

# Take the Plutocracy out of the CPI



Discussion of  
CNSTAT report on  
Modernizing the CPI:  
Supplemental Subgroup  
Price Indexes

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The views represented here are my own and do not reflect the views of NASEM or other NASEM staff

# The report acknowledges important research of Re-Engineering Statistics using Economic Transactions (RESET) project, and to use scanner data

- “A very recent paper (Ehrlich et al., 2021) attempts to implement both demand-based and reduced-form approaches to scanner data...Empirical works like these provide much needed perspective on the relative merits of these new contributions.”
- **Recommendation 3.5:** BLS should begin exploring development of a household-based scanner recording program that would **capture prices, quantities, and item characteristics** of purchases made by surveyed respondents. In addition to its value for estimating item strata weights, this method of obtaining spending information would be useful for construction of elementary aggregates.

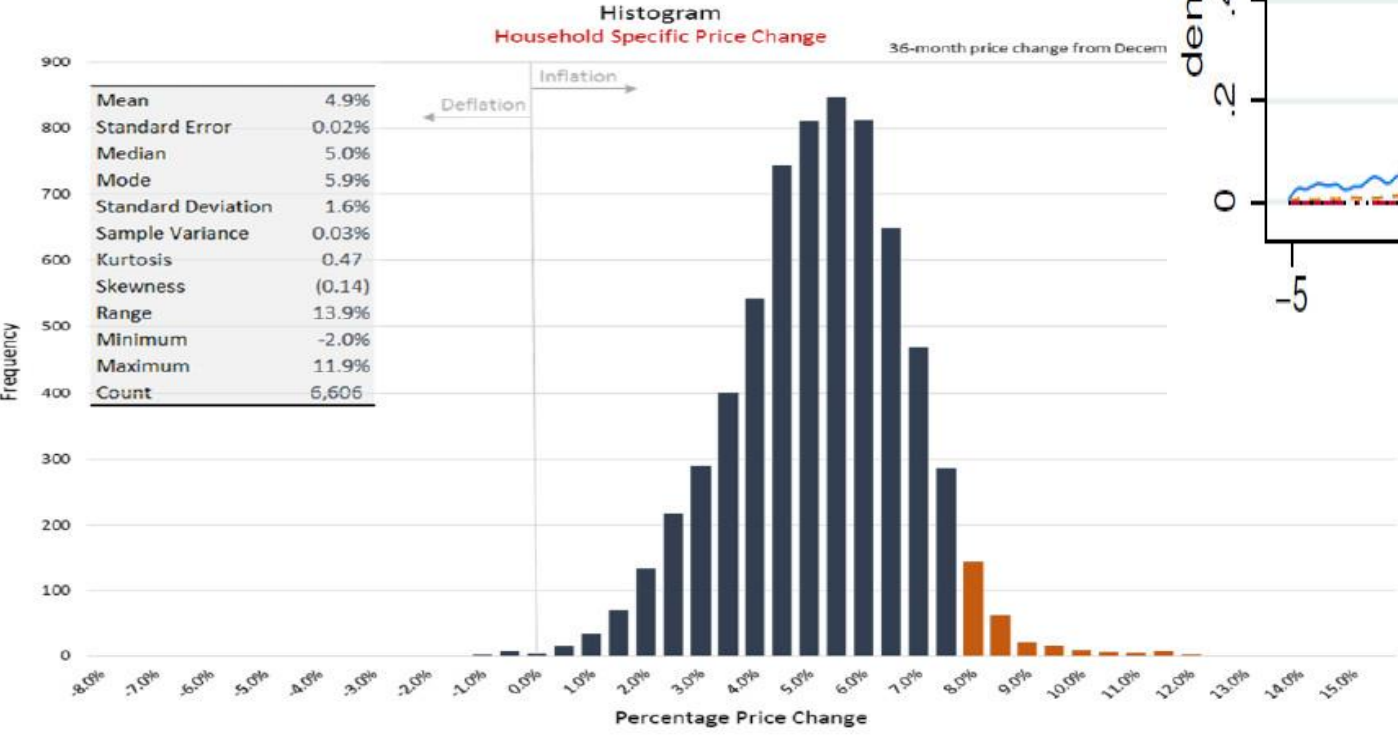
Report recommends BLS produce subgroup indexes by income, be creative, and use commercial data. But they should continue to examine upper-level market basket

- **Recommendation 6.1:** Because of the urgency of issues related to income and wealth inequality, social welfare, and poverty, **developing price indexes for population subgroups along the income distribution should be a high priority for BLS.** Identifying data sources that would ultimately allow production of price indexes by income quintile or, if possible, decile is a key part of this work.
- **Recommendation 6.2:** Even though the marginal cost of such exercises is not high, valuable CPI program resources **should ~~not~~ be devoted to developing additional subgroup price indexes that ~~simply~~ entail a re-weighting of upper-level expenditure categories**
- **Recommendation 6.3:** To identify and obtain the data necessary to estimate accurate subgroup price indexes, no one size will fit every category of goods and services. BLS will have to **be creative and flexible in finding and blending different data sources.** Exploiting commercial datasets on a range of household purchases will be essential.

