# Developing State Personal Income Distribution Statistics

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## Outline



- Introduction
- Source data and methodology
- Sample of results
- Your feedback

#### Introduction



- Goal: create a distributional account for State Personal Income
  - Allows for analysis of inequality by state and over time
  - Benchmarked to BEA SPI aggregates
  - Contributes to BEA's Beyond GDP initiative
- Builds off BEA work distributing national personal income (Fixler et al, 2020), adapting to state data constraints

# Other Estimates of State Inequality



- Census provides official state median household money income and Gini coefficients by state
  - Directly from American Community Survey and/or Current Population Survey
  - Not benchmarked to NIPA or State Personal Income, or tax data
- Economic Policy Institute (think tank) has top 1% state and county estimates up to 2015, based on IRS SOI data and ACS

#### Source Data



#### Base datasets

- State Personal Income accounts
- CPS Annual Social and Economic Supplement (ASEC) microdata

#### Other data sources

- IRS Statistics of Income
- Medical Expenditure Panel Survey
- Survey of Consumer Finances
- American Community Survey
- Center for Medicare and Medicaid Services
- Congressional Budget Office

#### Base Dataset 1: SPI Accounts



- We start by selecting 75 detailed annual state personal income components, to be allocated to households
- These population aggregates are Regional's bread & butter: measured using a variety of source data, often in partnerships with IRS, BLS
- Components measured on place-of-work basis are transformed to place-of-residence basis, to be consistent with survey data used in next steps

## Base Dataset 2: CPS ASEC microdata



- Base dataset for allocation to state households is pooled CPS
  ASEC microdata, from three previous years
- CPS is only source that has enough variety of income types
- Following Census guidance on using multiple years for state estimates

 Similar structure to ACS 3 or 5-year files used for smaller geographies

# **CPS Adjustments**



- CPS is adjusted for under/misreporting, to improve estimates of the top of the distribution
  - Using state IRS Statistics of Income data on wages, interest, dividends, business income (sole proprietor & partnership)
  - As in national methodology
- Other data sources used to supplement, or "fill out" CPS
  - CPS alone is not suitable to distribute some income types to households: medical income components, imputed interest/rent, etc.
  - Bring in: CMS, MEPS, SCF, BEA's recent housing work based on ACS, others

# Allocating, and Generating Estimates



- Each detailed, place-of-residence SPI component is allocated to state households using adjusted CPS
  - We now have microdata that adds up to State Personal Income
  - Household size-adjusted income is used to define the ranking of households
- Inequality measures can now be produced
  - Median, Gini, quintile shares of State PI
  - Quintile shares of sub-aggregates, consistent with existing BEA
    Regional publication tables

# Methodology differences with national release



- In general, methodology is very similar to national
- Four main differences
  - Consistency with State Personal Income rather than National
  - 3-year CPS sample
  - ACS for imputed rental of owner-occupied housing, rather than Consumer Expenditure Survey
  - Top bin is >\$200k AGI for SOI adjustment rather than \$500k

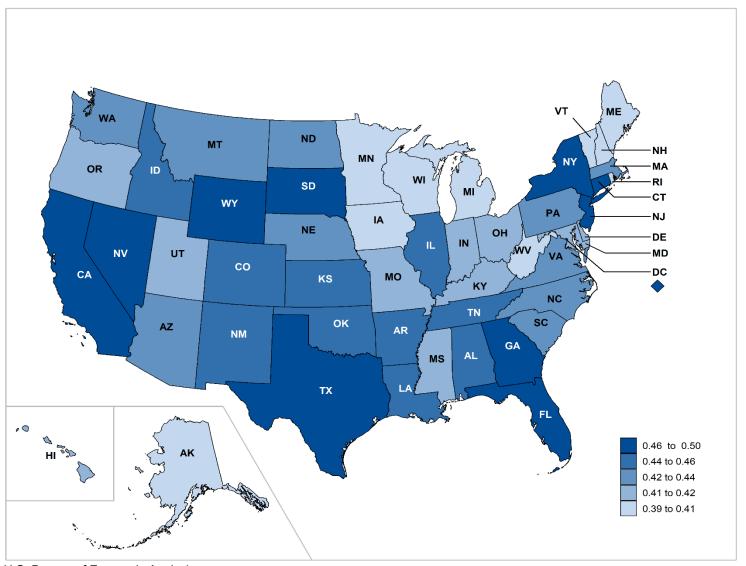
#### Results



- New results for 2009-2018
  - Just 2018 today for simplicity
  - Focus on Gini, median income, top quintile borders
    - Quintiles borders are defined at the state level
  - Comparison to Census state money income estimates

