An Expenditure Poverty Measure Based on the CE: The SEPM

Prepared for "A Dialogue on Measuring and Reducing Child Poverty"

March 13, 2020

NAS, Washington DC

By John Fitzgerald (Bowdoin College) and Robert Moffitt (Johns Hopkins Univ.)

Background

- Most policy analysts prefer the SPM to the OPM
- SPM calculates net income available for purchase of a basic consumer bundle (FCSU and a little more)
- We argue that the SPM concept can be viewed as a <u>*current available expenditure*</u> concept
- It tries to measure whether the household has enough resources available to *spend* dollars today (out-of-pocket *currently)* to buy the basic FCSU bundle (without borrowing or asset drawdown)
- It uses income from the CPS ASEC in an attempt to measure the expenditure available today (after "non-discretionary" deductions from income)

Background

- This “available expenditure” concept accords with the spirit of the 1995 NAS Measuring Poverty volume
- “Family resources should be defined—consistent with the threshold concept—as the sum of money income from all sources together with the value of near-money benefits (e.g., food stamps) that are **available** to buy goods and services in the budget, minus expenses that cannot be used to buy these goods and services”. (p. 5)
- In contrast to an income definition, an expenditure (or consumption) definition is more appropriate to the view that what matters is someone's actual standard of living, regardless of how it is attained. In practice, the availability of high-quality data is often a prime determinant of whether an income- or expenditure-based family resource definition is used. (pp.36-37)

Our Objective: SEPM
the Supplementary Expenditure Poverty Measure

- Use the CE instead of the CPS ASEC to measure current available expenditure resources for basic FSCU bundle
- Use total current total expenditures (outlays) from the CE, net of the same non-discretionary deductions as the SPM
- Compare CE current adjusted expenditures to the same FCSU threshold used by the SPM to get poverty status of each family
- Compare to SPM
- As distinguished from the *SIPM* (Supplementary Income Poverty Measure, or just SPM)

Types of poverty measures

- Existing work has primarily focused on two types:

1. **Income measure**: adjusted income < expenditure threshold
2. **Consumption measure**: consumption < consumption threshold

- We add a third type:

3. **Expenditure measure**: adjusted expenditures < expenditure threshold

SEPM Details: I

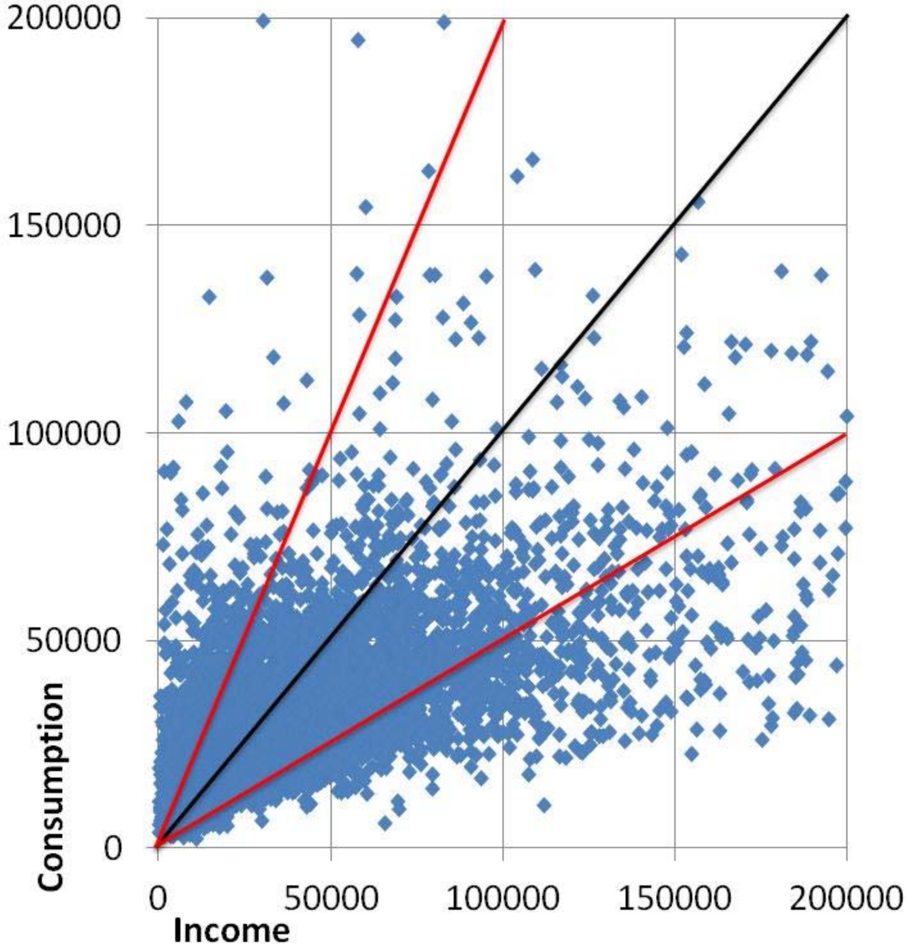
- Does adjusted spending exceed that needed for basic bundle of goods?
- Use SPM thresholds (and same over-time updating)
- Resources= CE Total Expenditure – CE adjustments similar to SIPM
  - (work expenses, child care, child support, medical expenses (MOOP))

