

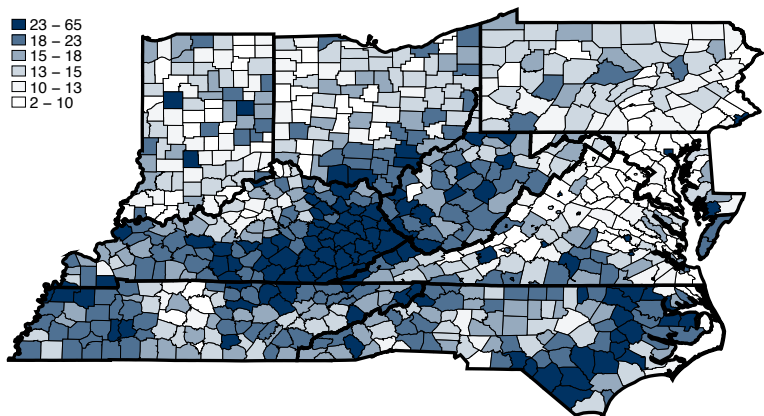
Trends in Spatial Inequality: Concentrating Affluence and a Democratization of Poverty

Cecile Gaubert, UC Berkeley
Patrick Kline, UC Berkeley
Damian Vergara, UC Berkeley
Danny Yagan, UC Berkeley

January 2021

Poverty is spatially concentrated

Poverty rate by Mid-Atlantic county [2013-2017 ACS, Gaubert-Kline-Yagan '20]

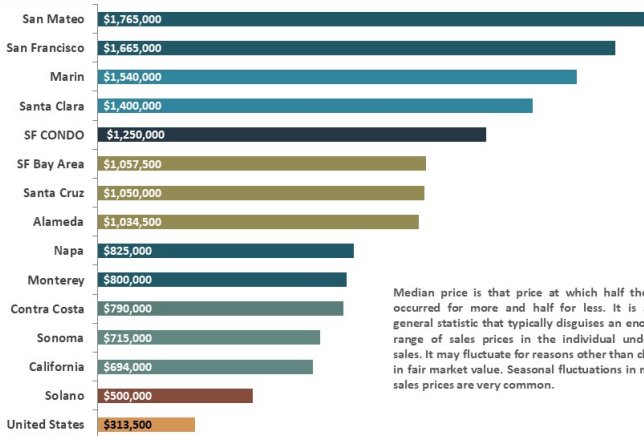


Affluence is spatially concentrated

Median House Sales Prices

by Bay Area County, Q3 2020

Approximate numbers, per CAR Housing Affordability Index calculations



Median price is that price at which half the sales occurred for more and half for less. It is a very general statistic that typically disguises an enormous range of sales prices in the individual underlying sales. It may fluctuate for reasons other than changes in fair market value. Seasonal fluctuations in median sales prices are very common.

Data per California Association of Realtors: "C.A.R.'s Traditional Housing Affordability Index (HAI). Methodology can be found on www.CAR.org. Market Data section. SF condo median sales price calculated per MLS sales data.

COMPASS

Enormous interest in spatial income inequality

Economics

- “Great divergence” across areas [Moretti '12]
- “Iron law of convergence” across areas [Barro-Sala-i-Martin '91, Berry-Glaeser '05, Barro '15, Ganong-Shoag '17]
- Income segregation → Large optimal place-based transfers [Gaubert-Kline-Yagan '20]

Elsewhere

- Sociology literature on residential income segregation [e.g., Wilson '87, Jargowsky '97, Reardon-Bischoff-Owens-Townsend '18]
- Spatial income shocks affect political outcomes [e.g., Autor-Dorn-Hanson-Majlesi '20]

This paper: Establish facts with best available data

Are we growing apart?

- Yes, in terms of per-capita income
- Faster than across people. Attenuated by taxes and transfers.
- Distinct from whether poor places have grown faster (σ -convergence vs. β -convergence) [Young-Higgins-Levy '08]

“Democratization” of poverty

But median and especially top incomes diverging

State, county per-capita income: BEA Regional Econ. Accts.

