

Consumption and Changes in Home Energy Costs: How Prevalent is the 'Heat-or-Eat' Decision?

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Starting Point

1. Home energy costs comprise a sizeable fraction of most household budgets.
2. Energy demand is price inelastic.
3. Increases in energy prices and adverse weather can leave households with less disposable income for other goods and services. What gives?

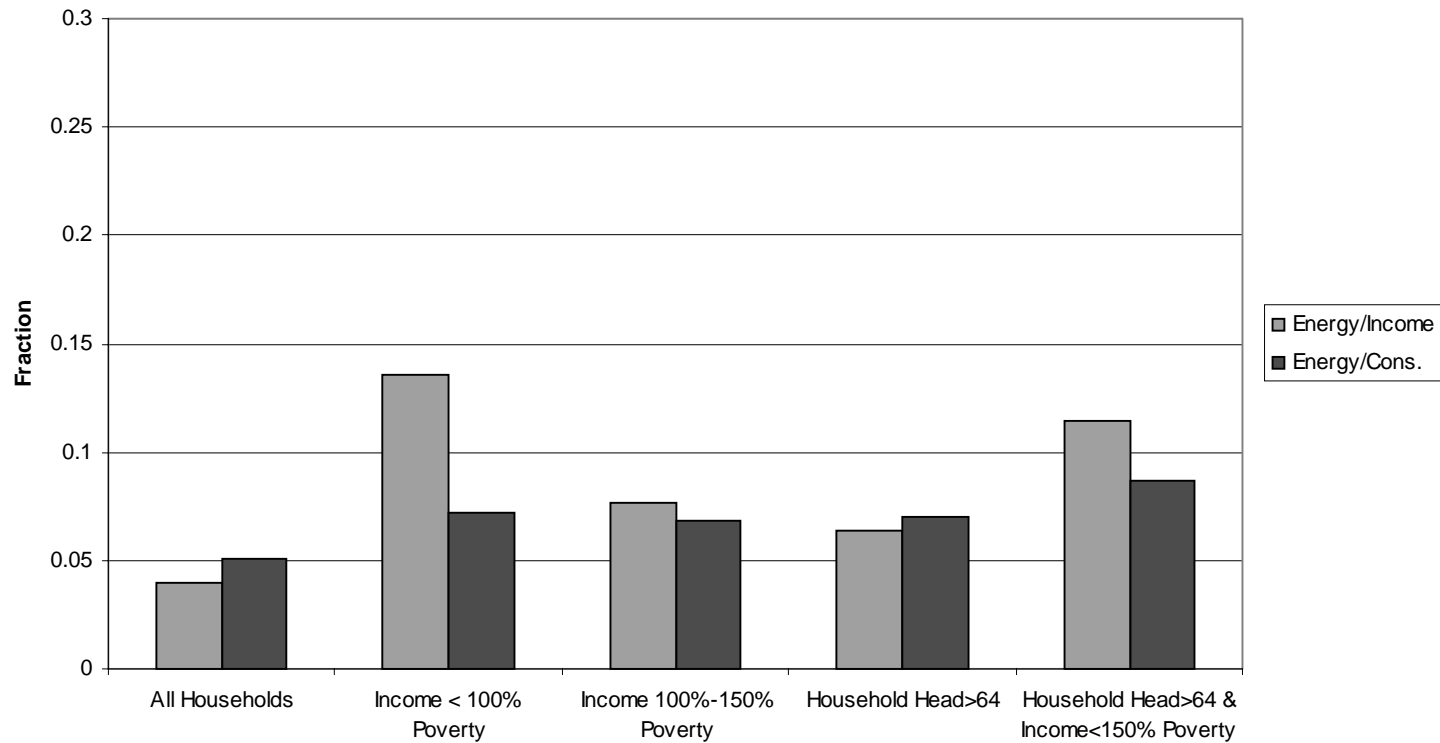
We focus on low-income households

- Energy is a higher fraction of budget
 - Use less efficient fuels, homes less well-insulated
- Anecdotal evidence of 'heat-or-eat'
 - Public health literature
 - Other tradeoffs: elders cutback on prescription drugs