Advantages:

1. Uses consistent measures of threshold and resources from same data set (CE)
2. If CPS ASEC income underreporting is worse than CE expenditure misreporting, SEPM will give more accurate estimates of the same SPM concept

   (In both cases, in-kind subsidies must be imputed)

For disadvantaged population, is expenditure better measured than income? Literature leans toward…?



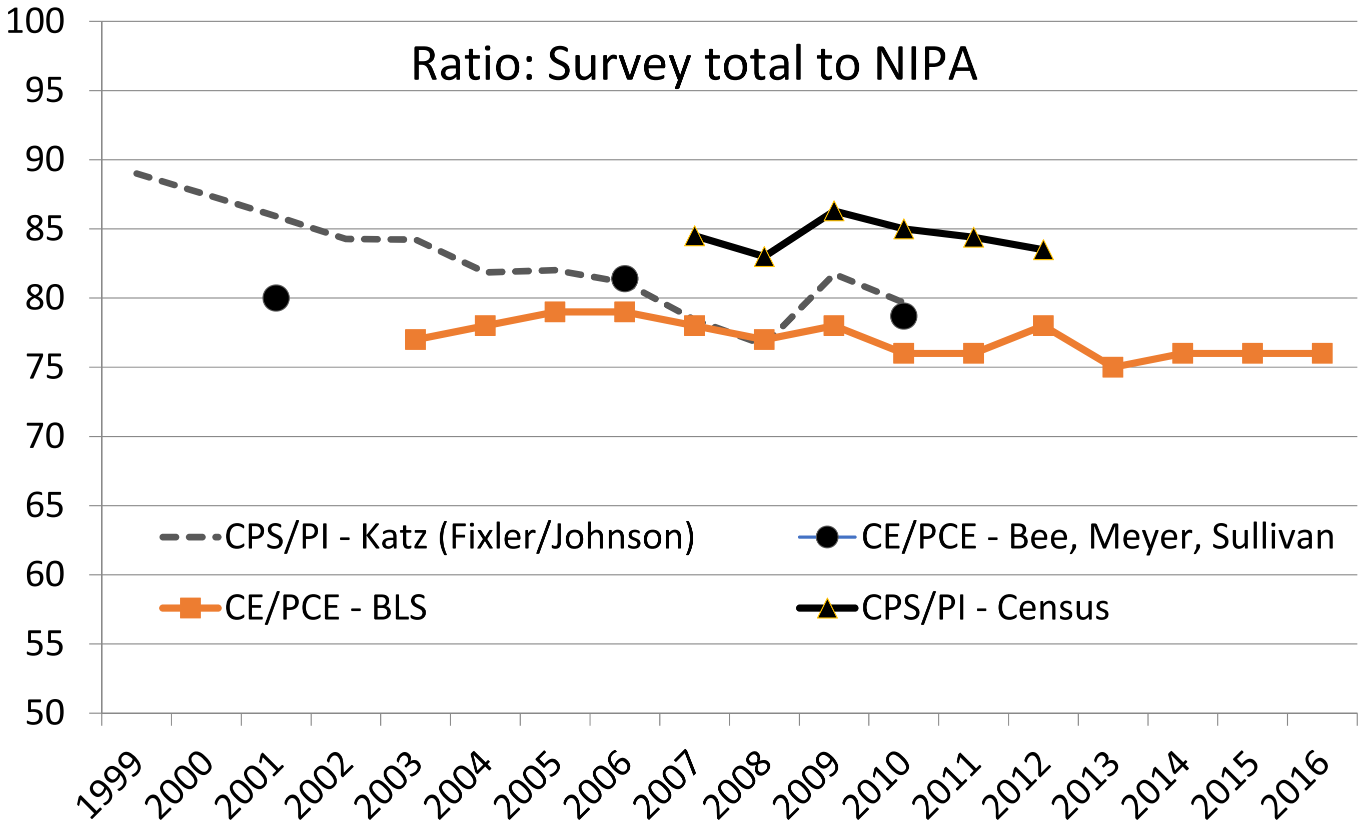
From CE data:
Consumption is related to income (.6)
80% lie between Consumption-to-income ratios (APC) of .5 and 2

