Adjustments to SPM Thresholds: Focus on In-Kind Benefits, Prices, and Expenditure Definitions

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FCSU

In-Kind Benefits

Adjusting for Prices

Refining Scope
1. In-Kind Benefits Accounted for in SPM Thresholds
Consistency in Poverty Concept:
Resources to Meet FCSU and Evaluate In-Kind

Thresholds

Consumption Value of FCSU (not including owner shelter) + “little bit more”

Resources

- Housing & Energy Subsidies
- Other Food Subsidies
- With SNAP In-Kind Benefits
- Cash income

Consistent
Missing Data Problem in Thresholds Leads to Inconsistency in Poverty Measure (current measure)

Thresholds: Expenditures for FCSU (including SNAP) + “little bit more”

Resources:
- Housing & Energy Subsidies
- Other Food Subsidies
- With SNAP In-Kind Benefits
- Cash income

Consistent
Inconsistent
Possible Solution: Thresholds and Resources Consistently Defined

Thresholds

FCSU Expenditures (including SNAP)

Consistent

Resources

With SNAP In-Kind Benefits

Cash income
Better Solution to CE Missing Data Problem

Thresholds
- Housing & Energy Subsidies
- Other Food Subsidies
- FCSU Expenditures (including SNAP)

Resources
- Housing & Energy Subsidies
- Other Food Subsidies
- With SNAP In-Kind Benefits
- Cash Income

Consistent

BLS
Example of Subsidized Renter: the Case of Rent Spending in Thresholds

**Thresholds**

- 1/3 of market rent paid OOP Spending

**Renter Resources**

- Money income used to pay contract rent = 1/3 of market rent
- Rental voucher covers 2/3 of market rent (not fungible)
Example of Subsidized Renter: Consumption Rent Value in Thresholds

Thresholds

1/3 of market rent paid
OOP Spending

2/3 of market rent paid
with voucher (in-kind benefit)

Renter Resources

Money income used to pay
contract rent = 1/3 of
market rent

rental voucher covers 2/3
of market rent (not
fungible)
# Expenditures, In-Kind Benefits, and Resources

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Form of Benefit</th>
<th>Value of Commodity or Service in CE Reported Expenditures?</th>
<th>Commodity or Service Value in Thresholds</th>
<th>In Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNAP</td>
<td>EBT cash-value to CU</td>
<td>yes, as food expenditures= full value</td>
<td>OOP</td>
<td>cash value</td>
</tr>
<tr>
<td>NSLP</td>
<td>Direct payment to school</td>
<td>&lt; full value</td>
<td>OOP+imputed benefit</td>
<td>imputed benefit</td>
</tr>
<tr>
<td>WIC</td>
<td>Voucher paper or EBT for commodities to CU (&amp; cash value voucher for fruits and veggies to CU)</td>
<td>&lt; full value yes, as food expenditure for WIC fruits and veggies</td>
<td>OOP+imputed benefit</td>
<td>imputed benefit</td>
</tr>
<tr>
<td>LIHEAP</td>
<td>Direct payment to vendor (&amp; check to CU to pay for “utilities” included in rent)</td>
<td>&lt; full value Yes, as expenditures for LIHEAP utilities</td>
<td>OOP+imputed benefit</td>
<td>cash value</td>
</tr>
<tr>
<td>Rental Assistance</td>
<td>Landlord accepts voucher or CU lives in public housing</td>
<td>&lt; full value</td>
<td>OOP+imputed benefit</td>
<td>imputed benefit</td>
</tr>
</tbody>
</table>
Options: Valuing “Needs” when Data Are Missing: Administrative Data or Imputations

- **All**: Impute NSLP, WIC, LIHEAP using CPS recipiency; Impute rental subsidy using CE
- **Impute “better” measured**
  - Impute fewer benefits using CPS recipiency; Impute rental subsidy using CE
- **Rental Impute - CE**
  - Impute rental subsidy using CE
- **Restrict Sample to No Participation**
  - Limit population to CUs without benefits
    - Assumption: spending for those without = those with

Greater data needs
2014 SPM Thresholds with and without In-Kind Imputed Benefits: 2 Adults with 2 Children (“2A+2C”)
2014 Poverty Rates for Thresholds with and without In-Kind Imputed Benefits