- Pre-tax income: Wages, benefits, interest, rent, and biz inc except corporate retained earnings
- Taxes: Federal, state, and local taxes except sales taxes
- Transfers include all major government transfers

Standardizing by inequality across people: Distributional National Accounts (DINA) [Piketty-Saez-Zucman '18]

Quantiles

- Bottom, median, and top (post-transfer) income: CPS
- Poverty rates: Census SAIPE
- Very top incomes: IRS pre-tax income [Sommeiller-Price '18]

Spatial income inequality statistics

Main: Pop.-weighted standard deviation of log per-capita income

- Bourguignon [79] planner has logarithmic inequality aversion
- We show Bourguignon index B relates to familiar var. of log:

$$B \approx \frac{1}{2} \sum_i s_i (\ln v_i - \overline{\ln v})^2$$

w/ per-capita inc. v in area i , pop. s , and $\overline{\ln v} = \sum_i s_i \ln v_i$

- Planner maximizing mean log per-capita income: Willing to trade a 1% loss in mean income for a 0.01 reduction in B

Spatial income inequality statistics

Main: Pop.-weighted standard deviation of log per-capita income

- Bourguignon [79] planner has logarithmic inequality aversion
- We show Bourguignon index B relates to familiar var. of log:

$$B \approx \frac{1}{2} \sum_i s_i (\ln v_i - \overline{\ln v})^2$$

w/ per-capita inc. v in area i , pop. s , and $\overline{\ln v} = \sum_i s_i \ln v_i$

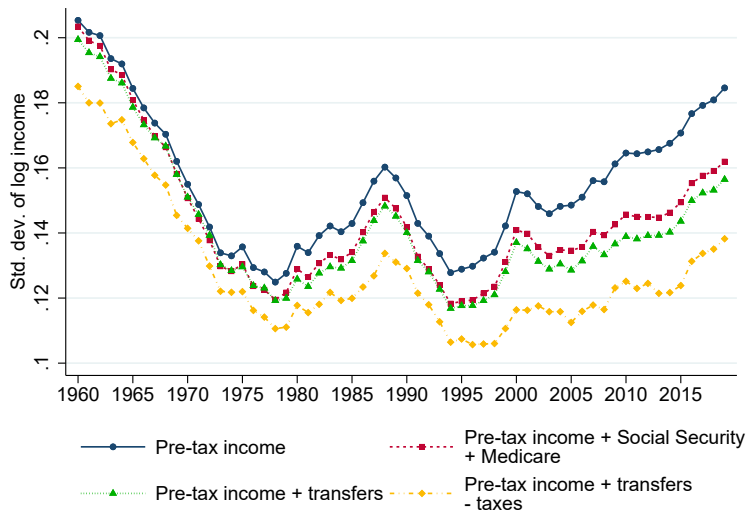
- Planner maximizing mean log per-capita income: Willing to trade a 1% loss in mean income for a 0.01 reduction in B

Dissimilarity index for poverty only

- Share who need to move for all areas i to have the same poverty rate: $\frac{1}{2} \sum_i |P_i - NP_i|$ [P_i , NP_i are poor, non-poor shares]

