Distribution of Real PI: what deflator to use?

PANEL ON IMPROVING COST-OF-LIVING INDEXES AND CONSUMER INFLATION STATISTICS IN THE DIGITAL AGE
Virtual Meeting Session: Supplemental Subgroup (defined by income) Price Indexes
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BEA Prototype Estimates

- In March 2020 released prototype estimates BEA web page: https://www.bea.gov/data/special-topics/distribution-of-personal-income
- Update will be released in December 2020
- What the data show (2007-2016)
  - Personal Income is growing for all quintiles
  - 58% of growth in Personal Income accrued to top quintile over period
  - Inequality is virtually unchanged - top shares have not risen

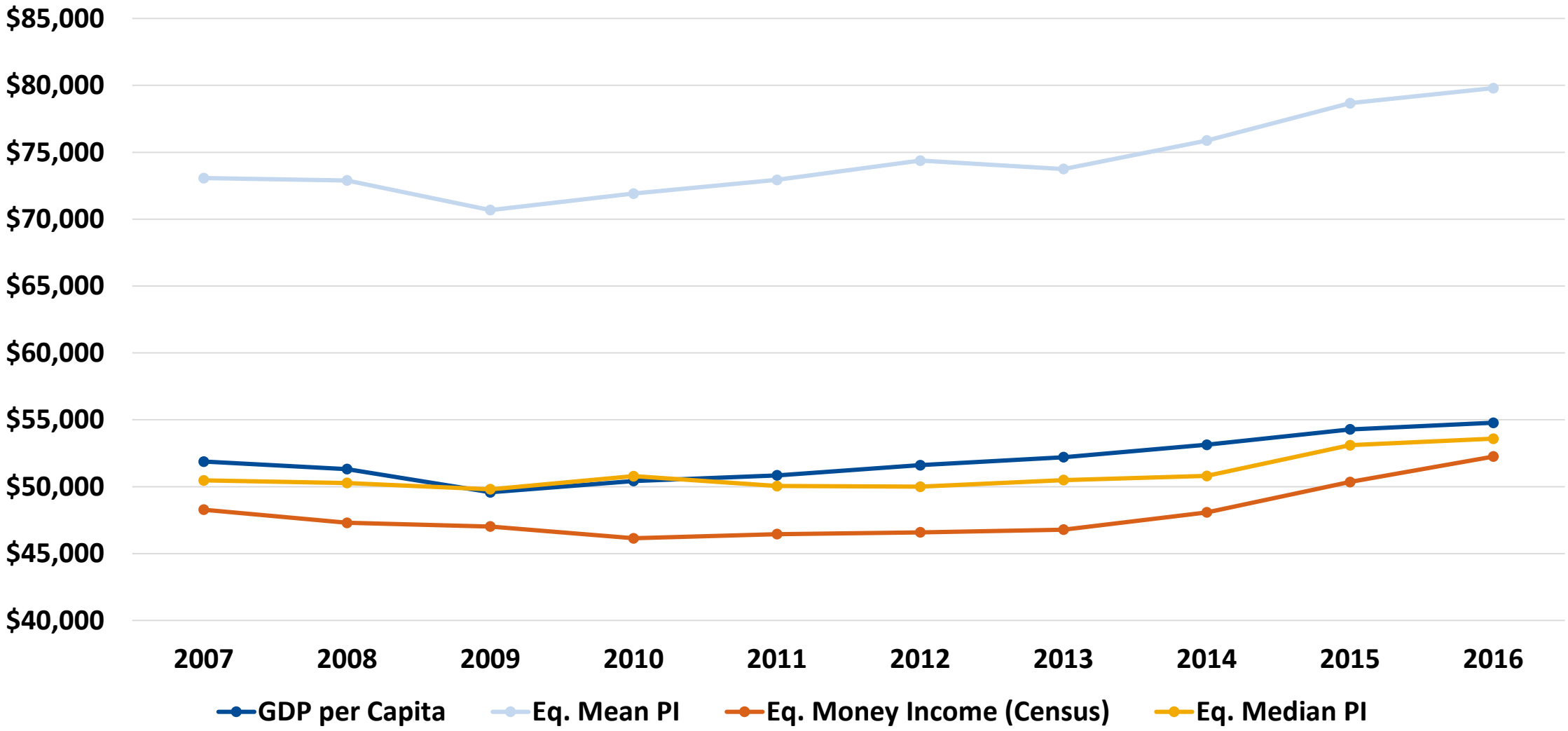
Features of Methodology

- All data sources are publicly-available: emphasis on *transparency* and *utility* for data users
- We adjust Current Population Survey variables using tax data from IRS (SOI) to capture underrepresented high-income households
  - Aggregate the SOI data on tax units (into the proportion of income with adjusted gross income (AGI) less than $500,000 versus AGI greater than or equal to $500,000 for six components: (1) wages, (2) business income, (3) ordinary dividends, (4) taxable and nontaxable interest income, (5) farm income, and (6) rents and royalties
- Build on Census concept of money income to get Personal Income
- We allocate PI to Households, not GDP
  - 87% of GDI (the income counterpart of GDP)
  - Most appropriate national accounts concept for households
  - Distribute Table 2.9 to separate out NPISH
  - Adjust for household size (i.e., “equivalize”): accounts for resource sharing in households
  - Households ranked accordingly equivalized PI

Sample from BEA Income Distribution web page

2016				
Table 2: Decomposition of Personal Income for Households (2016)				
Line	Income concept	Totals ($B)	Household average (equivalized)	Real household average (equivalized) (2012=100)
1	Money income (Census)	10,494.6	54,392.1	52,254.4
2	Adjusted money income	11,850.9	61,214.5	58,808.6
3	*Transfers*	1,299.0	7,466.4	7,172.9
4	**Plus:** Financial	1,963.2	10,010.6	9,617.1
5	**Plus:** Health	1,935.6	10,137.5	9,739.1
6	*Transfers*	1,243.9	6,705.9	6,442.4
7	**Plus:** Other transfers (net)	366.9	1,665.4	1,600.0
8	**Equals: Household income**	16,116.6	83,027.9	79,764.8
	Plus: NPISH (net)	…	…	…
9	**Equals: Personal income**	16,121.2	83,052.2	79,788.1

Growth over Time (Real $2012)



Note: Estimates are deflated using PCE. Money income is recalculated according to the census definition.

Computation of Real Personal Income

- Currently use aggregate annual PCE price index
- Question: Does an aggregate price index provide a “good” measure of real income for different subgroups—especially low income?
- Do low income households pay different prices and have different expenditure patterns?
- There are about 230 PCE product categories; BEA does not have information to create a distribution of them.
  - Corresponding price indexes are mostly CPIs
  - Differences between PCE and CPI: Formula, Scope, and Weights
    - Table on BEA website presenting differences: Table 9.1U. Reconciliation of Percent Change in the CPI with Percent Change in the PCE Price Index; https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=underlying
- Therefore cannot simply re-weight PCE components to create subgroup indexes

Needed: Distribution of PCE

- Even if we could there is a problem—how could we create the subgroups without first knowing the distribution of PI?
- In other words, to create a low income (bottom quintile) PCE price index, we would have to know what the bottom quintile is.
- Needed: Externally determined sub-group price indexes with a definition of where they would be applied
- This would require an exogenous distribution of PCE
- Such a distribution would require a distribution of BLS Consumer Expenditures

Needed: Distribution of PCE

- Discussions with BLS about a joint project to determine a distribution of consumption—both PCE and CE
- A distribution of PCE, even without price index use, would complement the distribution of PI
- Measures of consumption inequality important consideration for well-being