

Developing Poverty Thresholds



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Key in Development



- Determine threshold
 - Calculate resources
- ❖ Goal: Consistently measure thresholds and resources

National Academy of Sciences Recommendations



⌘ 2.1-2.4 A poverty threshold with which to initiate a new series of official U.S. poverty statistics should be derived from Consumer Expenditure Survey [CE] data for a reference family of four persons (two adults and two children).

- ☑ Basic bundle
- ☑ Percentage of median expenditures
- ☑ Multiplier for other needs
- ☑ Updating
- ☑ Real growth in consumption

⌘ 3.1 Adjustments

Procedure

This paper...

builds on NAS Workshop 2004



⌘ Threshold

- ☑ Concepts and measures
- ☑ Definitions
- ☑ Adjustments

⌘ Data

⌘ Results

- ☑ Time series: 1993-2003
- ☑ Relationship to other series

⌘ Conclusions

Concept Underlying Threshold?



⌘ Input (e.g., food)

⌘ Costs of inputs (dollars)

Costs Measures Used to Define Thresholds (Basic Needs)



⌘ Spending

- ☒ Official poverty threshold
- ☒ NAS basically

⌘ Consumption

- ☒ What people think about
- ☒ For housing in particular, spending does not equal consumption (e.g., subsidized, own)
 - ☒ Treat shelter consumption needs of owners and renters consistently – services valued as rent

Costs of inputs

Thresholds Defined in Terms of...

Food, Clothing, Shelter, Utilities, Medicare Care FCSUM

⌘ Spending

- ☒ CE-publication expenditures (NAS and Census): [FCSUM-CE](#)
- ☒ Out-of-pocket (OOP) expenditures: [FCSUM-OOP](#)


⌘ Spending and Consumption

- ☒ Expenditures adjusted for select consumption/needs (e.g., shelter): [FCSUM-R](#)

FCSUM-CE (Publication Definition) Threshold


- ☒ Out-of-pocket spending on
 - ☒ Food (includes Food Stamps value)
 - ☒ Clothing
 - ☒ Utilities (includes telephone)
 - ☒ Medical care
 - ☒ For renters, shelter expenditures
- ☒ For homeowners, non-vacation shelter expenditures that include
 - ☒ Mortgage interest payments (no principal repayments)
 - ☒ Prepayment penalties
 - ☒ Property taxes
 - ☒ Maintenance, repairs, insurance and other related expenditures

FCSUM-OOP (Out-of-Pocket Spending) Threshold



- ⌘ Same as for “CE” expenditures with the addition of ...
 - Repayments of mortgage principal for homeowners

FCSUM-R (Shelter Consumption) Threshold



⌘ Out-of-pocket spending on

- ⊗ Food
- ⊗ Clothing
- ⊗ Utilities (includes telephone)
- ⊗ Medical care

⌘ Food as pay

⌘ Rent as pay

⌘ Rent of renters

⌘ Rental equivalence of owners

⌘ Adjustment for the medically uninsured using CE data

Caution....



⌘ For a consumption based threshold, would also need

- ☒ Rent controlled or government subsidized housing
- ☒ School breakfast, school lunch, WIC, energy assistance
- ☒ Medical consumption not financed out-of-pocket
- ☒ Goods and services received as gifts (“net” value of gifts)

➤ ***And*** values would be added to resources for consistency

Computing the Thresholds



- ⌘ Use three years of quarterly CE data (update to most recent year)
- ⌘ Determine median expenditures for bundle for reference “family” (2 adults with 2 children)
- ⌘ Apply three-parameter equivalence scale to food, clothing, shelter, and utilities part and medical spending equivalence scales to medical part
- ⌘ Update over time using change in median expenditures of bundle