States are growing apart after having grown together

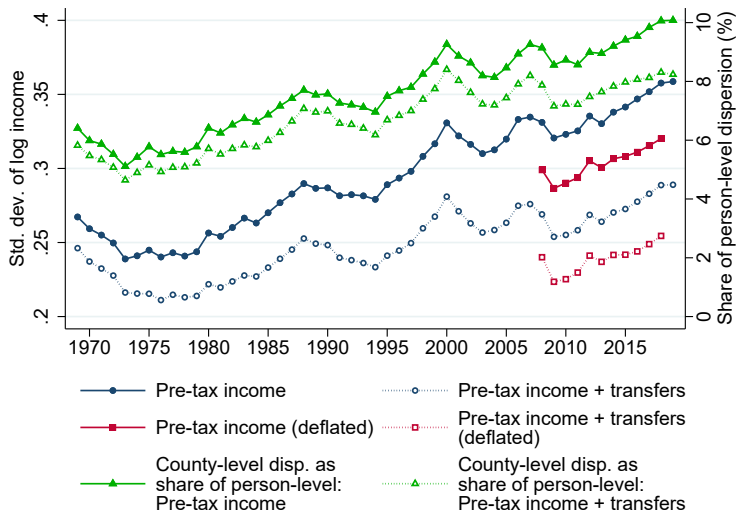
Per-capita income dispersion across U.S. states [BEA]



Note: Planner willing to reduce avg. inc. by 1.0% to achieve income equalization

Counties are growing apart

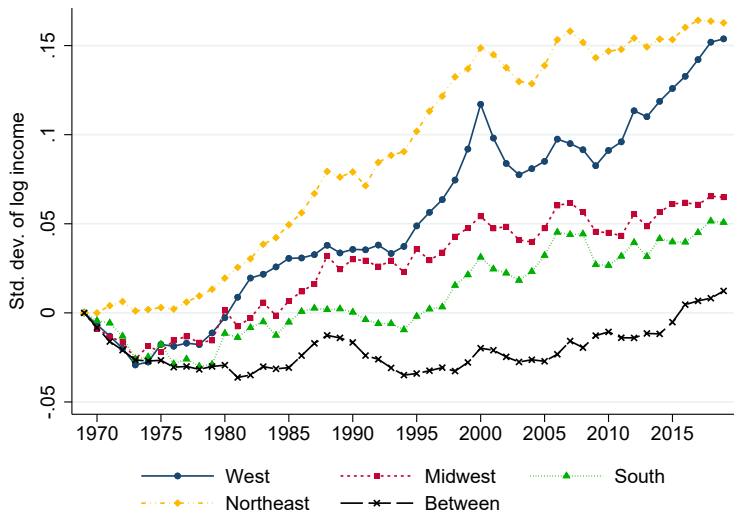
Per-capita income dispersion across U.S. counties [BEA, DINA]



Note: Planner willing to reduce avg. inc. by 4.2% to achieve income equalization

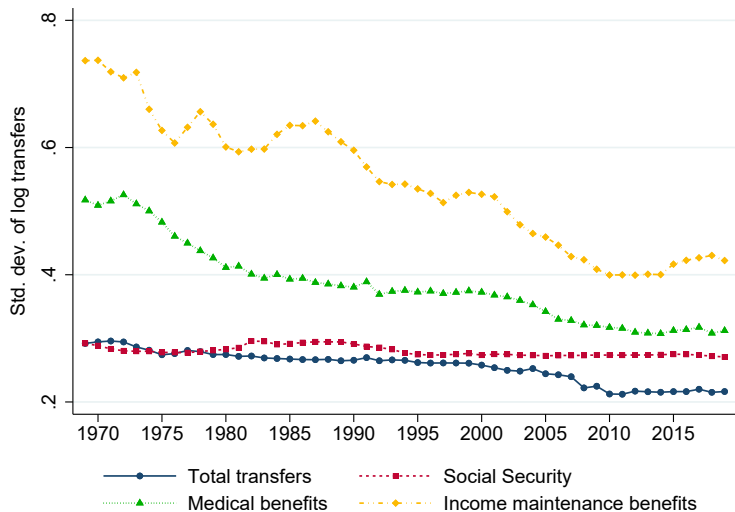
Counties are growing apart...mainly on the coasts

Per-capita pre-tax income dispersion across U.S. counties [BEA]



