Inequality and Segregation in US Cities

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Question

➢ over the last 40 years the US has experienced large increase in inequality

➢ at the same time substantial increase in residential segregation by income and education

Is there a link between segregation and inequality?

This paper: YES

key ingredient:
   neighborhood spillover that affects the returns to education

Neighborhood Spillover

➢ neighborhood spillover such that the returns to education are higher in richer neighborhoods
  ➢ Public schools, peer effects, learning from neighbors …

➢ amplification mechanism:
  ➢ higher inequality higher segregation (richer people happy to pay more for higher returns to education)
  ➢ higher segregation higher inequality (stronger spillover)
  ➢ higher segregation lower intergenerational mobility

The End of the American Dream?

Some Literature

➢ 1990s theoretical work on local externalities and inequality: Benabou, Durlauf, Fernandez & Rogerson. Theory ahead

➢ recently, advent of "big data" for micro estimates: Chetty et al. (2016) and (2014) estimate effects of childhood exposure to better neighborhoods. Measurement ahead

➢ we bridge the two literatures and use recent micro estimates to discipline a quantitative general equilibrium model

Contribution

➢ empirics: document the link in the data between inequality, segregation and mobility across time and across US cities

➢ theory: develop a model of education and residential choice with a neighborhood spillover affects the returns to education

➢ we use our data together with Chetty's estimates to calibrate the model and then use the model to run experiments

Preview: Data

We document three main regularities:

1. a strong correlation between inequality and residential segregation both across time and across space

2. in areas where segregation is higher, the educational gap between poor and rich families is larger

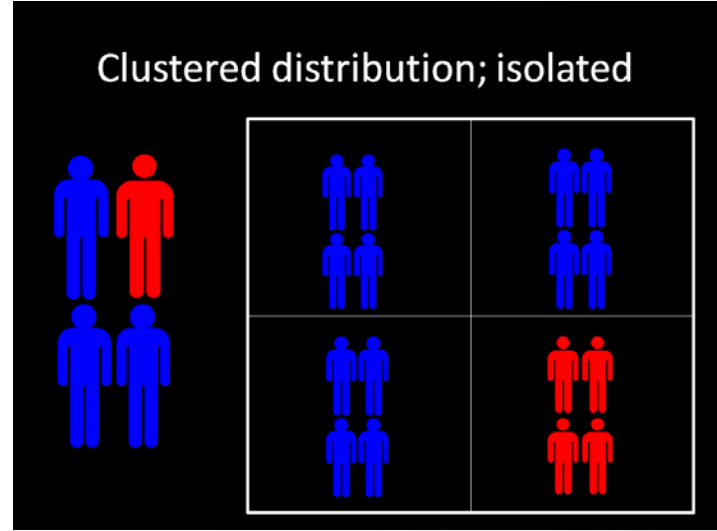3. in areas where segregation is higher, intergenerational mobility is lower