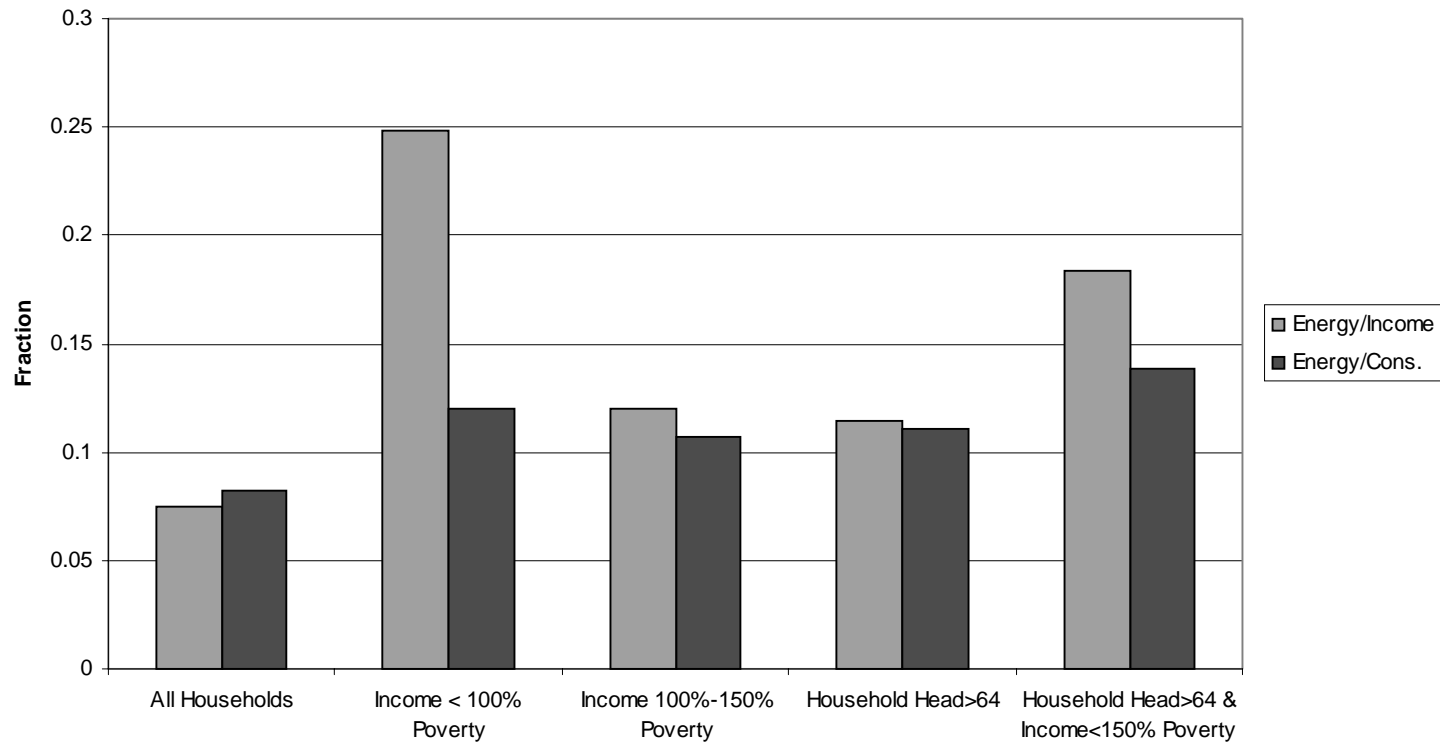
This paper

- Summary statistics on energy as a fraction of total budget
- Describe low-income energy assistance programs
- Examine data on consumption in the face of increases in energy costs

Energy as a fraction of income and total consumption – median households



Energy as a fraction of income and total consumption – households in 75th percentile



Low-income energy assistance programs

LIHEAP (Low-Income Home Energy Assistance Program)

- Federal block grant program, administered by states
- Eligibility based on income or participation in other assistance program (AFDC/TANF or SSI)

State supplements to LIHEAP

- LIHEAP also has a matching grant program

Utility Rate Assistance Programs (or Lifeline rates)