# BLS researchers have been producing subgroup indexes for many years

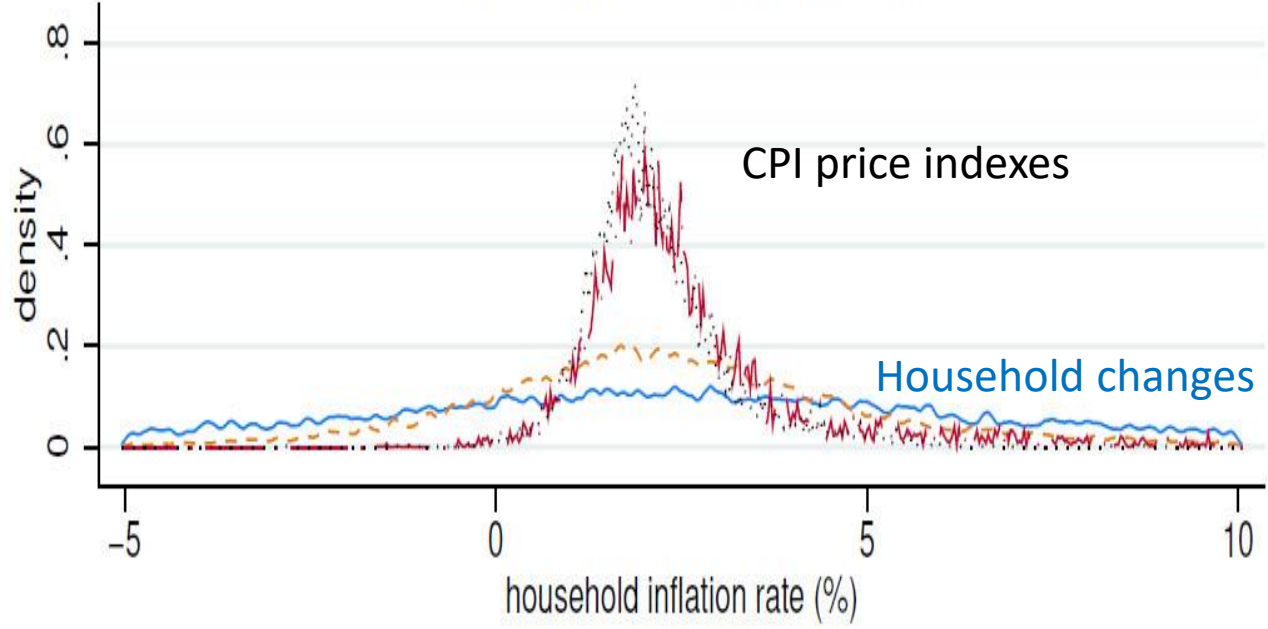
- Starting with the CPI-U, CPI-W and CPI-E
- Garner, T., Johnson, D., and Kokoski, M. 1996. “An experimental consumer price index for the poor“
- Cage, R., Garner, T., and Ruiz-Castillo, J. 2002. “Constructing Household Specific Consumer Price Indexes: An Analysis of Different Techniques and Methods“
- Lane, W. and Schmidt, M.J. 2006. “Comparing U.S. and European inflation: the CPI and the HICP”
- Cage, R., Klick, J., Johnson, W. 2018. “Population Subgroup Price Indexes: Evidence of Heterogeneity or Measurement Error?”
- Martin, R. 2021. “Democratic Aggregation: Issues and Implications for Consumer Price Indexes”
- Klick, J. and Stockburger, A. 2021. “Experimental CPI for lower and higher income households”

# Similar distributions of price indexes (using CPI and Nielsen), but more variation of price changes for actual household purchases



Cage et al. (2018)