Inequality and Segregation: data

➤ Segregation and inequality move together
  o Across time and across space
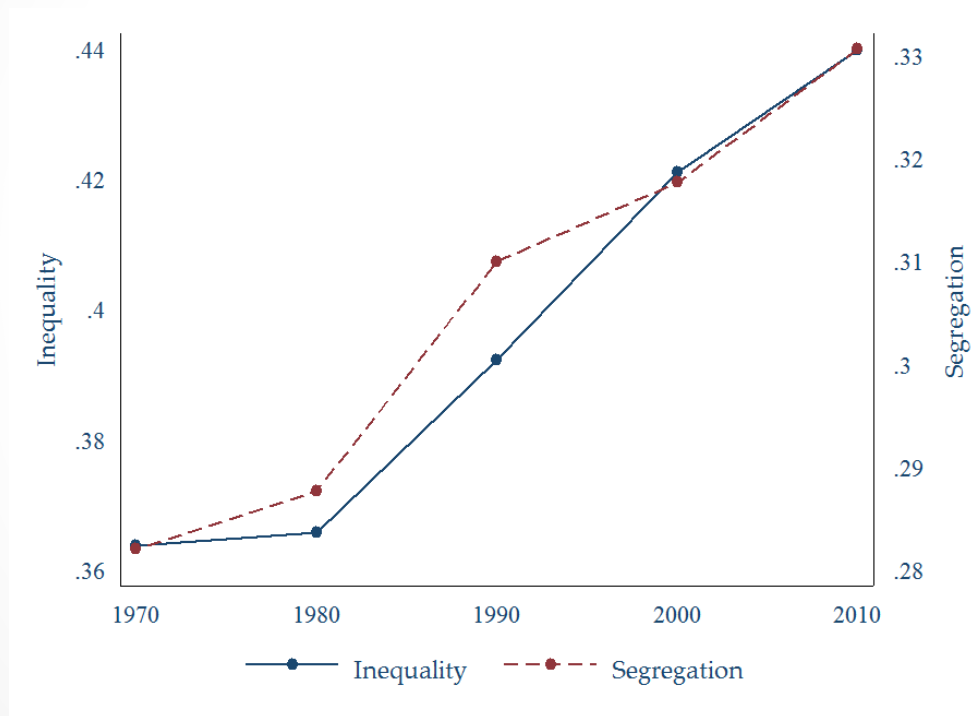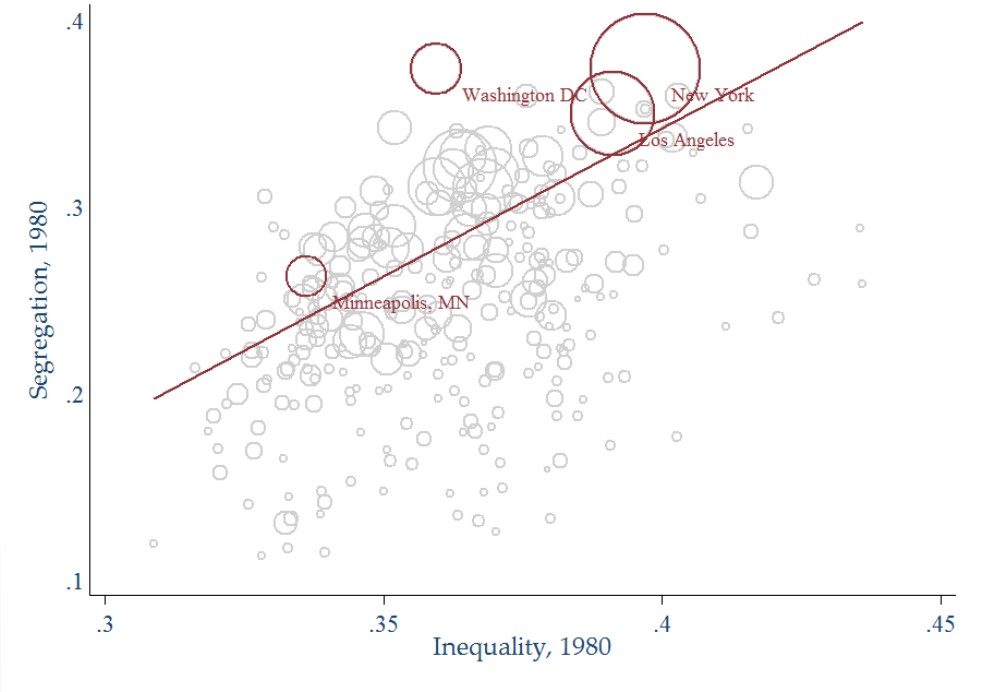
➤ How to measure segregation?

Segregation Measure

➢ Dissimilarity Index: measures evenness of distribution of two mutually exclusive groups across geographic units that make up a larger geographic entity.

➢ Example: the distribution of poor across census tracts in a metro.