- E.g. CARE program in California

Others: charities, utility shareholders, weatherization

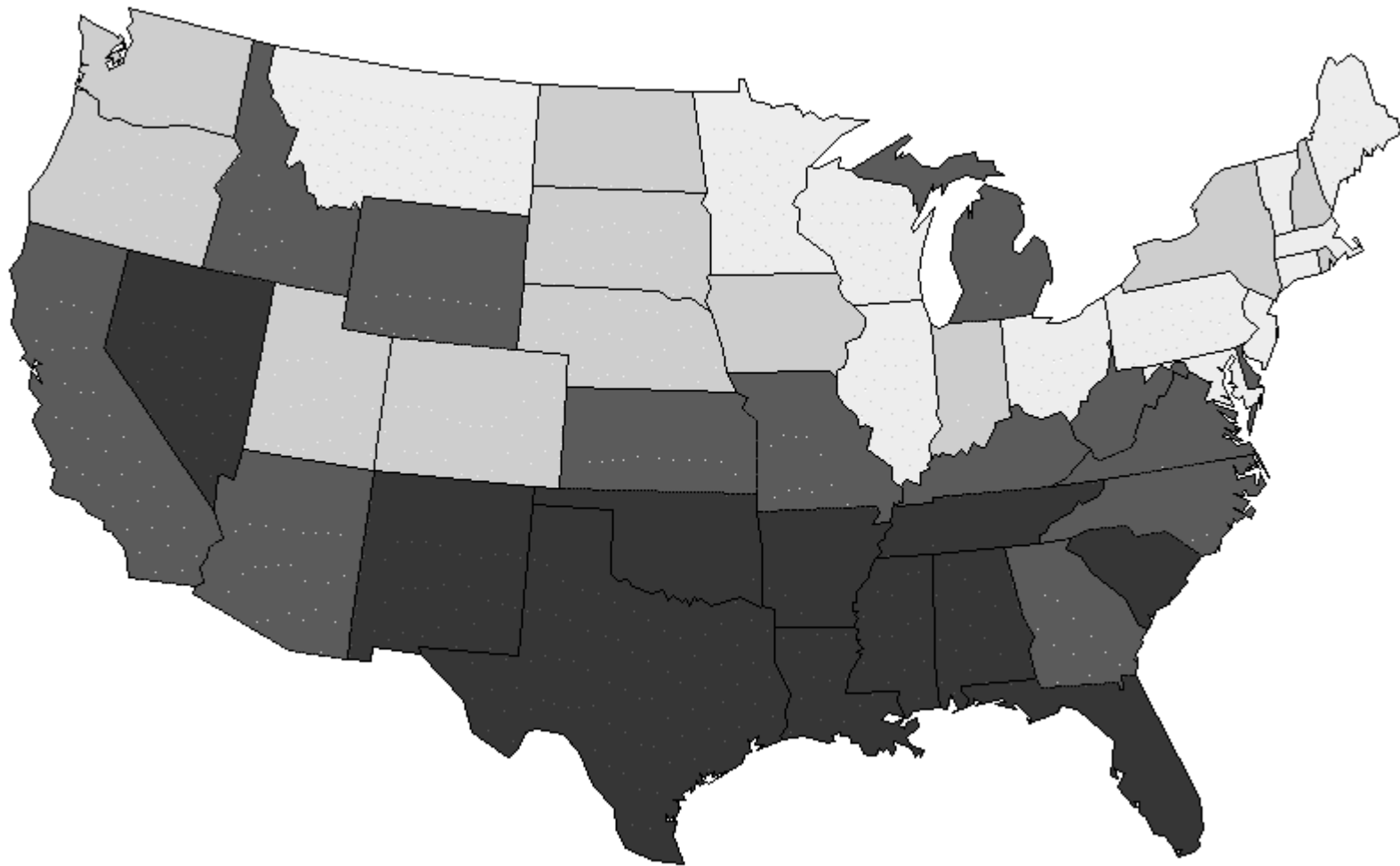
Funding for low-income programs by states

Table 3: Sources of Funding for State Low Income Assistance - FY 1999

	LIHEAP	State/ Local	Fuel Funds	Utility Rate Assist.	Other
US AVERAGE	75%	6%	3%	11%	4%
California	20%	1%	2%	52%	23%

Other states with large utility programs include: Arizona, Georgia, Maryland, Ohio and Pennsylvania.