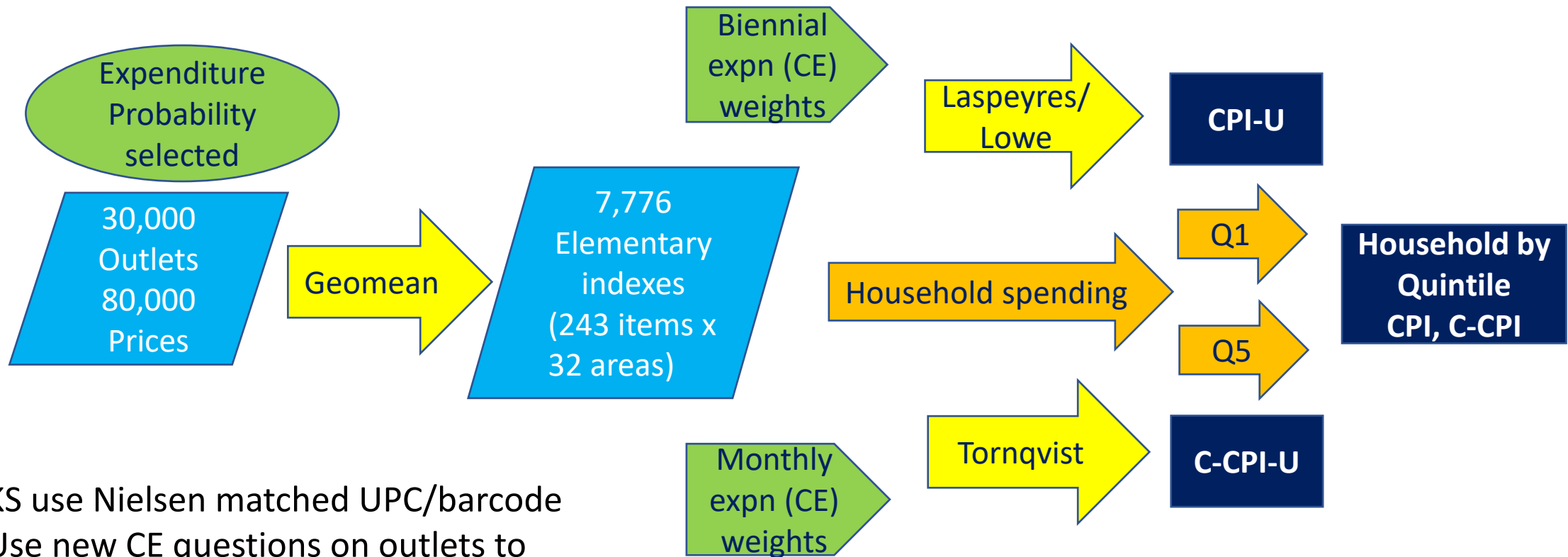
(a) Laspeyres indexes, 5+ barcodes



Kaplan & Schulhofer-Wohl; KS (2017)

Finds similar interquartile range.

# Construction of CPIs, elementary indexes and aggregation weights use a plutocratic approach



KS use Nielsen matched UPC/barcode  
Use new CE questions on outlets to create HH specific elementary indexes  
Consider price indexes by low-income areas/zipcodes

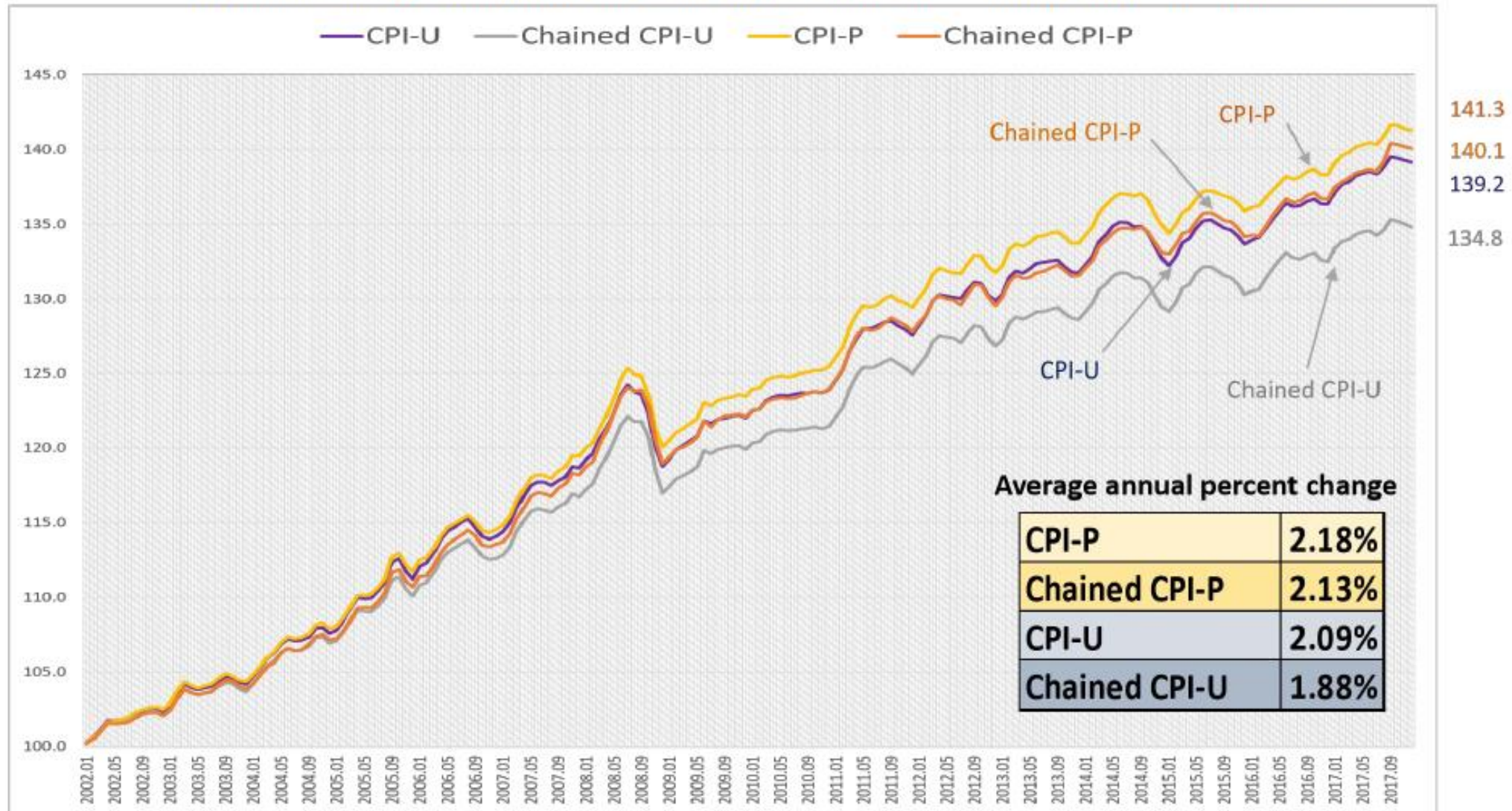
# Interagency Technical Working Group on Consumer Inflation Measures recommends C-CPI-U for the poor

## **Recommendation 1: Official Poverty Measure**

- The ITWG recommends the **BLS pursue development of a new consumer price index specifically designed to represent the inflation experience of low-income consumers**, and that OMB use that new index to adjust the OPM. To that end, a formula measuring price change based on the current behavior of consumers is superior to one based on consumer behavior from several years ago. Therefore, an index that uses the Tornqvist (or a similar formula that averages spending from adjacent time periods) should be used in the construction of the low-income index.

