Changes under Consideration for 2021: Thresholds

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Current Estimation of SPM Thresholds

- At the CU level, convert 5 years of quarterly 2-Child FCSU expenditures to thresholds year dollars using the All Items CPI for all urban consumers (CPI-U), and to 2 adult with 2 children reference unit thresholds using the 3-parameter equivalence scale

\[
FCSU_{i,q} = F_{i,q} + C_{i,q} + S_{i,q} + U_{i,q}
\]

\[
FCSU_{i,2016} = \left( \frac{CPI_{2016}}{CPI_{yr}} \right) \ast FCSU_{i,q} \ast 4
\]

- Rank CUs by equivalized 2A+2C FCSU\textsubscript{i,2016} expenditures.

- Housing tenure-specific thresholds produced based on means within 30th-36th percentile range (identified as “E”) of FCSU\textsubscript{i,2016}

\[
SPM_{j,2016} = 1.2 \ast FCSU_{E,2016} - SUE + SUE_{j}
\]

\[
\frac{SUE_{j}}{SPM_{E,j}} = aj = \text{housing share of } 2A+2C \text{ SPM}_{E,j}\text{ thresholds}
\]

- At threshold level, apply geographical price adjustment (MRI) for sub-national thresholds

\[
SPM_{j,g,2016} = [(aj \ast MRI_{g}) + (1 - aj)] \ast SPM_{j,2016}
\]
Planned Changes for Production of “National” Initial Threshold

1. Include in thresholds values for in-kind benefits
2. Expand estimation sample from consumer units with exactly two kids
   a. CUs with any number of children, or
   b. All CUs
3. Move base of thresholds from 33rd percentile to percentage of median
4. Move telephone out of utilities, and add internet
5. Base thresholds on 3 years of CE data rather than 5 years
6. Lag thresholds one year
7. To convert earlier quarterly FCSU expenditures into threshold year dollars: move from using annual CPI-U to composite FCSU annual averages
Not Planned as Changes for Thresholds

- Geographic adjustment of expenditure data prior to threshold creation
- Replace owner shelter out-of-pocket spending with rental equivalence
- Use of specific categories of goods and services (e.g., personal care and non-work related transportation) rather than 20% multiplier
- Addition of medical/health care to FCSU
- Use of 12 months of CU data rather than multiple quarterly by 4
- Use yet to be created price index based on spending rather than rents
- Different equivalence scale
## Impacts Relative to Published

<table>
<thead>
<tr>
<th>Change Planned</th>
<th>Impact on Thresholds</th>
<th>Impact on Housing Shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-kind benefits</td>
<td>own with mortgage: 2.8% higher Renters: 3.4% higher owners w/o mortgages: 4.5% higher</td>
<td>Marginal impact</td>
</tr>
<tr>
<td>Expand sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child&gt;0</td>
<td>own with mortgage: 3.1% lower Renters: 2.7% lower owners w/o mortgages: 2.2% lower</td>
<td>Marginal impact</td>
</tr>
<tr>
<td>All CUs</td>
<td>own with mortgage: 4.3% higher Renters: 4.3% higher owners w/o mortgages: 9.6% higher</td>
<td>own with mortgage: 50.2% to 50.9% renters: 49.7% to 50.5% owners w/o mortgages: 41.1% to 44.8%</td>
</tr>
<tr>
<td>Percentage of median (80.8%=&quot;33&quot;/&quot;median&quot; FCSU)</td>
<td>Marginal impact</td>
<td>Marginal impact</td>
</tr>
<tr>
<td>Telephone service separate (not in housing utilities)</td>
<td>Marginal impact but for owners w/o mortgages: 1.7% lower</td>
<td>own with mortgage: 50.2% to 44.2% renters: 49.7% to 44.1% owners w/o mortgages: 41.1% to 33%</td>
</tr>
</tbody>
</table>

Impacts related to published based on 2 children, 5 years of data, around 33rd percentile; “marginal” = less than 0.4%
All but expanded sample based on estimation sample with 2 children.
## Impacts Relative to Published

