Developing State Personal Income Distribution Statistics

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Outline

• Introduction

• Source data and methodology

• Sample of results

• Your feedback
• Goal: create a distributional account for State Personal Income
  
  o Allows for analysis of inequality by state and over time
  
  o Benchmarked to BEA SPI aggregates
  
  o 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
  o State Personal Income accounts
  o CPS Annual Social and Economic Supplement (ASEC) microdata

• Other data sources
  o IRS Statistics of Income
  o Medical Expenditure Panel Survey
  o Survey of Consumer Finances
  o American Community Survey
  o Center for Medicare and Medicaid Services
  o 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
  o Using state IRS Statistics of Income data on wages, interest, dividends, business income (sole proprietor & partnership)
  o As in national methodology

• Other data sources used to supplement, or “fill out” CPS
  o CPS alone is not suitable to distribute some income types to households: medical income components, imputed interest/rent, etc.
  o 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
  
  o We now have microdata that adds up to State Personal Income
  o Household size-adjusted income is used to define the ranking of households

• Inequality measures can now be produced
  
  o Median, Gini, quintile shares of State PI
  o 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
  o Consistency with State Personal Income rather than National
  o 3-year CPS sample
  o ACS for imputed rental of owner-occupied housing, rather than Consumer Expenditure Survey
  o 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

U.S. Bureau of Economic Analysis

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5/14/2021

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80th Percentile of Equivalized SPI, 2018
Our estimates vs. Census state estimates from ACS

2018 Gini Comparison

Note: each dot on the graph represents one state.
Our estimates vs. Census state estimates from ACS

Note: each dot on the graph represents one state.
Future Research

• State disposable personal income
  o Involves distributing taxes
  o Allows for analysis post-tax and post-transfer

• Integrate BEA regional price parities
  o This would not change within-state estimates, since RPPs do not have an inequality aspect
  o Could significantly change interpretation of median income differences across states
• Methodology comments?
  
  o Other data sources?

• What about presentation of the data?
  
  o State focus, versus state shares of national quintiles