Equations for Thresholds

$$(1 - s_{\text{medical}}) \frac{(1.15 * P_L * M) + (1.25 * P_H * M)}{2} +$$

$$(s_{\text{medical}}) \frac{(P_L * M) + (P_H * M)}{2}$$

➤ Used the midpoints of the percentages and multipliers

Three-parameter Equivalence Scale Applied to $(1 - S_{\text{medical}})$ Part

☒ **one and two adults**

$$[\text{adults}]^{0.7}$$

☒ **single parents**

$$[\text{adults} + 0.8 * 1\text{st child} + (0.5 * \text{children} - 1)]^{0.7}$$

☒ **all other families**

$$[\text{adults} + 0.5 * \text{children}]^{0.7}$$

Medical Expenditure Equivalence Scale



⌘ Number of family members

⌘ Ages of family members

☑ < 65 years of age

☑ ≥ 65 years of age

⌘ Health insurance status of family members

☑ No insurance

☑ One private policy

☑ One person covered by public insurance and no private coverage

Data



- ⌘ U.S. Consumer Expenditure Interview Survey

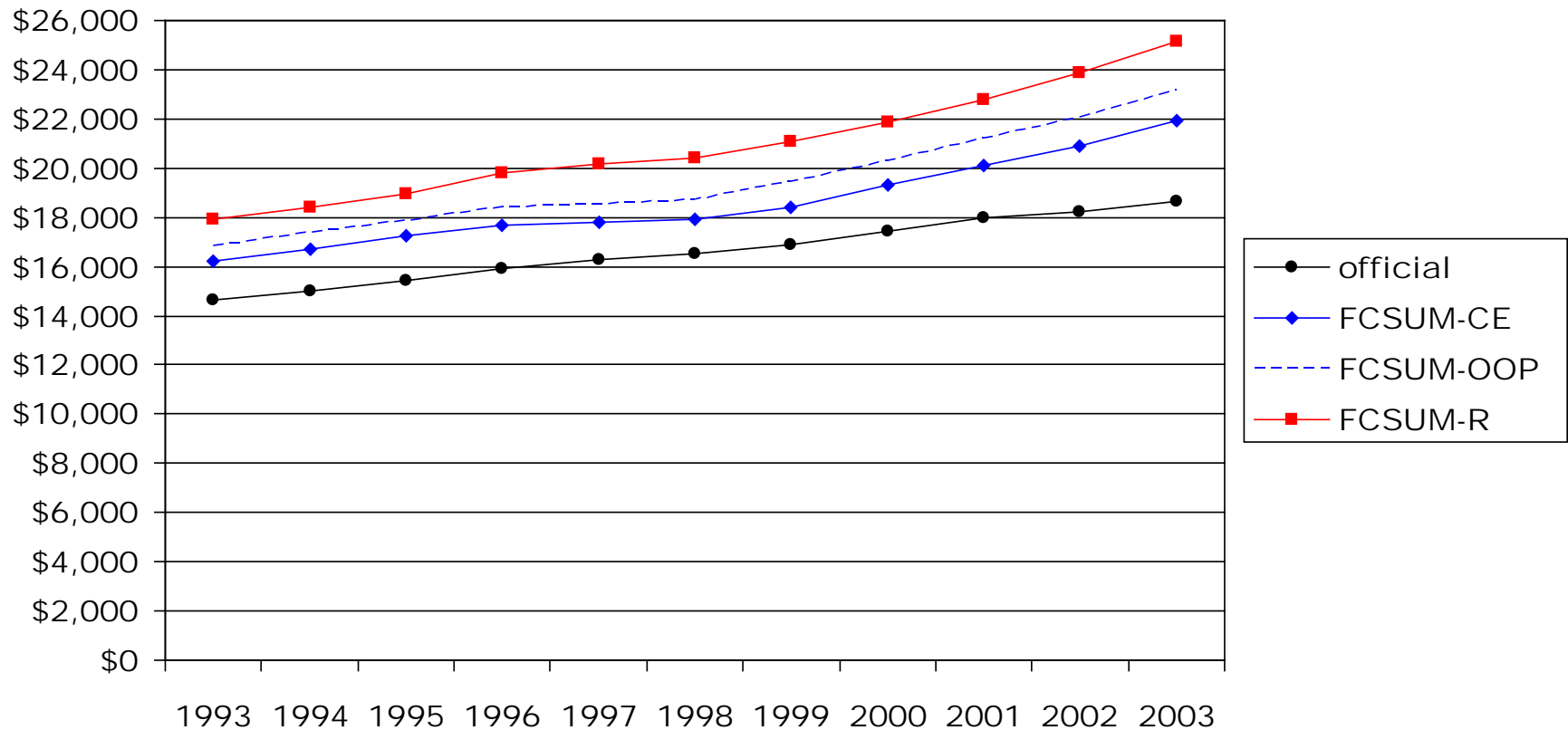
- ⌘ Each threshold, 3 years of data

 - ☑ 1993: 1990 Q2 – 1993 Q1

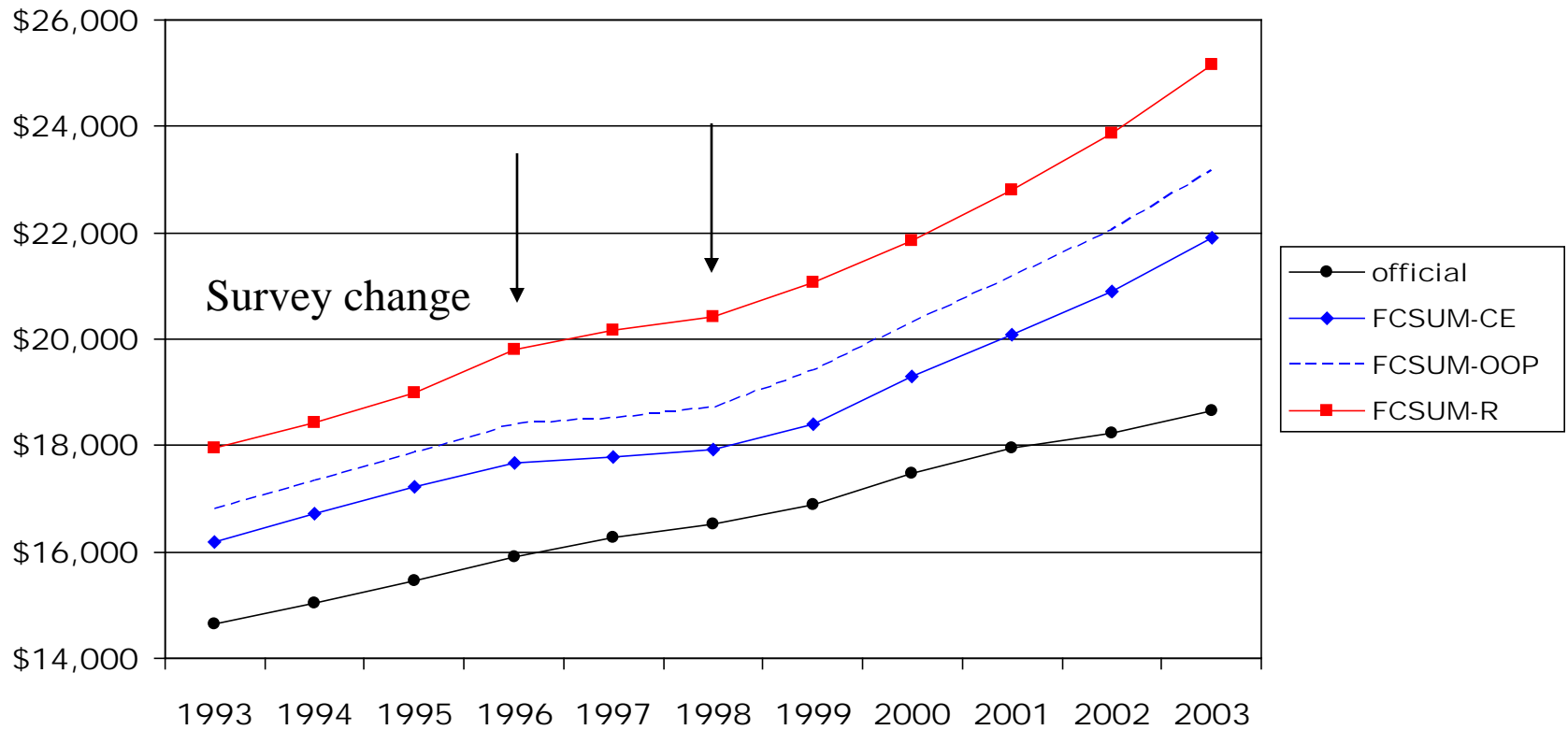
 - ☑ 2003: 2000 Q2 - 2003 Q1

- ⌘ Assumed quarters are independent

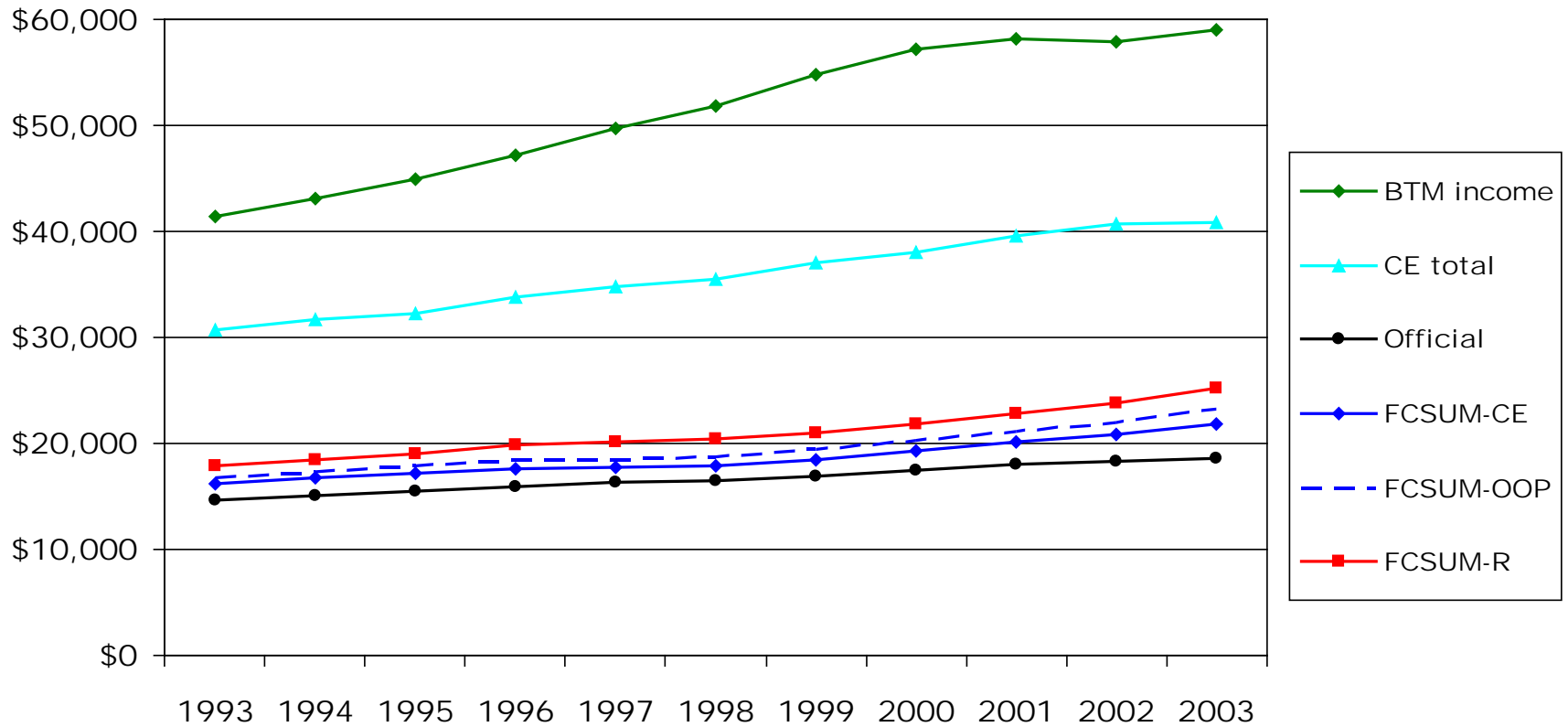