<table>
<thead>
<tr>
<th></th>
<th>All People</th>
<th>Owners with Mortgage</th>
<th>Owners no Mortgage</th>
<th>Renters</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPM</td>
<td>15.3%</td>
<td>8.1%</td>
<td>13.0%</td>
<td>26.1%</td>
</tr>
<tr>
<td>CE Rent Subsidy</td>
<td>16.4%</td>
<td>8.6%</td>
<td>14.0%</td>
<td>27.8%</td>
</tr>
<tr>
<td>FMR Method</td>
<td>16.6%</td>
<td>8.7%</td>
<td>14.2%</td>
<td>28.2%</td>
</tr>
</tbody>
</table>

Alternative to Deal with Missing Values-Dropping Benefit CUs: Impact on 2014 SPM Thresholds for “2A+2C”

Owners with mortgages

- Only Food Stamps: $25,844
- FCSU + NSLP + WIC + LIHEAP + Rent Subsidy (Imputed): $26,425
- No Cus w/Rent Asst.: $26,689

Owners without mortgages

- Only Food Stamps: $21,380
- FCSU + NSLP + WIC + LIHEAP + Rent Subsidy (Imputed): $22,210
- No Cus w/Rent Asst.: $22,300

Renters

- Only Food Stamps: $26,348
- FCSU + NSLP + WIC + LIHEAP + Rent Subsidy (Imputed): $26,533
- No Cus w/Rent Asst.: $26,533

Legend:
- Only Food Stamps
- FCSU + NSLP + WIC + LIHEAP + Rent Subsidy (Imputed)
- No Cus w/Rent Asst.
In-kind Benefits In SPM Thresholds: Summary and Recommendations

- Examined impact of different options to deal with missing data in the CE, imputing participation and benefits
- FCSU + in-kind benefits results in thresholds that are consistent with resources

**Recommendations**
- Impute in-kind benefits to CUs before thresholds produced
  - Use CE for rental assistance
  - Use CPS ASEC public use data for WIC, NSLP, LIHEAP
- Due to delay in release of CPS ASEC data, other options
  - Base thresholds on CUs not in public housing or receiving rental subsidy
  - Other?
2. Adjusting for Across Area Prices before Deriving SPM Thresholds
The Role of Prices in SPM Thresholds

Over Time to “Year”

- 2010Q2-2011Q1
- 2011Q2-2012Q1
- 2012Q2-2013Q1
- 2013Q2-2014Q1
- 2014Q2-2015Q1

FCSU in 2014$

from National to Geographic Areas

2A+2C Thresholds for 2014
- Owners with mortgages
- Owners without Mortgages
- Renters

Currently...
1. Converting 5 years of expenditures to threshold year dollars using All Urban Consumers (CPI-U) for the U.S. City Average at CU level, prices across time
2. Creating geographic area thresholds using Median Rent Index (MRI) applied at threshold level to allow for differences in prices across area
The Role of Prices Not Considered

- Spatial differences in shelter and utility costs are already embedded in the 2A+2C SPM thresholds (Bishop, Lee, and Zeager 2017)

- As currently published, no attempt to account for spatial differences in housing costs before producing “national average” SPM thresholds

Questions
- If there are differences, is this a concern?
- If yes, how to account for these differences before producing the thresholds?
Comparison of Quality-Adjusted Normalized “Prices”: 2014

<table>
<thead>
<tr>
<th></th>
<th>CE Interview</th>
<th>ACS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Renter S+U</td>
<td>Owner with Mortgage S+U</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.791</td>
<td>1.781</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.615</td>
<td>0.721</td>
</tr>
<tr>
<td>Range</td>
<td>1.176</td>
<td>1.060</td>
</tr>
<tr>
<td>Ratio of Max to Min</td>
<td>2.912</td>
<td>2.470</td>
</tr>
</tbody>
</table>

<sup>a</sup> Based on 5-year American Community Survey median rents for 2-bedroom apartments with complete kitchens and full baths (Renwick 2017).

- Based on log expenditures regressed on area dummy and control variables including housing unit characteristics
- Relative differences in renter and owner expenses across areas represented by area coefficients, holding all other characteristics constant
- Geometric mean across index areas, weighted by CE population weights, equal to 1.0 for each housing tenure group (renters, owners with mortgages, and owners without mortgages)
**Example**: Using CE Normalized Quality-Adjusted Prices to Adjust Housing Expenditures at CU Level for 2A+2C

\[
FCSU'_i = F_i + C_i + Tele_i + \frac{S_i + U_i}{QANP_{a,j}}
\]