# C-CPI-P rises more than overall C-CPI (and similar to CPI-U), which would lead to larger increases in poverty

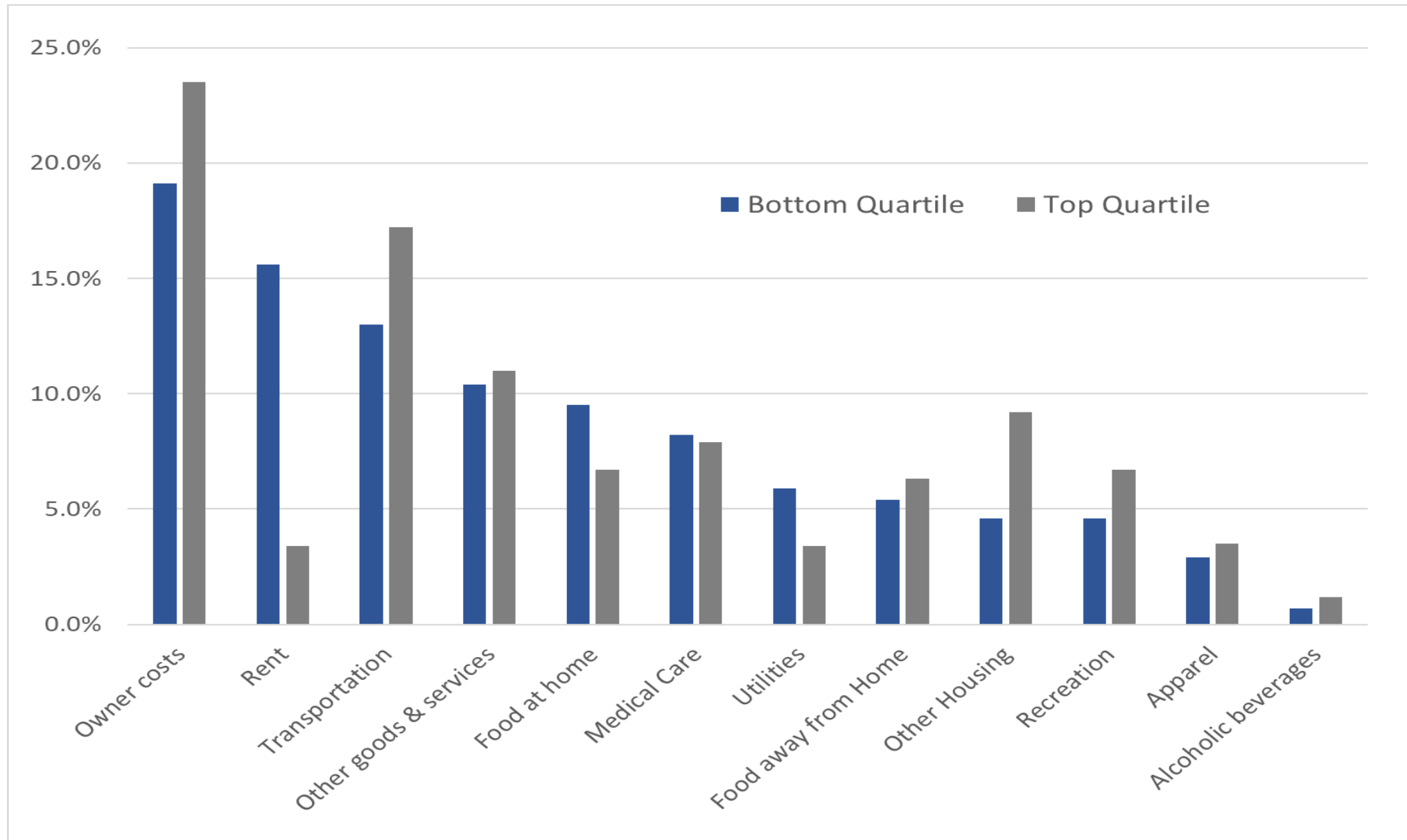
All-Items, U.S. City Average not seasonally adjusted index, December 2001 to December 2017