Experimental Thresholds



Experimental Thresholds

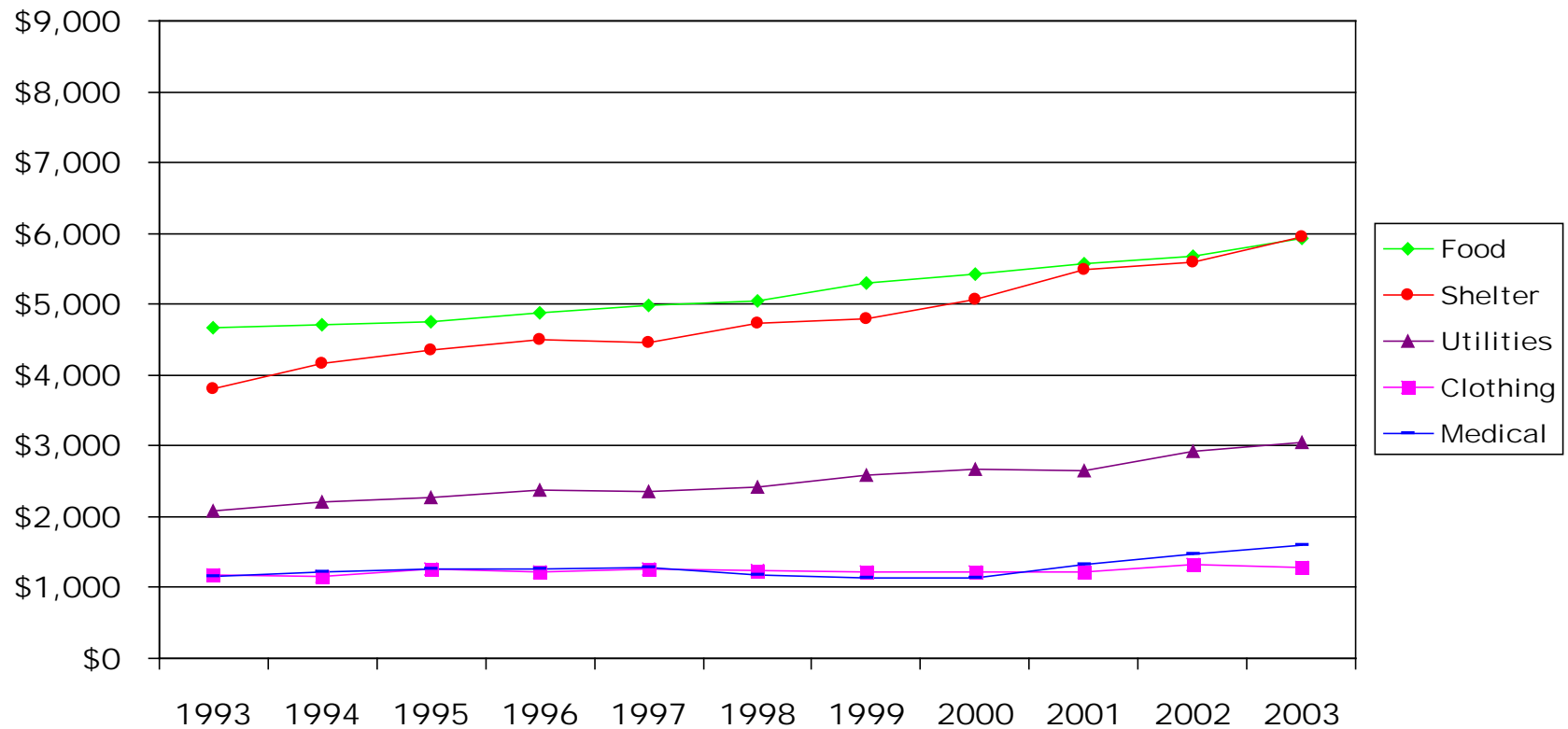


Average Annual CPS Household Income, CE Expenditures, and Thresholds



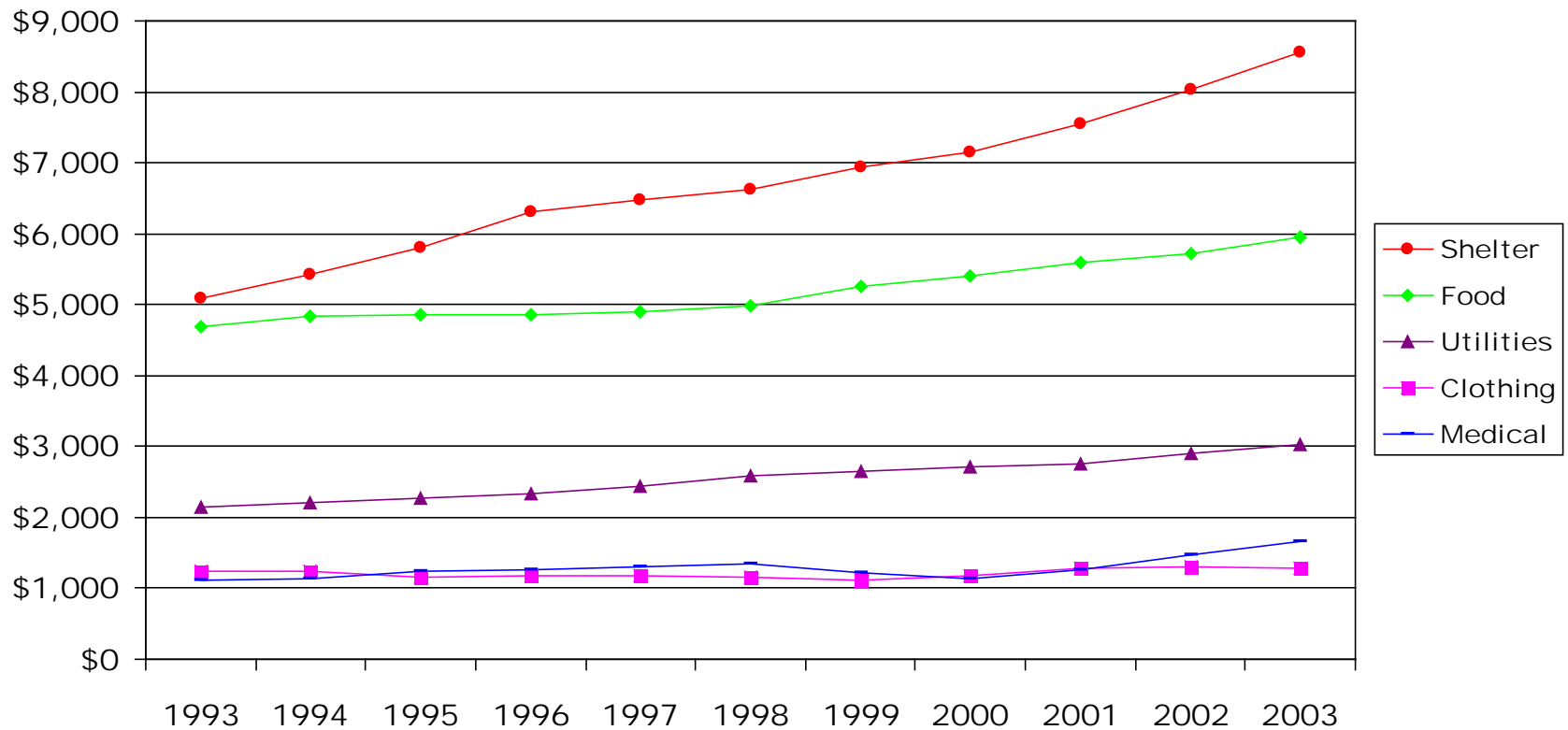
Sources: CPS and CE websites, author's calculations

