

# What's Space got to do with it?

## An Economic Geography Perspective on local Inequalities

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# (Income) inequality and the Macro level

💎 How do we treat inequality in Economics?

📍 We are interested in

- Overall dispersion in an economy—Gini!
- Top income shares
- Gender inequalities
- Equality of opportunity, social mobility, many more

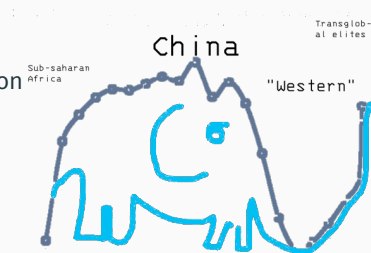
🚩 The *unit of observation* is given: The country level

...even when we are using individual level data (SILC, HFCS, ...)

⚡ Implicitly assuming a kind of spatial homogeneity within the country  
...or masking geographic variation

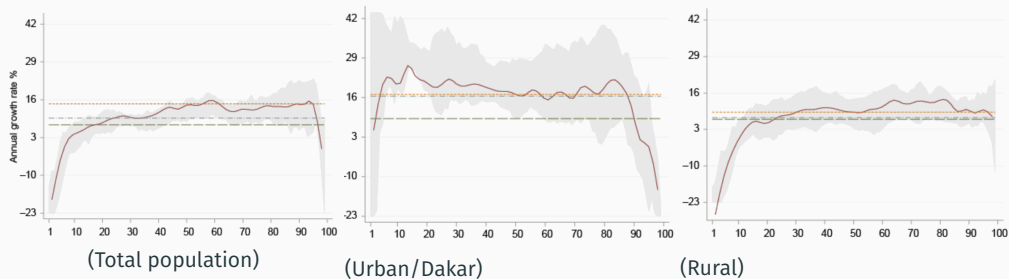
# What's hot in inequality rx?

- ✈ Recently, we have seen some really cool applications:
- 🌐 **wid.world**: A country-level database for (among others) inequality measurements
- 📄 Related: Distributional National Accounts (DiNA)
  - Again: country-level, potential regional accounts?
- 📈 Growth incidence curves
  - Milanovic: World, but with regional (country) interpretation



# Ex. Growth Incidence Curves for Senegal

Kireyev (2017)



# The Geographer's Critique

- 🔗 You are (dis-) regarding space as a *data container*
- ✓ You are implying that this container is a sensible level to answer question X
- 🕒 Historically: “Regional Inequality” in terms of between country convergence
  - Related: Data-availability. If you only get country data, you use these data
- 📦 Issues with space-as-a-container (SaaC)
  - Affects the questions we ask
  - Affects the results we get
  - Affects the conclusions we draw

# Economics, meet Regional inequality

- ⚠️ Geographers have also cared about inequality questions...since the 60s (and earlier!)
- 🌐 Space as a major category of thinking: Explicit treatment in analysis
- 🎓 Affects the...🏠...questions these disciplines ask

<b>Econ Geographers</b>		<b>Economists</b>
Local segregation	↔	Macro inequality
Regional inequality	↔	Kuznets' curves
Urban-Rural divide	↔	Convergence
Regions left behind	↔	Equilibrium models

## **Taking a closer look: Local inequalities in the U.S.**

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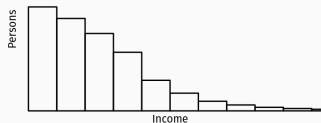
- ✿ Rule #1 of the EconGeo club: Lower geographic level, less data
- 📊 Small units for “neighbourhoods”: tracts, block groups, zip codes
- ☰ Data? Some. Inequality Data? Less.
  - Option 1: Internal Revenue Service on ZIP code level
  - Option 2: Census data on tract (block group) level
- 📄 Census publishes Gini and income brackets for *periods* of 5-years (disclosure control)



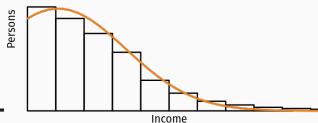
# Estimating neighborhood inequality

- To get a better understanding of local inequality, we need better measures (n/a in the Census)
- Since Census data = survey data: Under-reporting at the top might be an issue

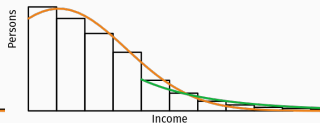
📊 Estimate **one million top-corrected, regional income distributions** using *Generalized Pareto Curves*