Slide Graphic Source: Consumptio
Poverty: Measurement Matters

David Johnson
University of Michigan

FESAC
June 14, 2019

Measurement Issue: Under-reporting of consumption and income is stable



CE/PCE see https://www.bls.gov/cex/cepceconcordance.htm
CPS/PI see https://www.census.gov/content/dam/Census/library/working-papers/2015/demo/SEHSD-WP2015-01.pdf

Slide Source: Consumption Pove
Measurement Matters

David Johnson
University of Michigan

FESAC
June 14, 2019

SEPM Details II: Calculation of Current Available Expenditures

- Resources: Adjusted Total expenditures
- Including
  - In-kind subsidies beyond outlays
  - Savings (current personal pension contributions)
  - Durable purchases (principal and interest for vehicles)
  - Housing out of pocket (rent, insurance, property tax, maintenance, mortgage interest + principal payments)
  - Education
- Excluding
  - Work expenses
  - Child care
  - Child support
  - MOOP
  - Taxes are implicitly excluded (uses after-tax spending, e.g. exclude Social security taxes)
- Note: we use the term “expenditures” for BLS term “outlays”

SEPM Details: III

- **Cash Transfers and Taxes**: can ignore completely; implicitly expenditures already reflect all cash transfers, and are already net of taxes
- **In-Kind Transfers**: do in same spirit as SIPM.
  - **SNAP**: No adjustment necessary assuming that CE expenditures on food include SNAP spending
  - **Subsidized housing, WIC, LIHEAP, school lunch**: just as in SIPM, impute additional expenditure not reflected in CE actual expenditure
  - When doing program participation and benefit imputation for subsidized housing, WIC, LIHEAP, impute using admin control totals and using best imputation algorithms
  - Follow Garner-Goudrais (2018) and impute in-kind expenditures to CE for purpose of finding the 33rd percentile of the FCSU distribution for **threshold determination**

In-kind estimation SPM-IK thresholds (Garner, Gudrais 2018)

Table 10. Experimental SPM-IK Poverty Threshold Poverty Rates: 2014

By Age	All Ages	Under 18 Years	18 to 64 Years	65 Years and Older
Only Implicit SNAP in Thresholds[1]	15.3%	16.7%	15.0%	14.4%
CE Imputations and CE-Based Imputed Rent Subsidy	16.4%	18.1%	15.9%	15.5%
CE Imputations and FMR Method for Rent Subsidy	16.6%	18.4%	16.1%	15.7%
By Housing Tenure	All Housing Tenures	Owners with Mortgages	Owners without Mortgages	Renters
Only Implicit SNAP in Thresholds[1]	15.3%	8.1%	13.0%	26.1%
CE Imputations and CE-Based Imputed Rent Subsidy	16.4%	8.6%	14.0%	27.8%
CE Imputations and FMR Method for Rent Subsidy	16.6%	8.7%	14.2%	28.2%

Poverty rates produced by Trudi Renwick at the US Census Bureau.

[1]Defined the same as published SPM thresholds with no imputed subsidy benefits in thresholds. The overall poverty rate of 15.3% is the same as reported by Short (2015): https://www.census.gov/content/dam/Census/library/publications/2015/demo/p60-254.pdf