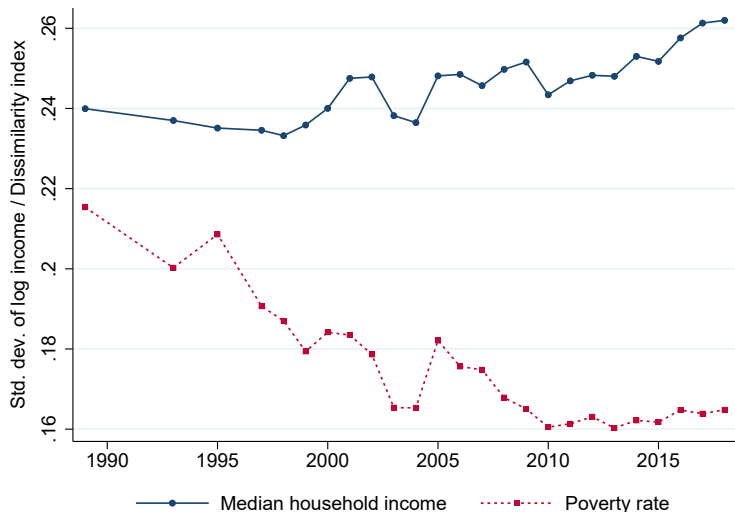
Transfers have converged

Dispersion in per-capita transfers across U.S. counties [BEA]



Poverty has converged. Median incomes have diverged.

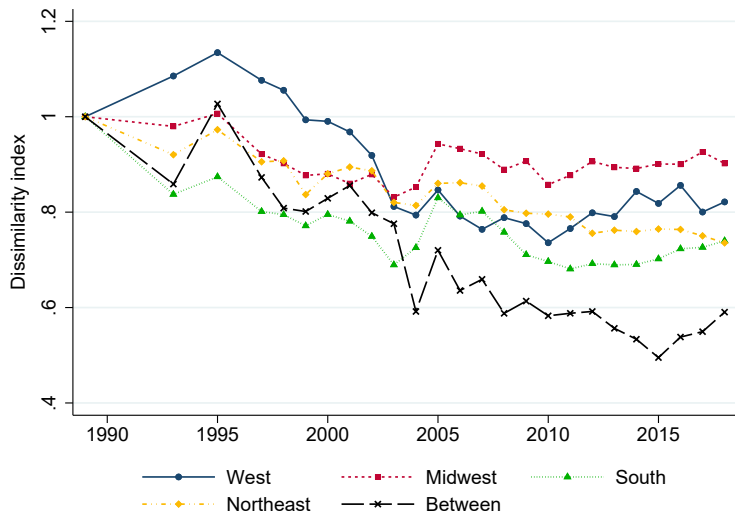
Dispersion in poverty rates and median household income across U.S. counties [Census]



Note: Planner willing to reduce med. inc. by 3.3% to achieve income equalization

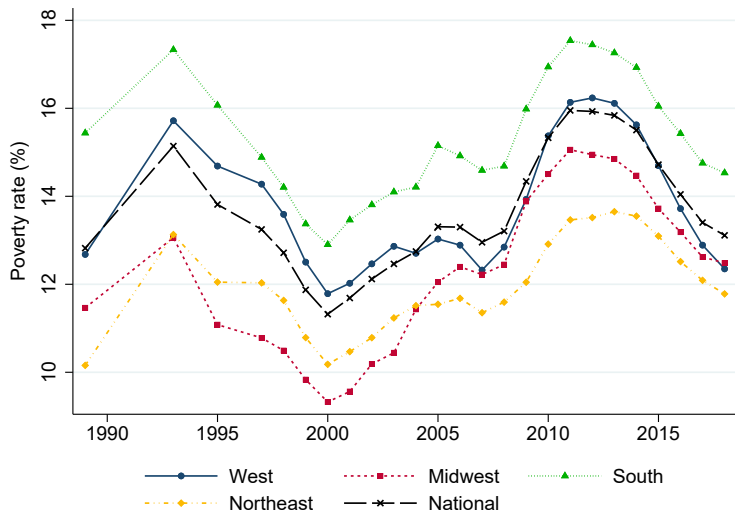
Poverty has converged...including between regions

