bombed

I will try and start the meeting a little early + stay on for OH

Syllabus: Attendence

Attendance is **mandatory**, lectures will not be recorded

The expectation is that you attend class every day

- The midterm & final will be administered during class time

The quality of these lectures increase with participation and attendance

Obviously, given the circumstances there exists some flexibility

- If you must isolate, I will provide you with additional course materials

Complete slides will be posted to GitHub *sometime* after lecture†

† More to talk about this next slide

Syllabus: Lectures

When I taught this class remotely, I made slides

However, I have a strong preference to use the board

- Slower; keeps a good pace

I may not have time to adapt the slides into lecture notes

If I use slides, I will post them to a public Github Repository

- They will not include any annotations (examples)

Teach through examples

- Walk through many **"important examples"** on the board 😉

Syllabus: Grading

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

- 40%: Final Exam (1x): 200 points
- 30%: Midterm Exam (1x): 150 points
- 25%: Problem sets (4x): 25 points each
- 10%: Book Report (1x): 50 points

Q: Is there a curve?

A: Maybe

Syllabus: Grading

Following department policies, for 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

Midterm: Monday of week 03 (Nov 04)

Final: Thursday of week 04 (Dec 08)

Absolutely no makeups

Under **extraordinary circumstances** I will shift midterm weight to the final

- Entirely by my discretion
- Must contact me before the exam via email

Drop this course if you are unable to take the scheduled midterm

Roughly 10% of points on the exam will be given for neatness + readability

- I will take points off for poor: Image quality, handwriting

Syllabus: Triumph of the City

Required reading Triumph of the City by Ed. Glaeser.

- **Problem sets:** Several questions (gifts) from assigned reading
- **Exams:** Several questions (gifts) from the book
  - the questions will be pretty easy
- **Book Report:** Due Sunday following the final exam (August 15)
  - Instructions and a rubric are posted on the course github + canvas
  - Syllabus has the reading schedule. Feel free to read ahead

This is a suuuuper interesting book and easy to read. Read every night.

Syllabus: Homework

There will be **4 problem sets** throughout the term:

- Each one is worth **5%** of your grade
- You must submit a **pdf** document on Canvas*

No late homework assignments will be accepted

Start them early, they will cover a lot of material

Geared to prepare you for the exams. Think of them as a study guide.

Syllabus: Canvas + Github

Canvas:

- All the important materials will be posted to Canvas
  - Homework submission
  - Announcements

Github:

- Light, public course page with links to all course material
- Do not need an account. It is just easier for me

What is economics?

What is economics?

The Wealth of Nations *by* Adam Smith (1776)

- Seminal work on economics, four volumes; as important to its field as:
  - Newton's *Principia Mathematica*
  - Darwin's *Origin of Species*
- "Wealth" ("weal")
  - Money and other assets
  - But also well-being, welfare
- Archaic use of "wealth" make it seem like economics is merely the study of how to get rich

What is economics?

In a nutshell:

Economics is the study of how people make allocation decisions to maximize their happiness when facing limit resources (budgets)

There is never enough resources to fulfill all human wants

Scarcity gives us constraints and we do the best *we can* s.t. constraints

Not just money:

- Time
- Health
- Land
- Natural resources

Economics is very general; the market lens can be used across many topics

Economics "wheelhouse"

Explain how people and firms **actually behave**; less about how they *should behave*

- Normative vs positive statements
  - Normative statements: Matters of opinion that may never be resolved
  - **Positive statements:** Matters of fact that can be resolved by data
- Figure out what the data say for evidence-based policy making

Opportunity cost: What you have to give up by not putting a resource to its *next-best* alternative use

- Economist use the word **cost** differently than the general public
  - "Cost" is different than "price"

Intro to Urban Economics

Intro to Urban Economics

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

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

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:

- City growth 🏙️
- Crime 👮‍♀️
- The environment ♻️
- Income growth & inequality 📈
- Education 🏫
- Employment + wages 🤑

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

- Minimum Wage
- Rent Control
- Land Use Restrictions
- Sustainability

What are the economic drivers behind urban development?

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 (supply and demand)
2. **Application**
    - Rent Control & Minimum Wage
    - Highways and urban transportation
    - Income inequality and environmental issues

What is a city?

According to the Census Bureau...

