Suggestions of the OMB Interagency Technical Working Group: Consumer Inflation Measures

Rob Cage
Assistant Commissioner for Consumer Prices and Price Indexes
Bureau of Labor Statistics

Greg Kurtzon
Research Economist
Bureau of Labor Statistics

prepared for
Expert Meeting on Adjusting Historical Income and Earnings Estimates for Inflation:
Selecting the Optimal Inflation Index
U.S. Census Bureau
March 22, 2022
## BLS consumer inflation measures

<table>
<thead>
<tr>
<th>INDEX</th>
<th>POPULATION REPRESENTED</th>
<th>YEAR INTRODUCED</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-W&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Wage-earners and clerical workers</td>
<td>1921</td>
<td>Index used for Social Security cost of living adjustment (COLA)</td>
</tr>
<tr>
<td>CPI-U</td>
<td>All urban consumers</td>
<td>1978</td>
<td>Headline Index</td>
</tr>
<tr>
<td>R-CPI-E&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Elderly consumers</td>
<td>1988</td>
<td>Experimental</td>
</tr>
<tr>
<td>R-CPI-U-RS&lt;sup&gt;2&lt;/sup&gt;</td>
<td>All urban consumers</td>
<td>1999</td>
<td>Research series</td>
</tr>
<tr>
<td>Chained CPI-U&lt;sup&gt;3&lt;/sup&gt;</td>
<td>All urban consumers</td>
<td>2002</td>
<td>Published with ~1 year lag</td>
</tr>
</tbody>
</table>

**Notes:**
1. Index represents a population cohort that is a subset of the all urban consumer population.
2. Index designed to reflect methodological improvements made to the CPI-U since 1978 retrospectively back to 1978.
3. Index designed exclusively to mitigate substitution bias in the CPI-U. A preliminary version is published on the same schedule as the CPI-U, and then revised. It is the only CPI product subject to revision.
# BLS consumer inflation measures

<table>
<thead>
<tr>
<th>INDEX</th>
<th>Number of indexes published</th>
<th>Percent of website hits(^1)</th>
<th>Number of references in U.S. Code</th>
<th>Notable statutory escalation uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-W</td>
<td>7,860</td>
<td>12%</td>
<td>5</td>
<td>42 US 62 - Federal contract wages</td>
</tr>
<tr>
<td>CPI-U</td>
<td>8,091</td>
<td>86%</td>
<td>100 +</td>
<td>11 US 104 - Bankruptcy dollar amounts</td>
</tr>
<tr>
<td>R-CPI-E</td>
<td>9</td>
<td>?</td>
<td>2</td>
<td>None</td>
</tr>
<tr>
<td>R-CPI-U-RS</td>
<td>2</td>
<td>?</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>Chained CPI-U</td>
<td>29</td>
<td>2%</td>
<td>2</td>
<td>26 US 1 - Federal income tax brackets</td>
</tr>
</tbody>
</table>

**Notes:**
1. For the 12-month period ending February 2022.
# Use in compilation of federal statistics

<table>
<thead>
<tr>
<th>INDEX</th>
<th>AGENCY</th>
<th>FEDERAL STATISTIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-W</td>
<td>BLS</td>
<td>Real earnings for production and nonsupervisory employees</td>
</tr>
<tr>
<td></td>
<td>BEA</td>
<td>Real output (GDP)</td>
</tr>
<tr>
<td></td>
<td>BLS</td>
<td>Real compensation per hour</td>
</tr>
<tr>
<td></td>
<td>BLS</td>
<td>Real earnings for all employees</td>
</tr>
<tr>
<td></td>
<td>BLS</td>
<td>Employment Cost Index (ECI)</td>
</tr>
<tr>
<td></td>
<td>Census</td>
<td>Official Poverty Measure</td>
</tr>
<tr>
<td>R-CPI-U-RS</td>
<td>Census</td>
<td>Real median income</td>
</tr>
</tbody>
</table>
OMB Interagency Technical Working Group: Inflation Measures

- 13 members from 8 federal agencies
- Chartered February 2019
- Goals:
  1. Recommend proper index for official poverty measure (OPM); revise Statistical Policy No. 14
  2. Provide federal agency guidelines for selecting appropriate inflation measure for administrative purposes and official statistics
OMB Interagency Technical Working Group: Inflation Measures

Recommendations:

1. BLS should pursue development of a CPI specifically designed to represent the inflation experience of low-income consumers
   - OMB should use the new CPI for low-income consumers to adjust OPM
   - The Tornqvist formula should be used in the construction of the CPI for low-income consumers (i.e., a Chained CPI for Low-income)

2. BLS should provide additional resources to assist users on index choice
Aid for BLS Guidance on Index Choice

- Helps guide users to the appropriate index for their target
- Uses same agreed on principles as the choice of OPM escalation index
- Leaves open options of using indexes only available in future
- Allows for different indexes to be used for different ranges of time
  - Not all indexes are available for all time periods
General Principles

- An index weighted with current quantities is preferred to one with lagged quantities.

- Specific population-targeted indexes are preferred for uses related to their targeted population than general indexes.

- A revised index is preferred to an unrevised index.

- A recalculated revised index is preferred to an extrapolated revised index.

- An index targeted to consumers is preferred for a consumer income measure.

- An official index is preferred for research series of similar nature.
All-purpose index decision-making flowchart

Is the target of inflation “national all-items” or Some or one item/area?

No

Component indexes, other

Yes

Population

Is the target population a demographic subpopulation?

Yes

Demographic subpopulation

Urban wage earners and clerical workers

*Use the CPI-W
Range: 1978 - present

*Use the C-CPI-U
Range: 2000 - present

Elderly

*Use the CPI-E
Range: 1913 - present

*Use the PCE
Range: 1959 - present

Poverty/low income

*Use the CPI
If available

*Use the initial (unrevised) C-CPI-U
*Range: 2000 - present

Is an “official” index needed?

Yes

Is the focus on producers/output or consumers?

No

Output

Consumer Welfare

Is an monthly, real-time, never-revised index needed?

Yes

*Use the CPI-W
Range: 1978 - present

*Use the CPI-U
Range: 2000 - present

*Use the C-CPI-U
Range: 2000 - present

*Use unless a new index is available, and proceed through checklist boxes below to determine if new index is preferable.

^ If time range is insufficient, then cycle back through changing course at the last decision node and combine the indexes to create full time range.

Checklist boxes for newly available indexes. If “no” to all, stay with choice(s) in purple; if “yes,” to any, continue to check all boxes and use the index version mentioned in the checkbox farthest to the right.

Is a previously more preferable choice newly available for the time range?

Is there a version with current purchases available?

Is there a version with recalculated-revised indexes available?

If the target is the cost of living of median income earners, is there a version that also target the median income level itself?
Example of Median Income

- All items? Yes
- If Yes (Demographic subpopulation) for median population, hit dead end at subgroup choices
  - Checklist questions
    - Special box for median income
- Back to No (Population). Real-time needed? No
- Consumer welfare? Yes
- Then C-CPI-U. But must back up for before 2000
- Leads to PCE from 1959-2000, must back up before 1959
- Leads to CPI-U before 1959
- Checklist questions could change answer in future
Contact Information

**Rob Cage**
Assistant Commissioner for Consumer Prices and Price Indexes
Bureau of Labor Statistics
cage.rob@bls.gov
202.441.2576

**Greg Kurtzon**
Research Economist
Bureau of Labor Statistics
kurtzon.greg@bls.gov
202.691.6574