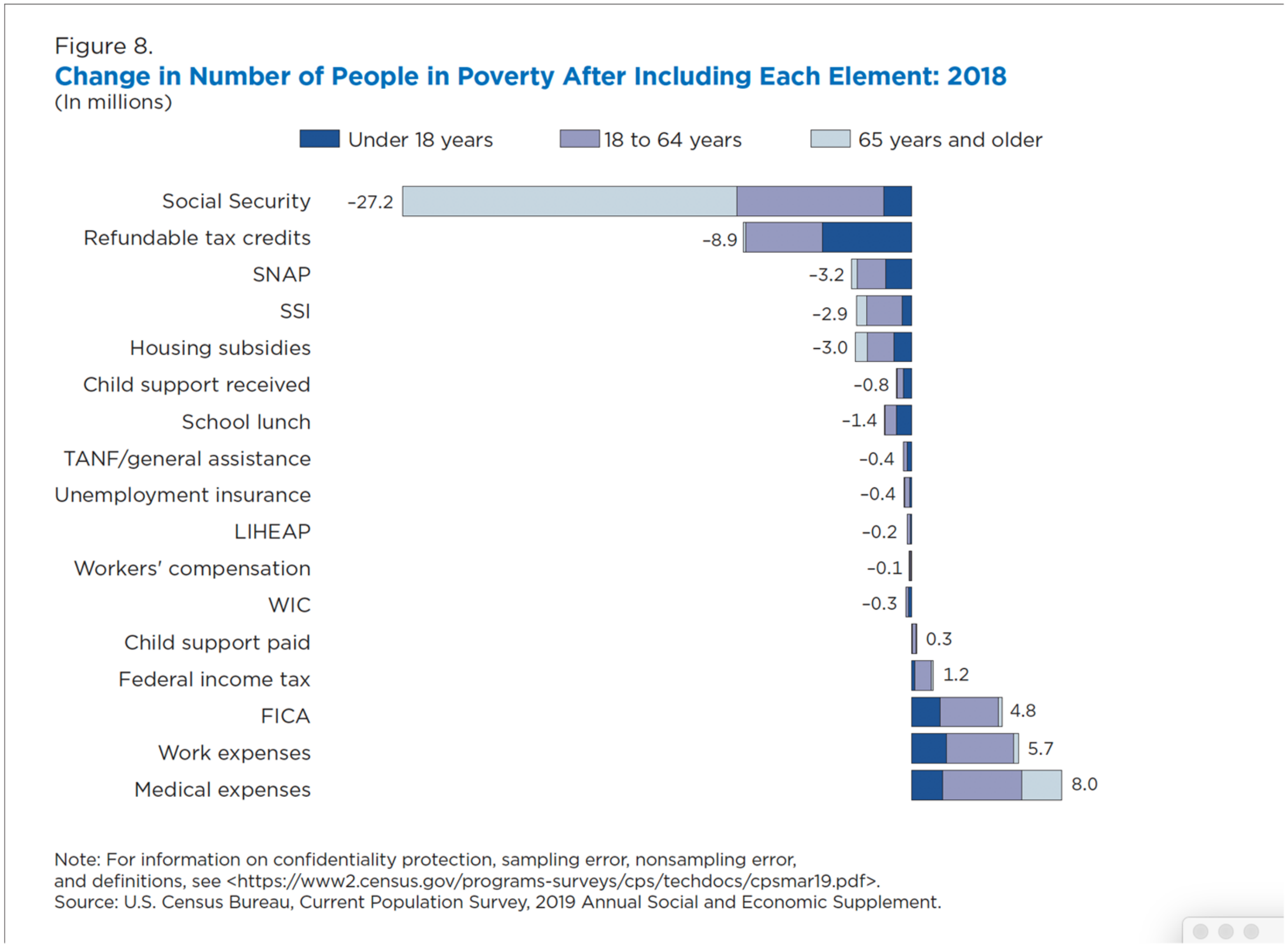
Alternative Poverty Measurement for the U.S.: Focus on Supplemental Poverty Measure Thresholds
Thesia I. Garner, **Marisa Gudrais**, U.S. Bureau of Labor Statistics , Working Paper 510, Sept 2018.