- **Urban Area:** a **densely settled geographical area** with:
  - Minimum population of **2,500**
  - Minimum density of **500 people per square mile**
- 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: abbrev. for both **metropolitan** and **micropolitan** statistical area
- Principal City: the **largest municipality in an MSA**

City: Dense collection of people in specific geographic area

Intro to Urban: Cities

The majority of the US population lives in cities† and more people will continue to migrate into urban areas

Questions:

1. Do you like cities?
2. What are favorite city **amenities**?
3. Are cities at odds with the natural world?

Why do cities exist?

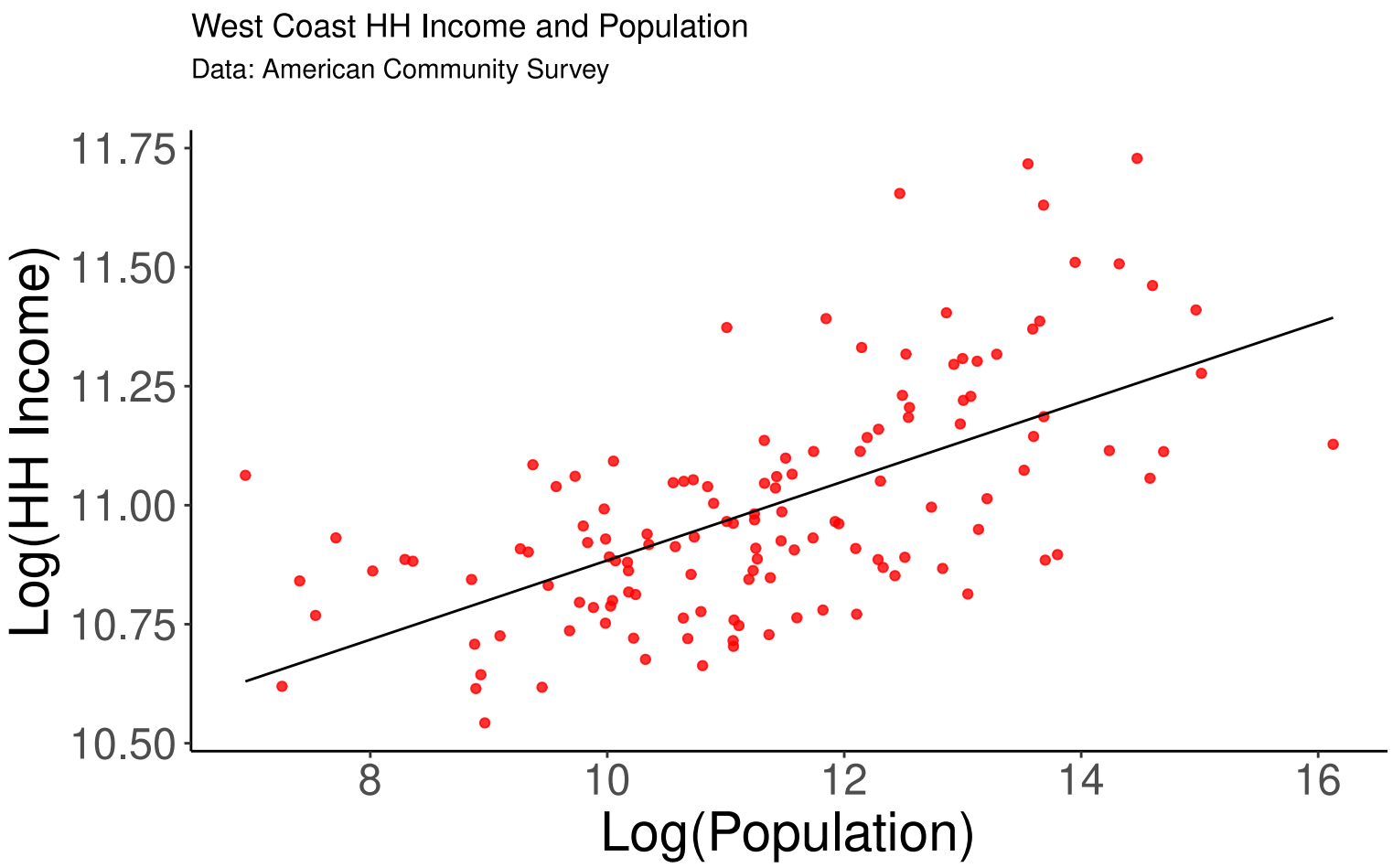
Location matters

Let's look at some data

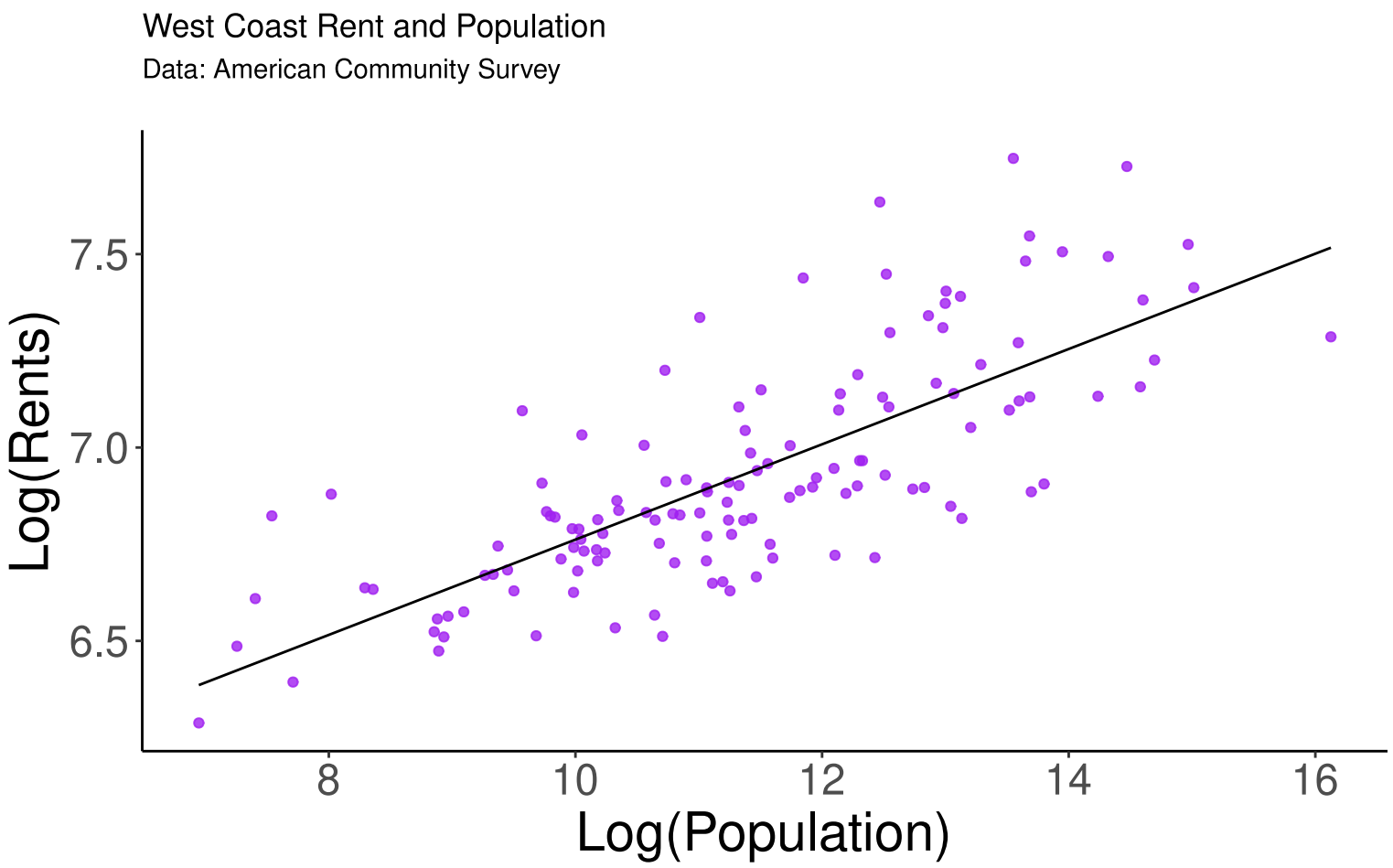
†. 80 - ish percent, according to the Census Bureau