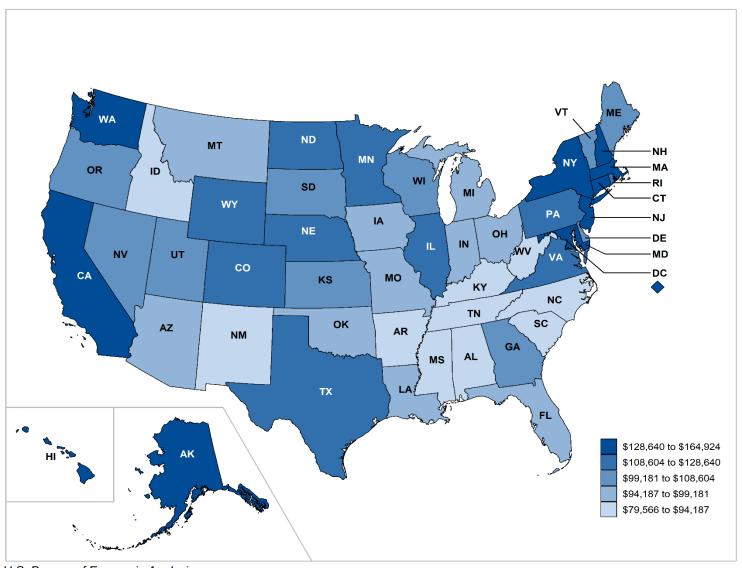
# Gini Coefficients, 2018





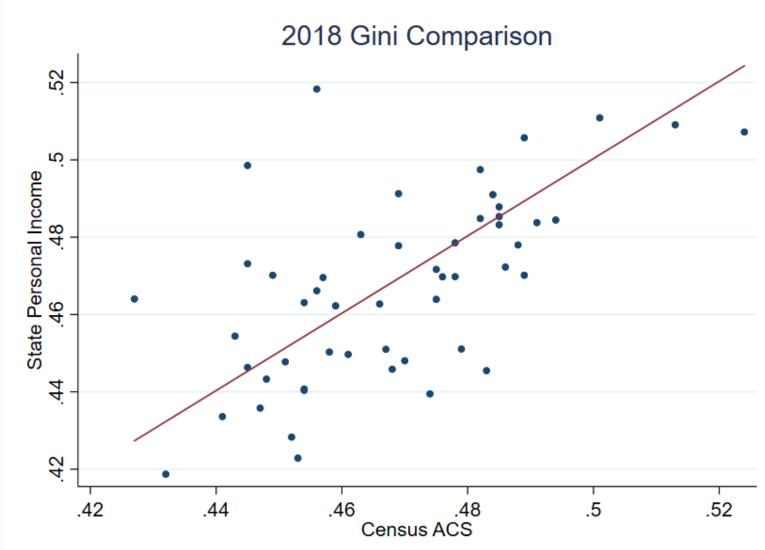
# 80<sup>th</sup> Percentile of Equivalized SPI, 2018





# Our estimates vs. Census state estimates from ACS

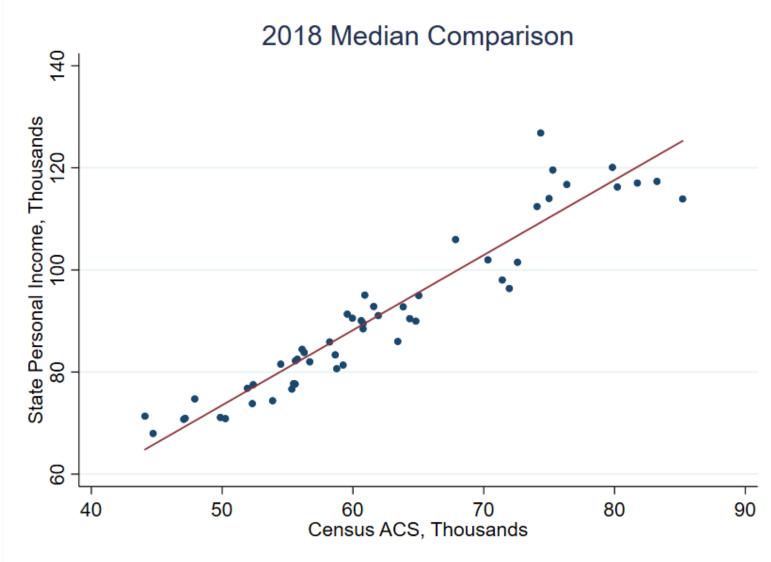




Note: each dot on the graph represents one state.

# Our estimates vs. Census state estimates from ACS





#### **Future Research**



### State disposable personal income

- Involves distributing taxes
- Allows for analysis post-tax and post-transfer

### Integrate BEA regional price parities

- This would not change within-state estimates, since RPPs do not have an inequality aspect
- Could significantly change interpretation of median income differences across states

## Your feedback



- Methodology comments?
  - Other data sources?
- What about presentation of the data?
  - State focus, versus state shares of national quintiles