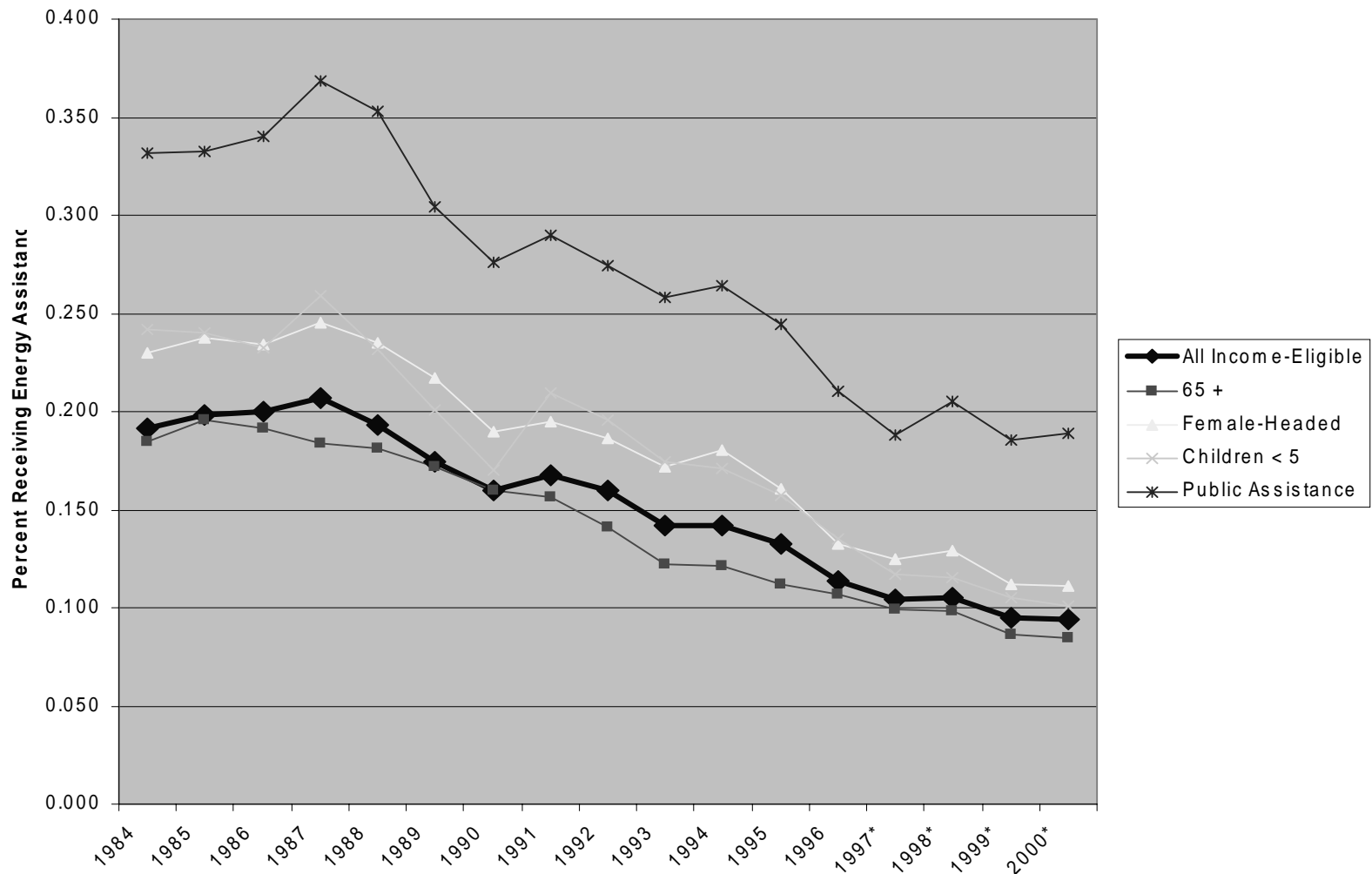
Generosity varies considerably across states



Funding quartile 1 2 3 4

Energy Assistance participation rates are low and falling, though successfully target particular groups

Figure 1: Percent of Target Population Receiving Energy Assistance



Analyzing how changes in energy costs affect consumption of other goods

Consumer Expenditure (CEX) Survey tracks households for up to 5 quarters

- Very detailed data on consumption and income by quarter (90:1-98:4)
- Identifies household's state of residence

We want to assess how changes in a household's energy costs affect consumption of other goods and services.

Issue: Changes in energy costs may be correlated with other changes in the households preferences.

- E.g. wife returns to work

Our Solution: Predict energy consumption with state-level prices and weather (IV estimation)

Our Findings

We compare middle-income consumers to low-income consumers.

Relative to middle-income households, low-income consumers cutback more on *transportation* and *entertainment* purchases.

Middle-income households also reduce *durable* purchases and *medical* expenditures.

Responses are relatively small.

Conclusions

- Our results are preliminary, but we do not see evidence of “heat-or-eat” decisions
- Caveats
 - Quarterly data may be too aggregated to see effects on food consumption
 - Our measure of income is rough
 - Possibly, the energy assistance programs are working
 - More price volatility may cause larger effects