Data

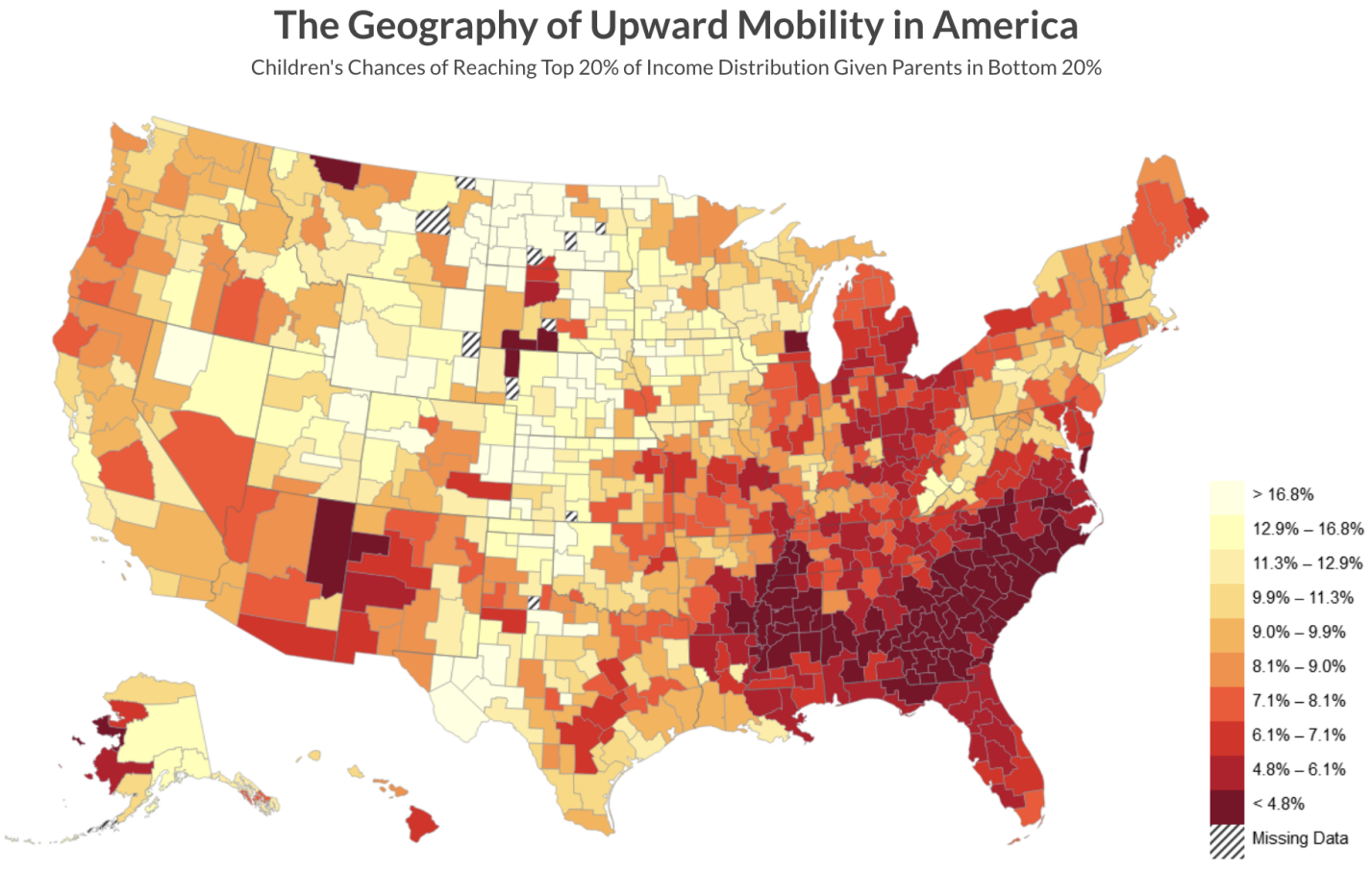
Intro to Urban: Income & Population



Intro to Urban: Rent and Population



Intro to Urban: Economic Oppurtunity



Source: The Equality of Oppurtunity Project

Intro to Urban: 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)
Lowest							
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
Middle							
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
Highest							
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

Source: Colas & Morehouse (2019)

Intro to Urban: Location...

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?*

We will answer these questions as we progress through this course

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

$$\begin{aligned} \text{Supply}: \quad & P(Q_s) = 10 + 5 * Q_s \\ \text{Demand}: \quad & P(Q_d) = 20 - 2 * Q_d \end{aligned}$$

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 percise with our language
    - Gives us the ability to **predict** the various aspects of the economy
    - Can shed insight on **mechanisms** through which procceses interact
2. What are the **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**

$$\text{Supply}: \quad P(Q_s) = 10 + 5 * Q_s$$
$$\text{Demand}: \quad P(Q_d) = 20 - 2 * Q_d$$

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

Are these reasonable? Can your behavior be explained by a simple **linear function**?

Does a function even exist?

†: Marginal = Adding one additional unit

Planning

Next Class:

- EC201 Review
- 5 Axioms of Urban Economics

Reading:

- Get the book ASAP!!
- Read the introduction

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