

# Econ 330: Urban Economics

## Lecture 01

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Andrew Dickinson

07 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<sup>†</sup>, Email: [adickin3@uoregon.edu](mailto: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.

<sup>†</sup>: 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**

# Syllabus

## 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 interrupt 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: Attendance

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<sup>†</sup>

<sup>†</sup> 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 suuuper 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

- Economists 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
- Land Use Restrictions
- Rent Control
- 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<sup>†</sup> 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

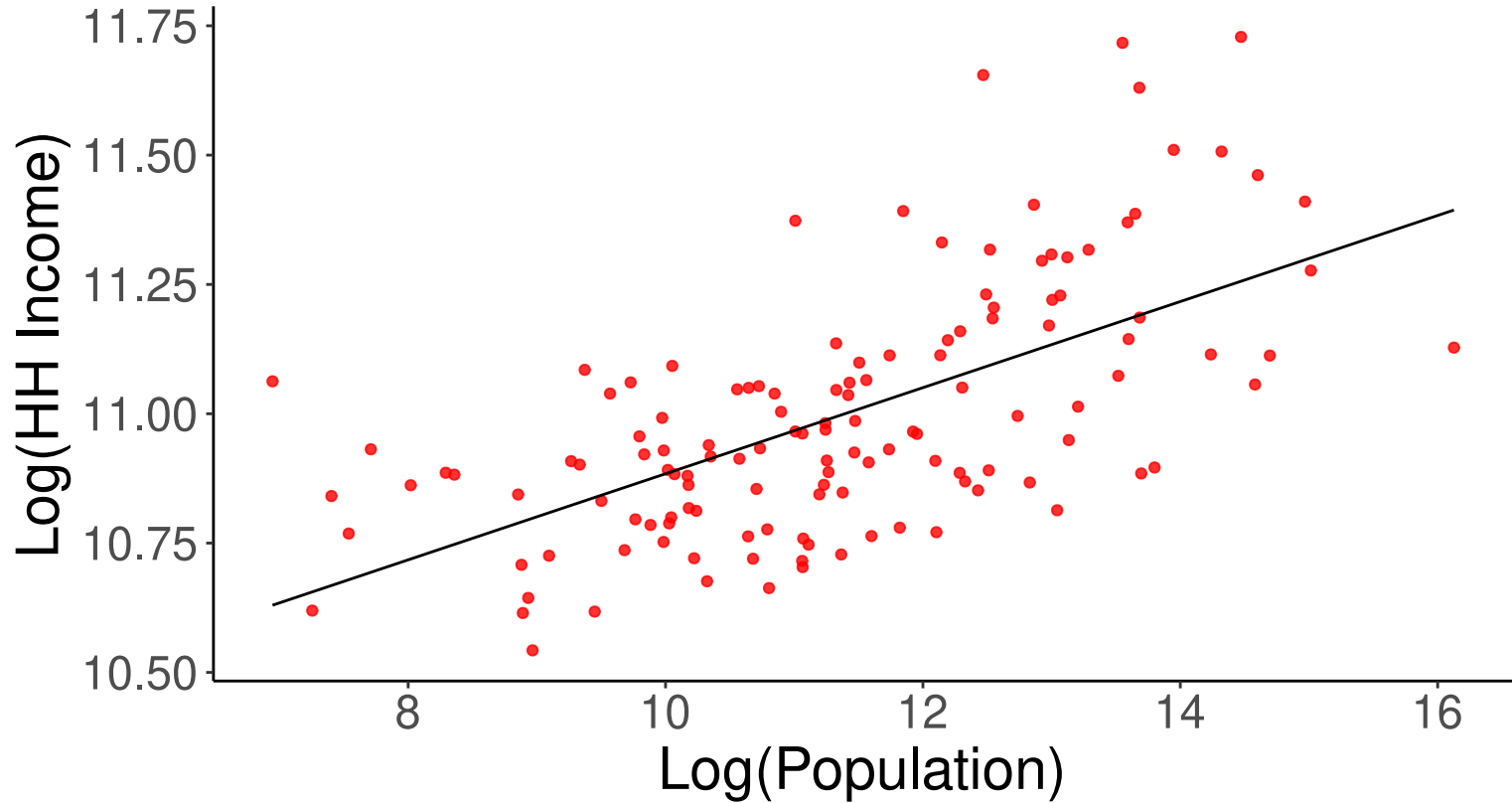
<sup>†</sup>. 80 - ish percent, according to the Census Bureau