Dispersion in poverty rates across U.S. counties by region [Census]



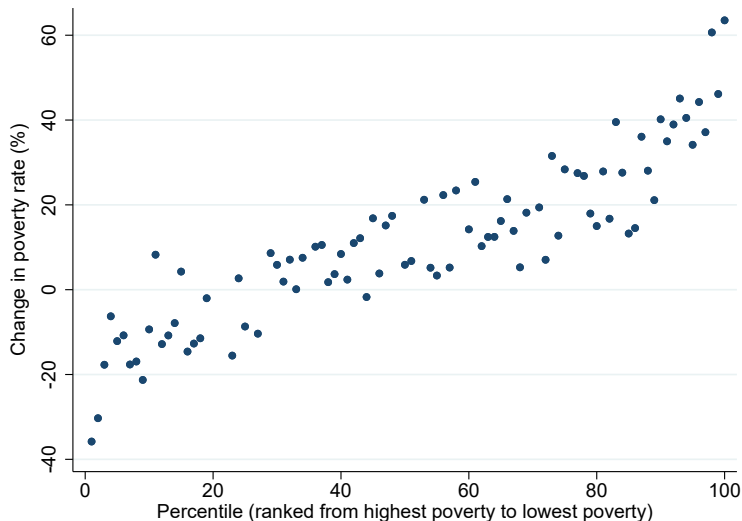
...as poverty rose in Northeast/Midwest, fell in South

Poverty rates by U.S. regions [Census]



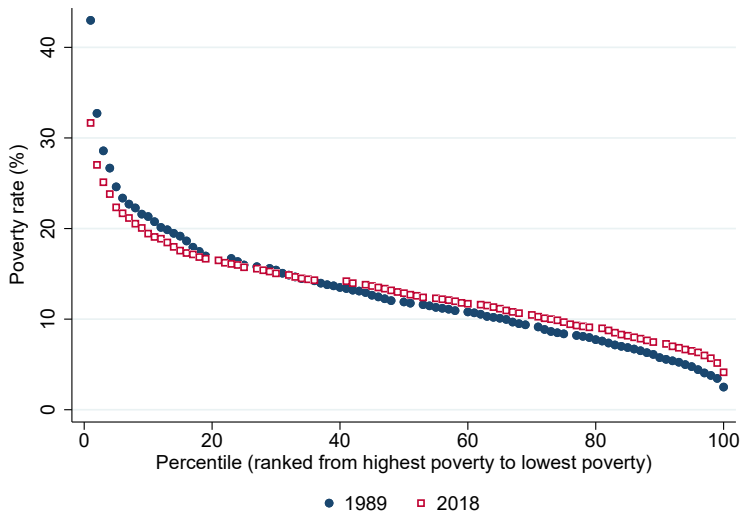
Poverty fell in the highest poverty counties, rose in the lowest

County poverty 1989-2018 growth by 1989 county poverty rate rank [Census]



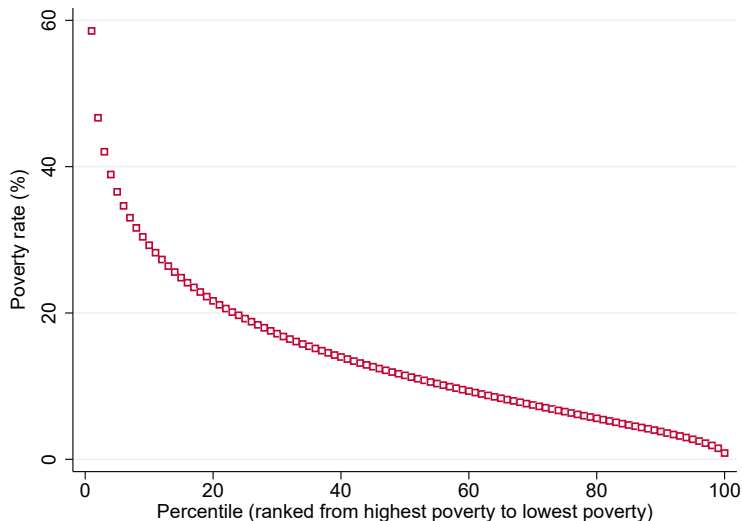
Note: Poverty remains highly concentrated