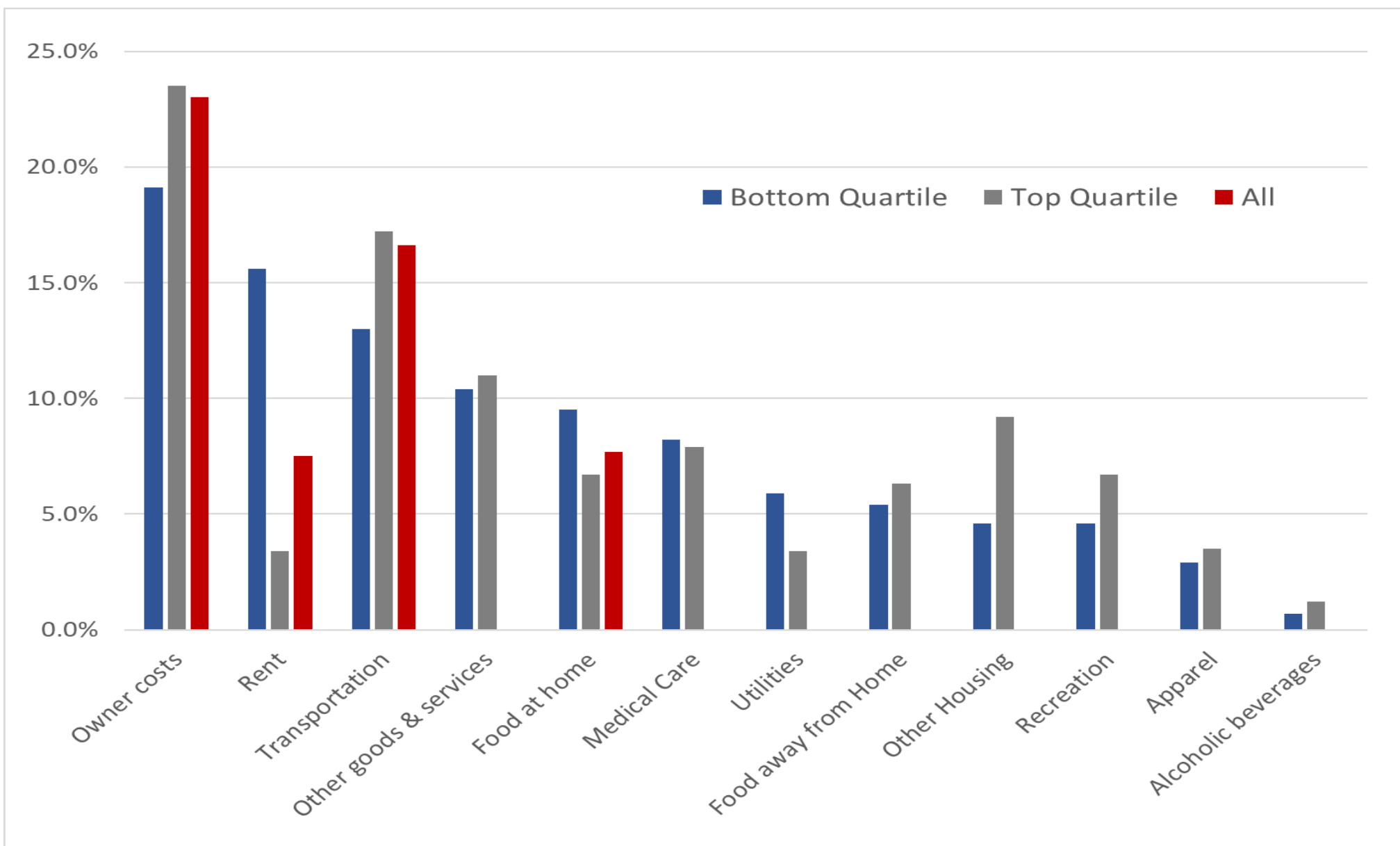
Source: BLS unpublished research for ITWG. P3 cohort definition



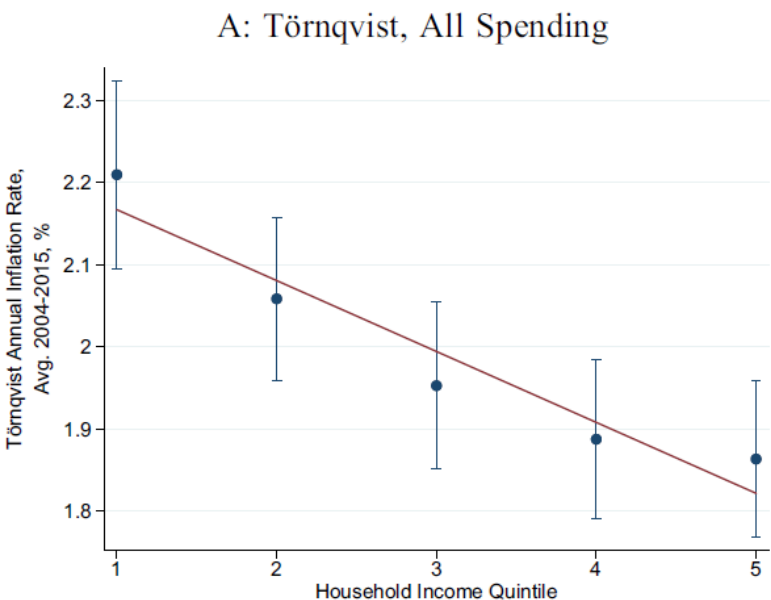
# Klick/Stockburger show different market baskets for top and bottom quartiles; 2014-15