Reference Family Annualized Spending in the 30th-35th Percentile for FCSUM-CE



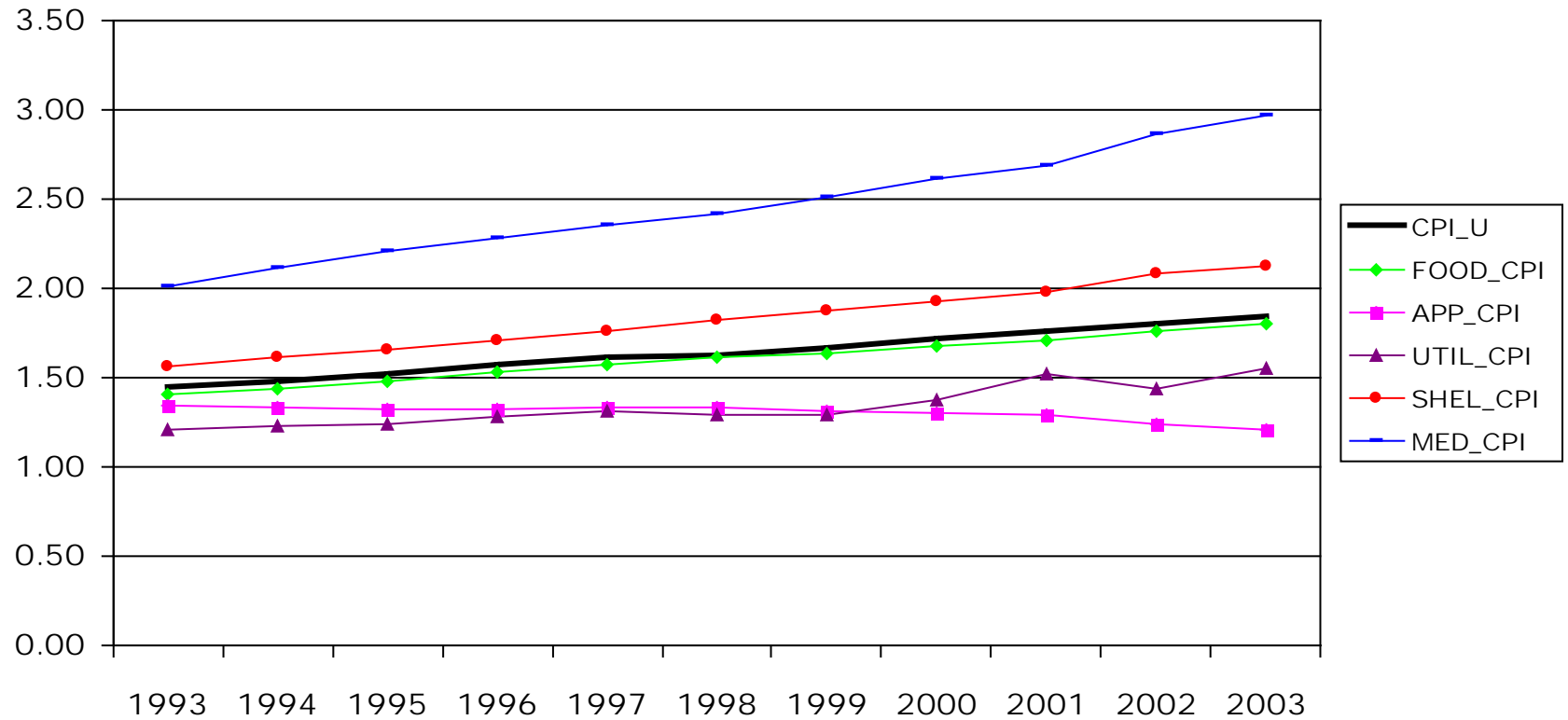
CE publication expenditures

Reference Family Annualized Spending/Owner Consumption in the 30th-35th Percentile for FCSUM-R



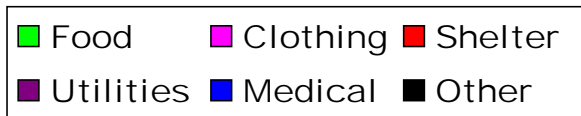
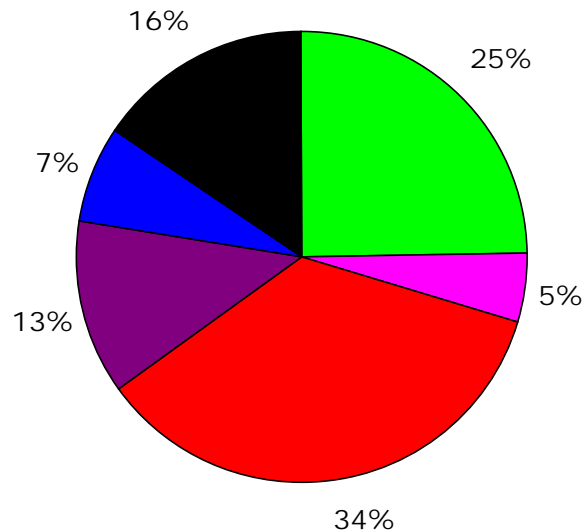
CE publication expenditures adjusted with shelter consumption

CPI-U for All and for Selected Expenditure Categories

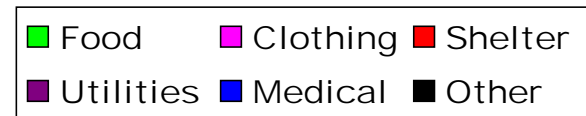
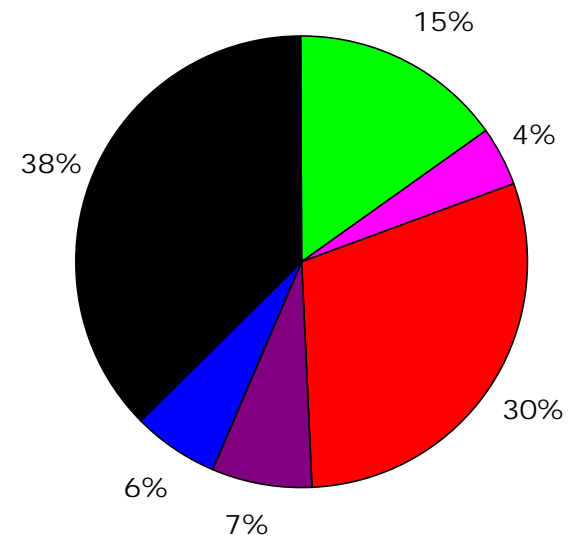


Threshold Shares and CPI-U Relative Importances: 2003

FCSUM-R Threshold



CPI-U



Summary and Conclusions



- ⌘ Spending- and consumption-based thresholds
- ⌘ More research
 - ☑ Equivalence scales
 - ☑ Data collection
 - ☑ Medical care
 - ☑ Consumption-based measures
 - ☑ Updates to reflect whose experience?
 - ☑ "Average" urban consumer
 - ☑ Reference family
- These thresholds, unlike official, reflect current basic consumption needs – levels and patterns

Contact



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