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<tr>
<td>Add internet</td>
<td>own with mortgage: 1.7% higher Renters: 2.1% higher owners w/o mortgages: 1.1% higher</td>
<td>own with mortgage: 50.2% to 49% renters: 49.7% to 48.7% owners w/o mortgages: 41.1% to 39.4%</td>
</tr>
<tr>
<td>3 years of CE data</td>
<td>own with mortgage: 0.7% higher Renters: 2.4% higher owners w/o mortgages: 3.0% higher</td>
<td>own with mortgage: 50.2% to 49.3% renters: no change owners w/o mortgages: 41.1% to 41.5%</td>
</tr>
<tr>
<td>Lag by 1 year</td>
<td>own with mortgage: 0.4% lower Renters: 0.8% lower owners w/o mortgages: 2.0% lower</td>
<td>Marginal for all but owners w/o mortgages: 41.1% to 41.5%</td>
</tr>
<tr>
<td>Use created “composite FCSU CPI-U”</td>
<td>own with mortgage: 2.0% higher Renters: 2.3% higher owners w/o mortgages: 1.9% higher</td>
<td>owner with mortgage: 50.2% to 49.8% renters: marginal owners w/o mortgages: 41.1% to 40.7%</td>
</tr>
</tbody>
</table>

Impacts related to published based on 2 children, 5 years of data, around 33rd percentile; “marginal” = less than 0.4%
All but expanded sample based on estimation sample with 2 children
Combined Changes Relative to 30-36\textsuperscript{th} Percentile of FCSU: SPM 2016 2A+2C Thresholds

**Published**

- 5 years of CE data
- no lag
- No in-kind benefits (other than SNAP)
- Telephone in housing utilities
- Internet not included
- Use All Items CPI-U to adjust quarterly CU FCSU expenditures to threshold year dollars

**Combined Changes**

- 3 years of CE data
- 1-year lag
- In-kind benefits added
- Telephone not in housing utilities
- Internet added
- Use composite FCSU CPI-U to adjust quarterly CU FCSU expenditures to threshold year dollars

**NOTE:** Does not include change to percentage of the median because the percentage can be selected that does not change the thresholds.
Impact of Combined Changes Based on 30-36th Percentile of FCSU and Different Estimation Samples: SPM 2016 2A+2C Thresholds

NOTE: Does not include change to percentage of the median because the percentage can be selected such that The thresholds will not change.

NOTE: Published base on 2C, 5 years of data, no in-kind (except for SNAP), telephone in U, no internet, CPI-U to adjust FCSU at CU level
Impact of Combined Changes Based on 30-36th Percentile of FCSU: S+U as % of SPM 2016 2A+2C Thresholds

NOTE: Does not include change to percentage of the median because the percentage can be selected such that the thresholds will not change.

NOTE: Published base on 2C, 5 years of data, no in-kind (except for SNAP), telephone in U, no internet, CPI-U to adjust FCSU at CU level.
# Discussion of Planned Changes

<table>
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<tr>
<th>Change Planned</th>
<th>Justification</th>
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<tr>
<td><strong>In-kind benefits</strong></td>
<td>Consistency in measurement with resources</td>
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<tr>
<td><strong>Expand sample</strong></td>
<td></td>
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<tr>
<td><strong>Child&gt;0</strong></td>
<td>Represents larger share of the population</td>
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<tr>
<td><strong>All CUs</strong></td>
<td>Represents full population</td>
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<tr>
<td><strong>Percentage of median</strong></td>
<td>Reduces impact of in-kind benefit imputations; expectation of greater stability</td>
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<tr>
<td><strong>Telephone service separate (not in housing utilities)</strong></td>
<td>Increased cell service expenditures as share of total; cell not geo specific</td>
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<tr>
<td><strong>Add internet</strong></td>
<td>Increased means of communication in addition to telephone</td>
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<tr>
<td><strong>3 years of CE data</strong></td>
<td>In combination with increasing sample size, reduce impact of recession</td>
</tr>
<tr>
<td><strong>Lag by 1 year</strong></td>
<td>CPS ASC data not available in time to produce in-kind benefits for thresholds for most recent year</td>
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<tr>
<td><strong>Composite FCSU CPI-U</strong></td>
<td>More reflective of threshold component price changes</td>
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