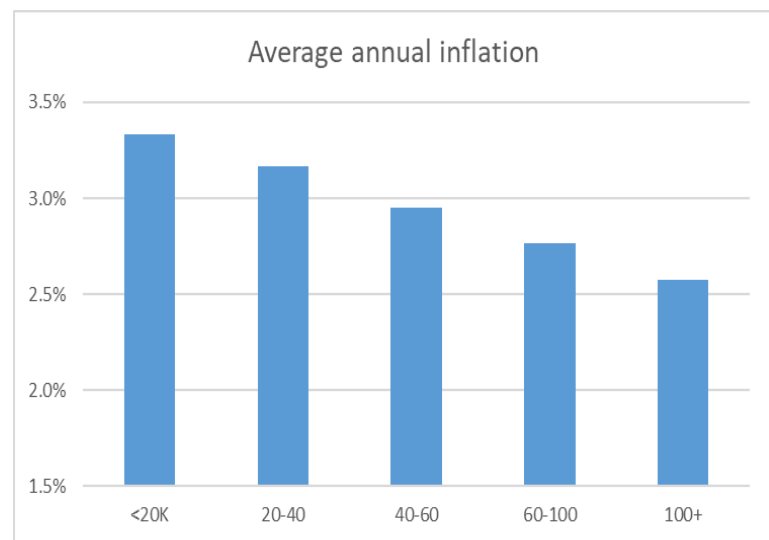
Overall CPI shares more similar to shares of top income since they have more spending – the plutocracy



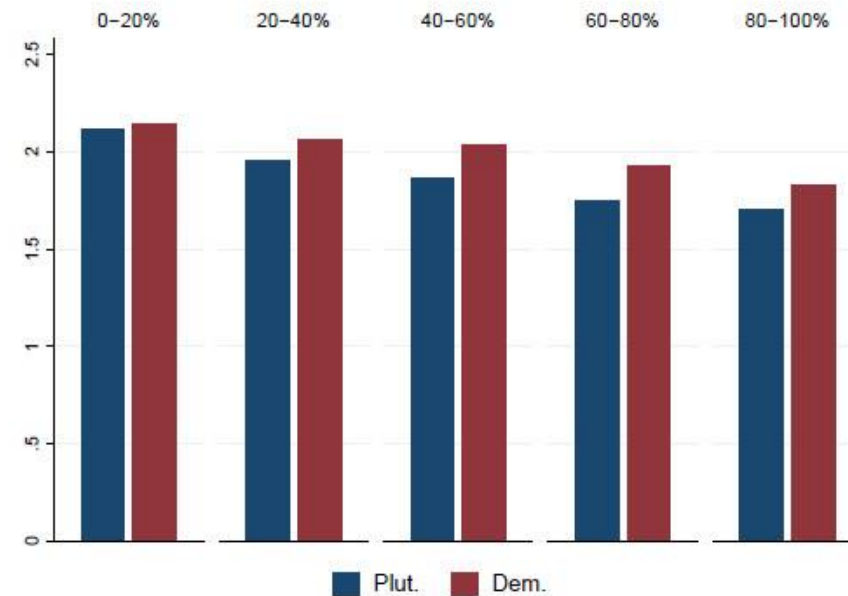
Research shows inflation falls with income; inflation for bottom is anywhere from 0.3 to 0.7 pp higher than for top income households