# Intro to Urban: Income & Population

West Coast HH Income and Population

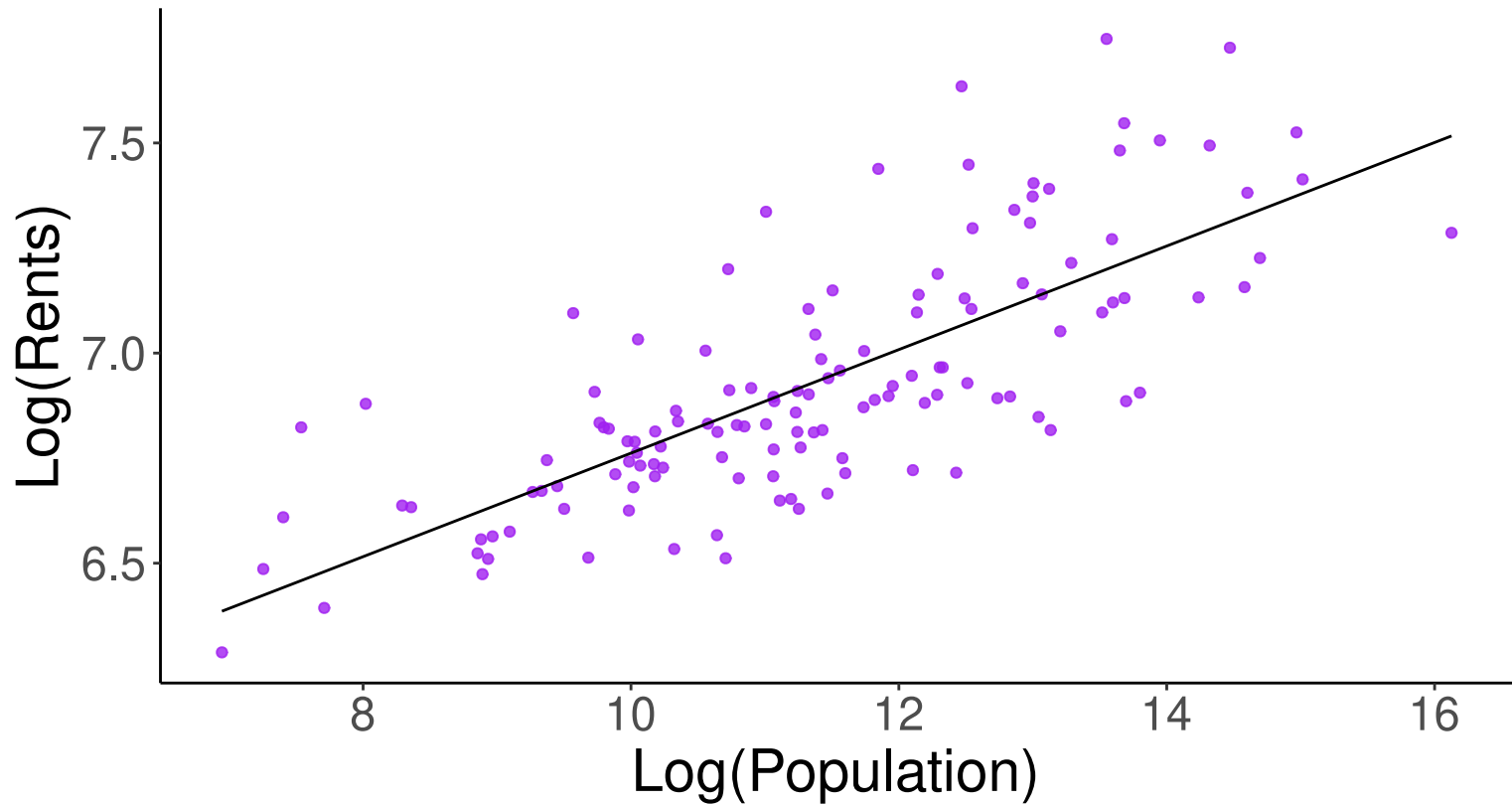
Data: American Community Survey



# Intro to Urban: Rent and Population

West Coast Rent and Population

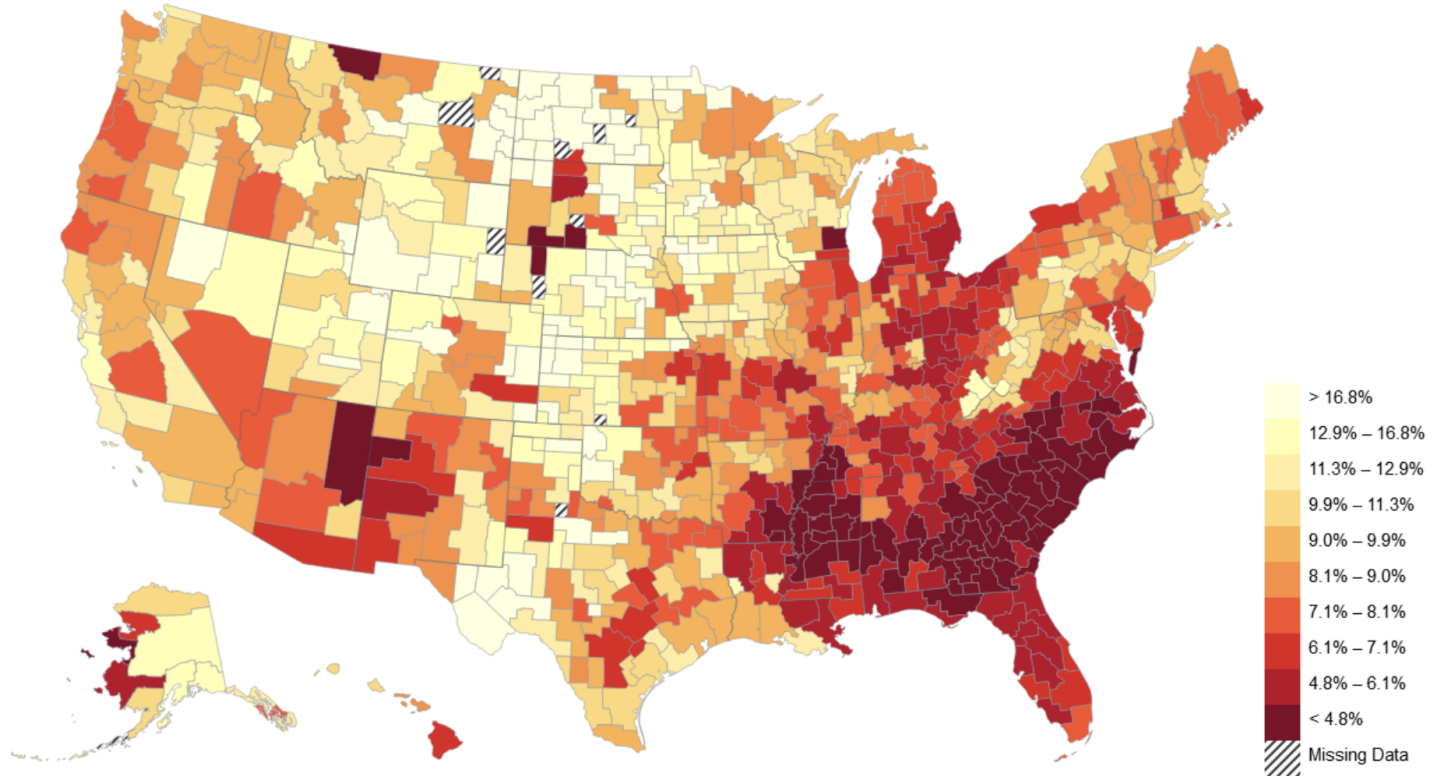
Data: American Community Survey



# Intro to Urban: 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

# 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)
<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

# 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

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

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

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. 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**

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

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

1. **Marginal values** are diminishing and **marginal costs** are increasing †

- 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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## Intro to Urban Economics

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