County poverty rate by annual county poverty rate rank [Census]



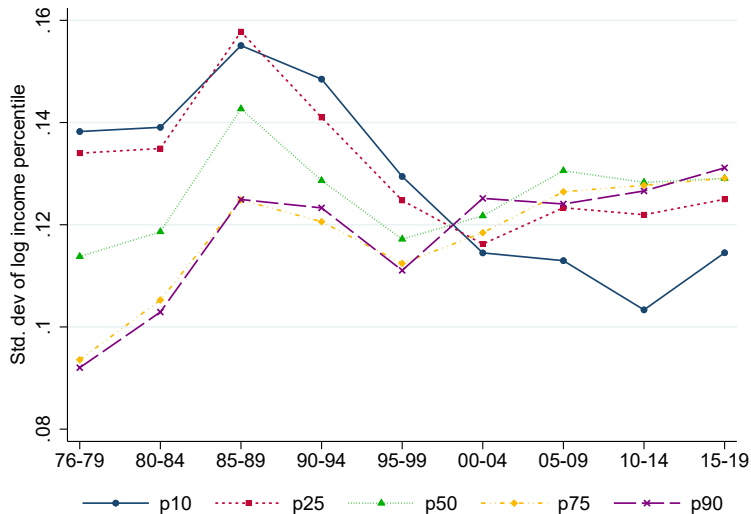
Note: Poverty remains highly concentrated

Tract poverty rate by tract poverty rate rank [2013-2017 ACS, Gaubert-Kline-Yagan '20]



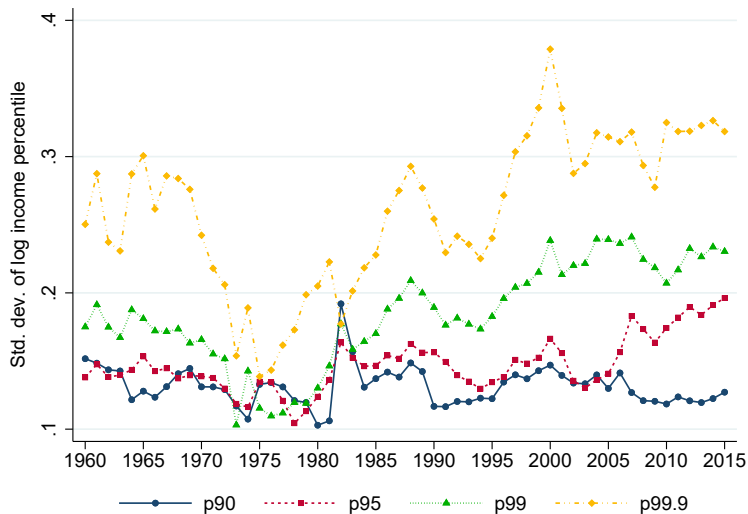
Top incomes have diverged across states

Dispersion in state income percentiles [CPS]



Top incomes have diverged across states

Dispersion in state income percentiles [IRS]



Conclusion

Growing apart?

- Yes, on average and at the top and middle
- No, at the bottom (though poverty still concentrated)

Implications

- Growth findings poor guide to spatial income inequality
- Divergence due in part to persistence of place-based shocks?
[e.g., Autor-Dorn-Hanson '13, Walker '14, Yagan '19]
- Impetus for “millionaire taxes” in CA/NY/CT/NJ/DC?