Jaravel (2018) Figure



Kaplan & Schulhofer-Wohl (2018) Table 1

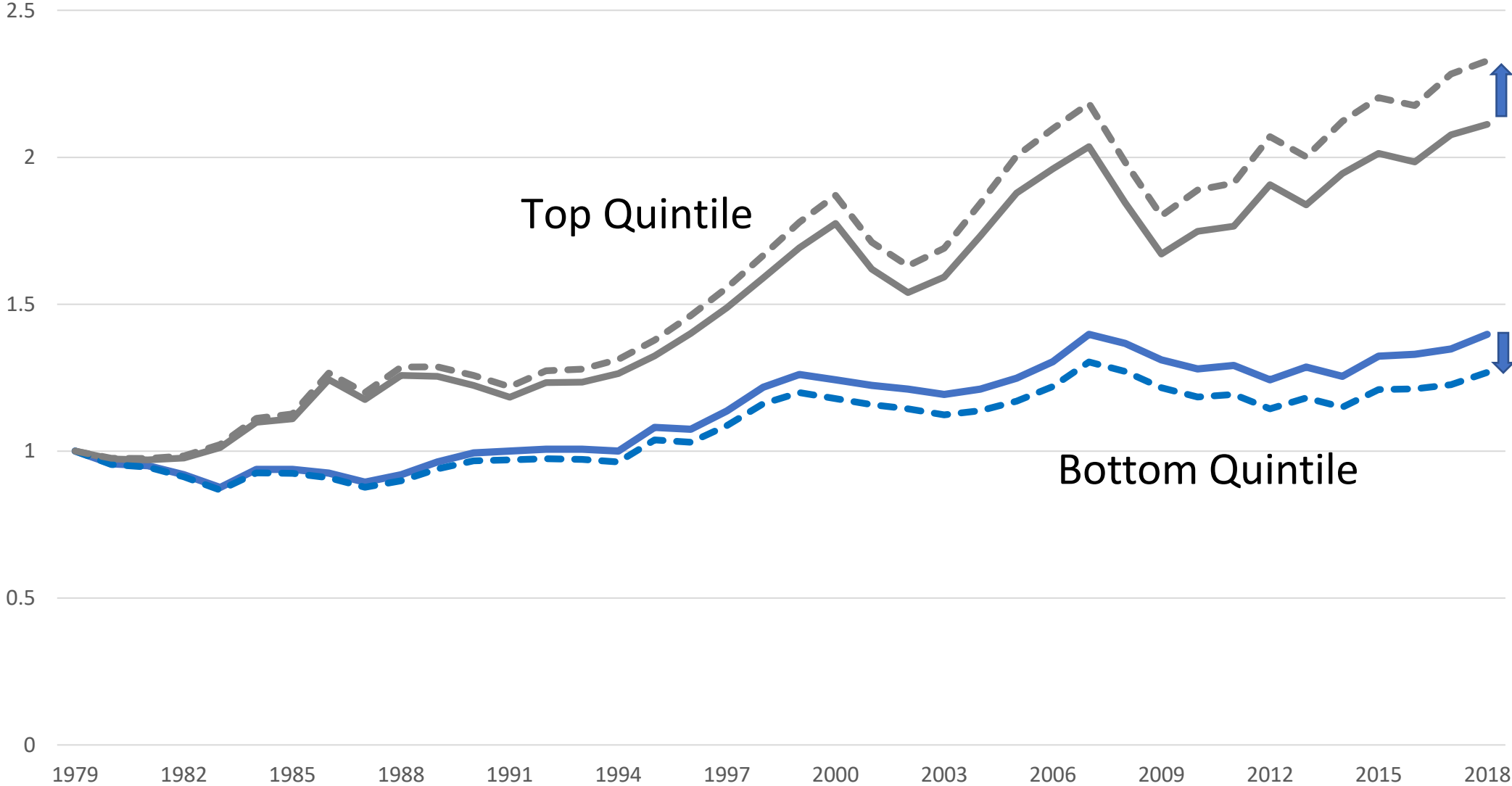


(b) Income\*\*

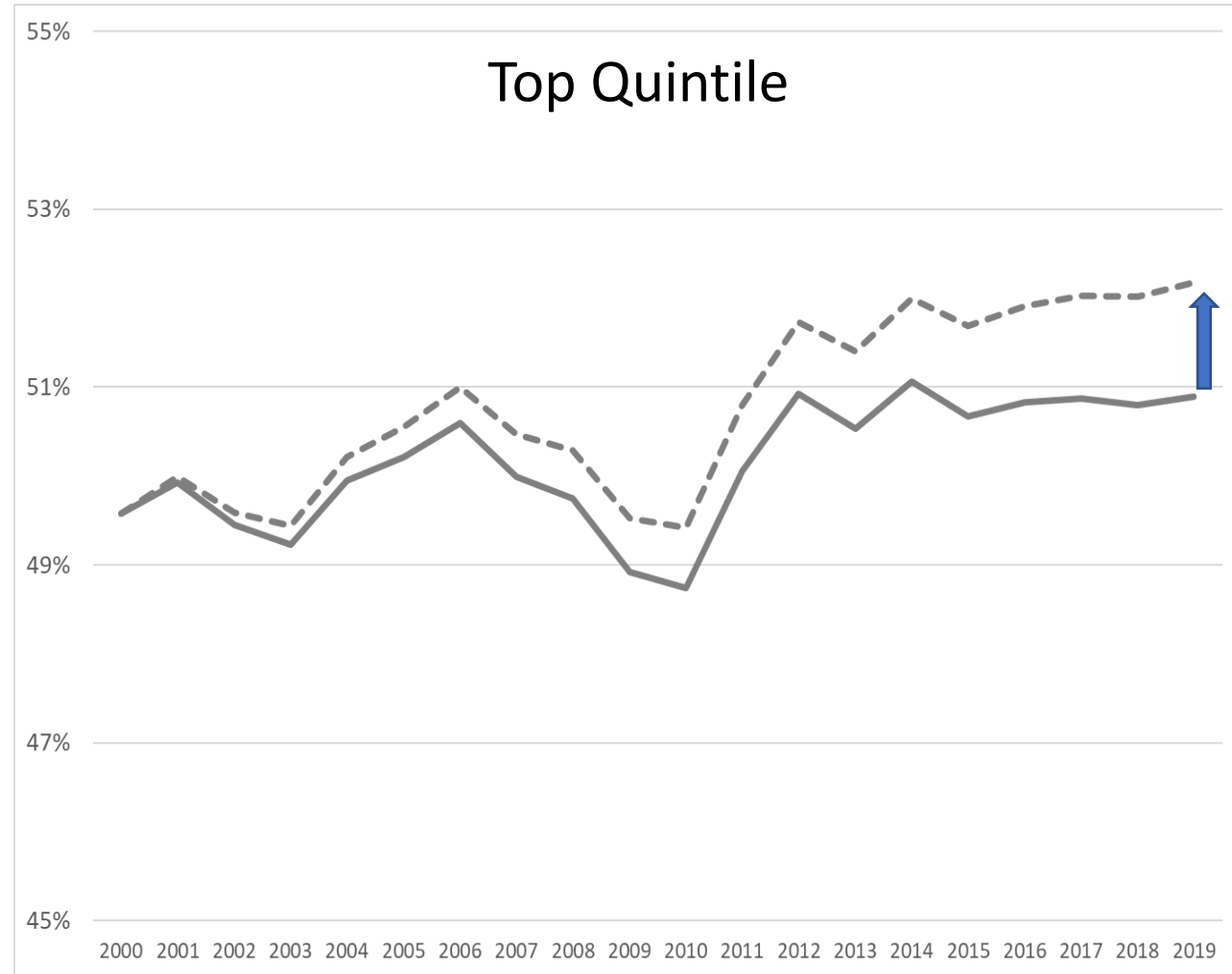
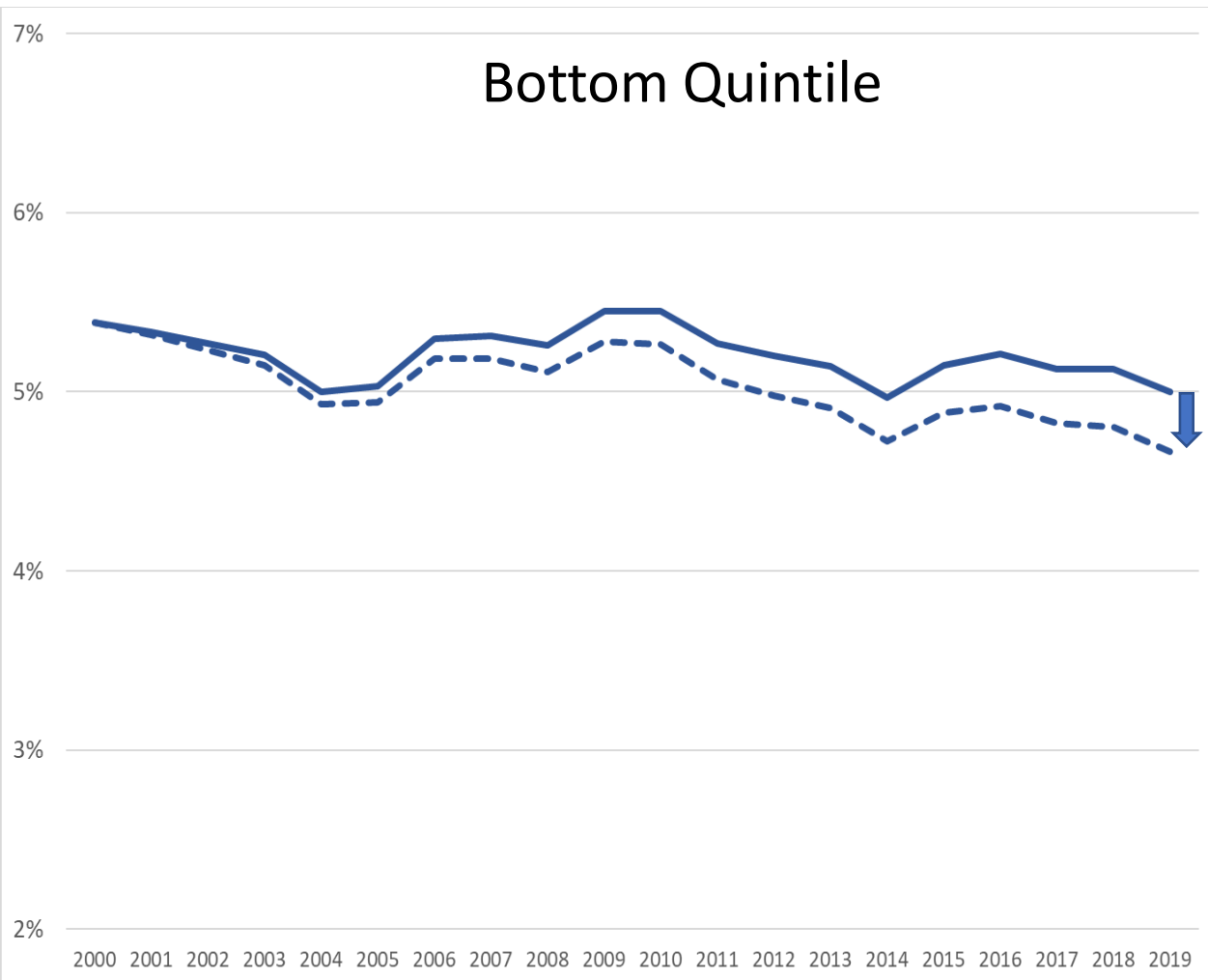
Martin (2021) Figure

also compare to Cage et al. (2018); and Klick & Stockburger (2021)

# Different prices indexes increase inequality – larger increase in real income of CBO top quintile; smaller increase for bottom



# Larger increase in share of BEA's personal income for top quintile, and larger decrease for bottom quintile



# Need cooperation across the federal statistical system

- **Recommendation 7.2: More extensive collaboration between BLS, the Census Bureau, and the Bureau of Economic Analysis—along with other statistical agencies that collect key economic data, such as the U.S. Department of Agriculture—is needed to advance the acquisition and use of alternative data sources** in the production of economic indicators. More specifically, such coordination will allow the statistical system to negotiate common, unified, comprehensive contracts with companies (once, not multiple times) that collect applicable data.

# Creating a new data infrastructure



**CPI**

**GDP / PI**

**Inequality  
Poverty**