<table>
<thead>
<tr>
<th></th>
<th>Quality-Adjusted Normalized Price</th>
<th>Monthly Housing Expenditures</th>
<th>F+C+Telep Expenditures</th>
<th>FCSU (i)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unadjusted</td>
<td>Adjusted</td>
<td>Unadjusted</td>
<td>Unadjusted</td>
</tr>
<tr>
<td>Washington, DC-MD-VA-WV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renter</td>
<td>1.461</td>
<td>$1,170</td>
<td>$801</td>
<td>$500</td>
</tr>
<tr>
<td>Owner with Mortgage</td>
<td>1.195</td>
<td>$2,116</td>
<td>$1,771</td>
<td>$500</td>
</tr>
<tr>
<td>Owner without Mortgage</td>
<td>1.234</td>
<td>$671</td>
<td>$544</td>
<td>$500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural South</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renter</td>
<td>0.615</td>
<td>$440</td>
<td>$715</td>
<td>$500</td>
</tr>
<tr>
<td>Owner with Mortgage</td>
<td>0.730</td>
<td>$891</td>
<td>$1,221</td>
<td>$500</td>
</tr>
<tr>
<td>Owner without Mortgage</td>
<td>0.683</td>
<td>$294</td>
<td>$430</td>
<td>$500</td>
</tr>
</tbody>
</table>
Percentage Distribution of CUs in 30-36th Percentile Range of FCSU Published vs. with Pre-Geo-adjustment vs. All CUs

- **West**
  - Published: 22.3%
  - Pre-geo-adj: 21.0%
  - All CUs: 23.6%

- **South**
  - Published: 41.7%
  - Pre-geo-adj: 37.9%
  - All CUs: 35.4%

- **Midwest**
  - Published: 23.2%
  - Pre-geo-adj: 22.0%
  - All CUs: 22.3%

- **Northeast**
  - Published: 12.8%
  - Pre-geo-adj: 19.1%
  - All CUs: 18.7%

Reference CUs in 30-36^{th} percentile

All CUs

Published vs. with Pre-Geo-adjustment vs. All CUs

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2014 SPM Thresholds with and without Quality-Adjusted Normalized “Prices” Applied to $S_i+U_i$ for 2A+2C


Owners with Mortgages

Owners without Mortgages

Renters
2014 Percentage of SPM Poor Based on Published SPM Thresholds vs. Thresholds with and without Telephone in Housing and CE-Geo Adj.

- Published: 15.3%
- Telephone not in Housing Share: 15.3%
- CE-Adj. with Telephone Not in Housing: 15.8%
- CE-Adj. with Telephone in Housing Share: 15.8%

<table>
<thead>
<tr>
<th>Region</th>
<th>Published</th>
<th>Telephone not in Housing</th>
<th>CE-Adj. with Telephone Not in Housing</th>
<th>CE-Adj. with Telephone in Housing Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>West</td>
<td>18.0</td>
<td>18.4</td>
<td>18.4</td>
<td>18.4</td>
</tr>
<tr>
<td>South</td>
<td>16.3</td>
<td>15.9</td>
<td>16.5</td>
<td>16.5</td>
</tr>
<tr>
<td>Midwest</td>
<td>12.2</td>
<td>12.0</td>
<td>12.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Northeast</td>
<td>15.1</td>
<td>15.0</td>
<td>15.0</td>
<td>15.0</td>
</tr>
</tbody>
</table>
Adjusting for Across Area Prices before Deriving SPM Thresholds: Summary and Recommendations

- Determined that spatial differences in shelter and utility costs, embedded in the 2A+2C SPM thresholds, impact poverty rates
- Proposed a method to account for these differences

**Recommendations**

- Move telephone expenditures be moved out of housing share for Census Bureau adjustment to derive geographic SPM thresholds
- Adjust S+U expenditures for spatial differences across geographic areas before estimating SPM thresholds
3. Refining the Scope of FCSU Expenditures
Refining What is Included in FCSU

- Shelter and utilities for primary residence only
  - No home equity loans or lines of credit
  - No vacation shelter or utilities
- Food at home + Food Away from Home
  - No food or rent as pay (*not accounted for in resources*)

Suggestions
- Food Away from Home *minus* Catered affairs
- Apparel *minus*
  - Material and supplies for sewing, needlework, quilting (includes for household items)
  - Watches
  - Jewelry
  - Watch and jewelry repair
  - Clothing rental
  - Clothing storage
  - Coin-operated apparel laundry and dry cleaning
  - Apparel laundry and dry cleaning not coin-operated
Refining What is Included in FCSU: Recommendations

- Need to conduct research on the impact of changes
  - Thresholds
  - Poverty rates

- Recommendations
  - Drop catered affairs from food away from home
  - Drop non clothing (and repair) items from apparel
Contact Information

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