Original Data



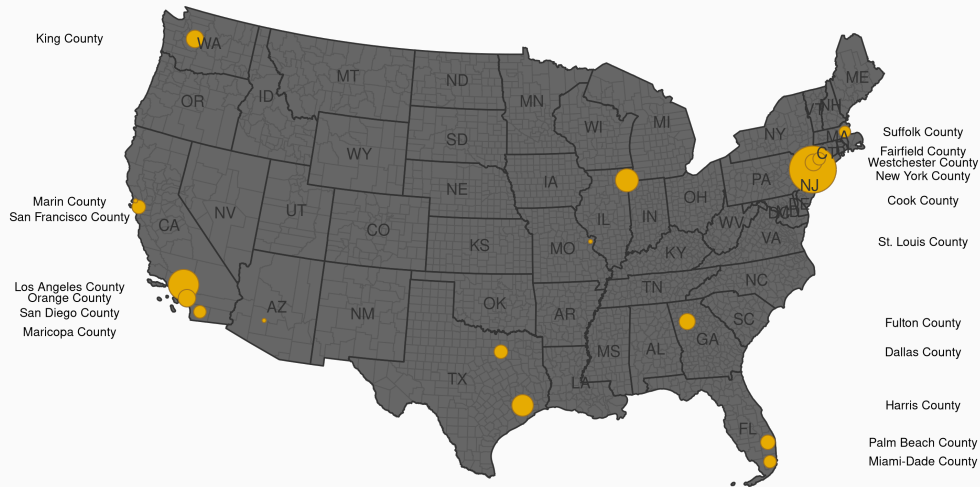
Non-parametric fit



Adaptive Pareto Top Tail

🧩 **Automated** method on high performance cluster, unsupervised crosswalking, implemented in 

**Theil(National)<sub>2010-2018</sub> = 0.46 → 0.485**



# Global Markets: Local Rents

✈ National inequality is a **tale of global markets** and **local rents**

- Effects in Superstar cities: New York (Finance), LA/Miami (Coastal housing), SF (High-tech)
- Inequality increase in 1% tracts accounts **=** national increase

🔍 How does this affect **local neighborhoods**?

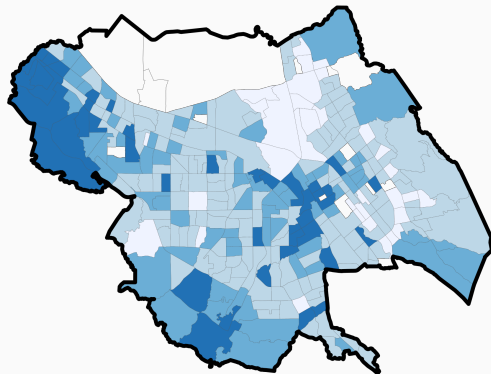
- Let's take a closer look at the Silicon Valley example:



# Within Silicon Valley: Top 10%/bottom 50% income



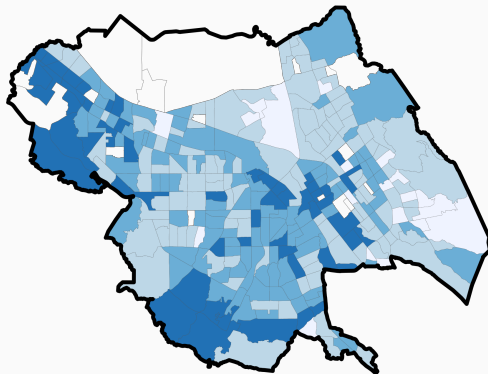
2009



Top 10/Bottom 50 Ratio

Ratio	Color
<1	Light Blue
1-1.5	Medium Blue
1.5-2	Dark Blue
>2	Very Dark Blue
NA	White

2017



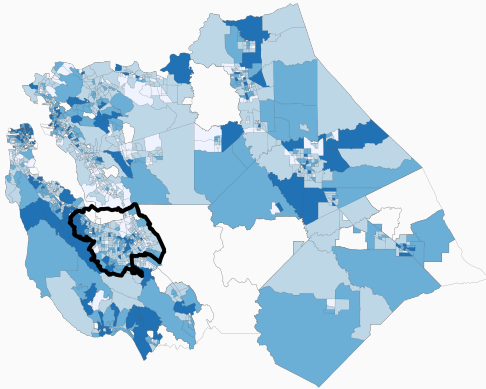
Top 10/Bottom 50 Ratio

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# Silicon Valley: Commuting zones



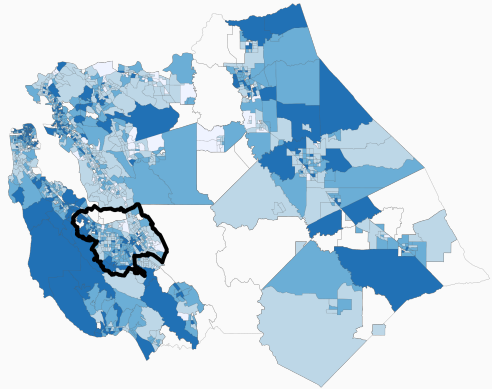
2009



Top 10/Bottom 50 Ratio

<1	1-1.5	1.5-2	>2	NA
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2017



Top 10/Bottom 50 Ratio

<1	1-1.5	1.5-2	>2	NA
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✚ Digitization opens up **global markets**, where do rents flow?

✚ **Concentrated feedback** into communities, altering distribution

🏰 **Changing environments:** Housing prices, pollution (traffic/commute), infrastructure (schooling), living spaces (🏠 Airbnb!)

### Inequality: Not only multi-scalar, but **multi-level**

- Data: small-area data to better understand **inequality processes**  
(local interaction, agglomeration effects, ...)
- Method: **Combine evidence** from levels  
(Spatial econometrics, Hierarchical modelling, ...)
- Theory: Understand how lower level phenomena **influence** observations at **larger scale**

# Questions?

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## Contact me!

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