Inequality and Segregation across Time

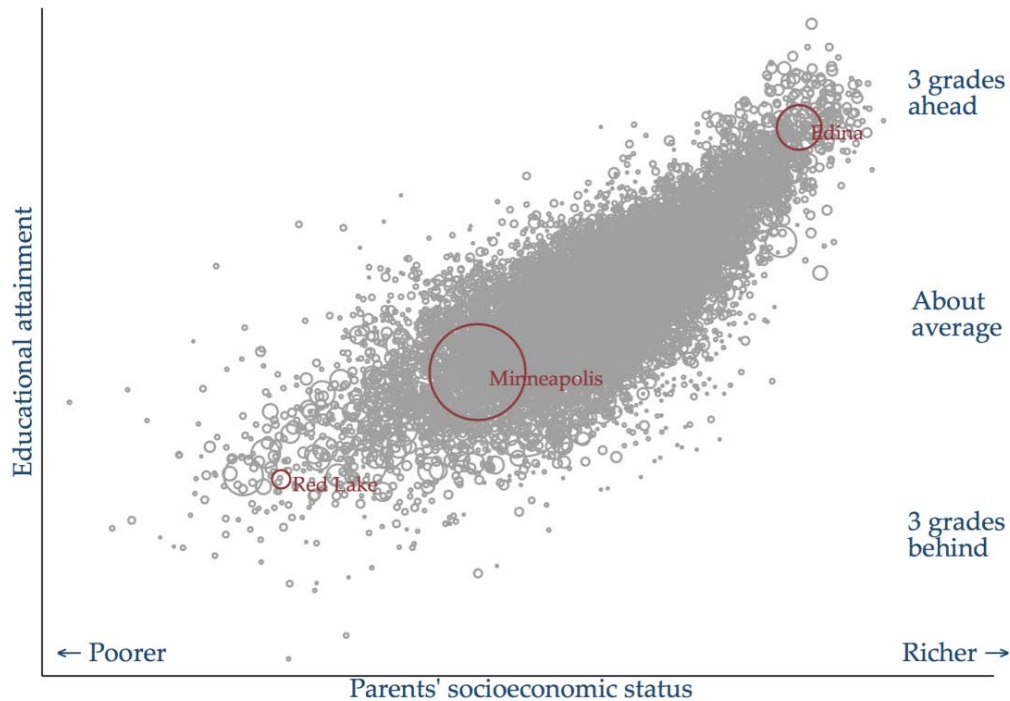# Inequality and Segregation across Space

Segregation and Mobility: data

➢ in areas where segregation is higher:

1. larger educational gap between poor and rich families
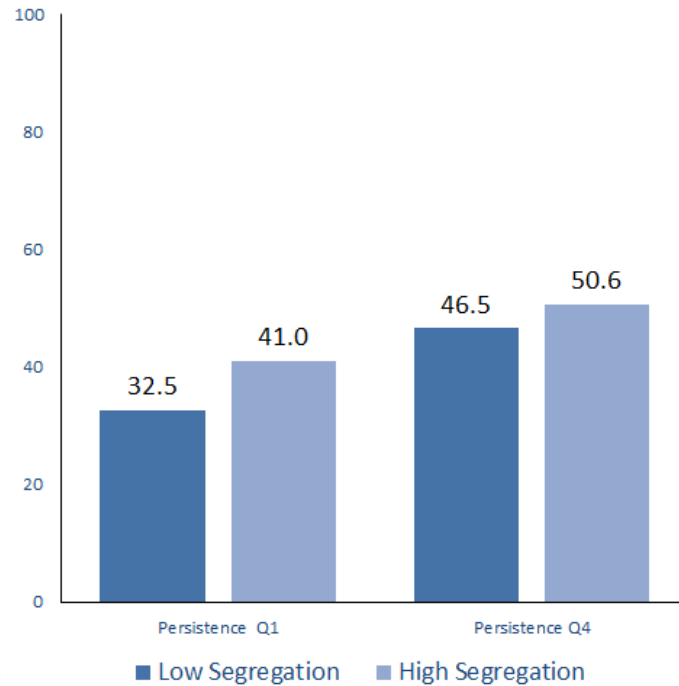
2. lower intergenerational mobility

Education Gap between Rich and Poor

Segregation and Education Gap

Segregation and Mobility

The Model Dynamics

➢ Need a model to quantify amplification effects due to segregation and evaluate policies designed to mitigate them.

➢ GE OLG model where inequality and segregation feed on each other and affect mobility

➢ agents care about their children's outcomes:

➢ Where is a shock and is a neighborhood's spillover

➢ = average wage in neighborhood k at time t

➢ given choose education and neighborhood

➢ The differential spillover induces segregation and evolves as a result of higher segregation

Model Implications

➤ Poor parents will invest less in the education of their children

1. because of fewer resources (classic channel)
2. because the returns to education progressively deteriorate (new channel)

➤ Segregation is an amplifying mechanism through which inequality generates more future inequality and lower future mobility.

Quantitative Analysis

1.   We use our data on inequality, segregation and mobility to calibrate steady state of representative metro to 1980 and we use Chetty et al. (2016) micro estimate for the strength of the spillover effect.

2.   Introduce a shock to returns to education and look at the response of inequality, segregation, and intergenerational mobility.

3.   Counterfactual: how much of the increase in inequality is due to the spillover?

How to Revive the American Dream?

➢ In our model there is a role for policy because of externality
➢ Education from equalizer to divider
➢ Policies that guarantee widespread access to high quality education:

o break the link between residential choice and school choice
o more centralized school financing
o housing policies to break up city segregation