Another Alternative
SCPM: Supplemental Consumption Poverty Measure

- Use a consumption measure from CE rather than an expenditure measure. Use SPM concept for thresholds.
- Many economists think consumption is a better measure
- Has been discussed elsewhere by many analysts
- Move to consumption flows:
    - Replace out of pocket costs for housing, vehicles, durables with service flows (e.g. Meyer and Sullivan 2012)
    - Deduct saving, pensions, etc.
    - Make same adjustments to resources as SPM
    - Make adjustments for underreporting of pubic assistance and expenditures

Measuring Impact of Policy: Current SIPM

SPM can show impact of cash and in-kind benefit changes



Measuring the impact of policy changes with SEPM

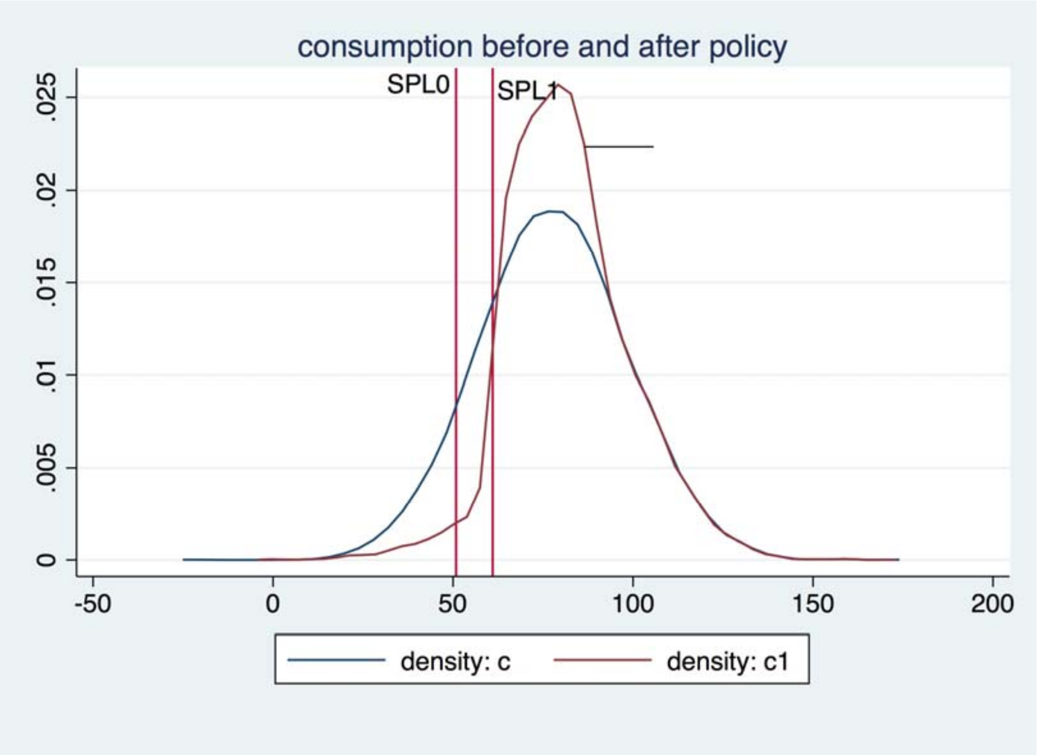
- SEPM similar: A program change which increases after-tax income or aid also increases *available* current expenditure by exactly the same amount
- Pro of SEPM: Household expenditure/consumption may be more relevant determinant of child outcomes and hence child poverty
- Potential Con: For consumption measure, have to make a behavioral assumption on how program changes affects consumption
  - But that is harder with consumption than with expenditure

- Also, Policy changes will affect both the threshold and the resources. But with 5-year average of FCSU, the threshold changes slowly.

Policy change affects thresholds

Poor After - Poor Before =
Change in poverty based on old threshold
+ change in poverty due to change in threshold.

Threshold changes slowly:
Garner and Fox, 2019, estimate that a 10% increase in after tax income causes a .66% increase in FCSU threshold.



Other measurement issues

- Time Frame: we aggregate quarterly CE to annual measures.
  - CE data gathered quarterly. To make annual estimates, need to aggregate and reweight to account for attrition. E.g. Fisher and Johnson (2006)
  - Quarterly poverty measures also useful.
- For medical expense, we use MOOP as resource deduction as is done with current SPM.
  - Consider adding medical needs to threshold, adding health insurance provided as resource. See Korenman et al. (2017)

In short: we think the SEPM is a self-consistent, feasible and useful addition to poverty measurement using the CE

- Thank you
- Thanks to Thesia Garner and David Johnson for helpful discussions.
- Suzanne Le Menestrel and others for organizing session.

- Contact:
- John Fitzgerald, Bowdoin College, 9700 College Station, Brunswick ME 04011. email: jfitzger@bowdoin.edu
- Robert Moffitt, Johns Hopkins University, 3400 N. Charles St., Baltimore, MD 21218. email: moffitt@jhu.edu