Consumption and the CE

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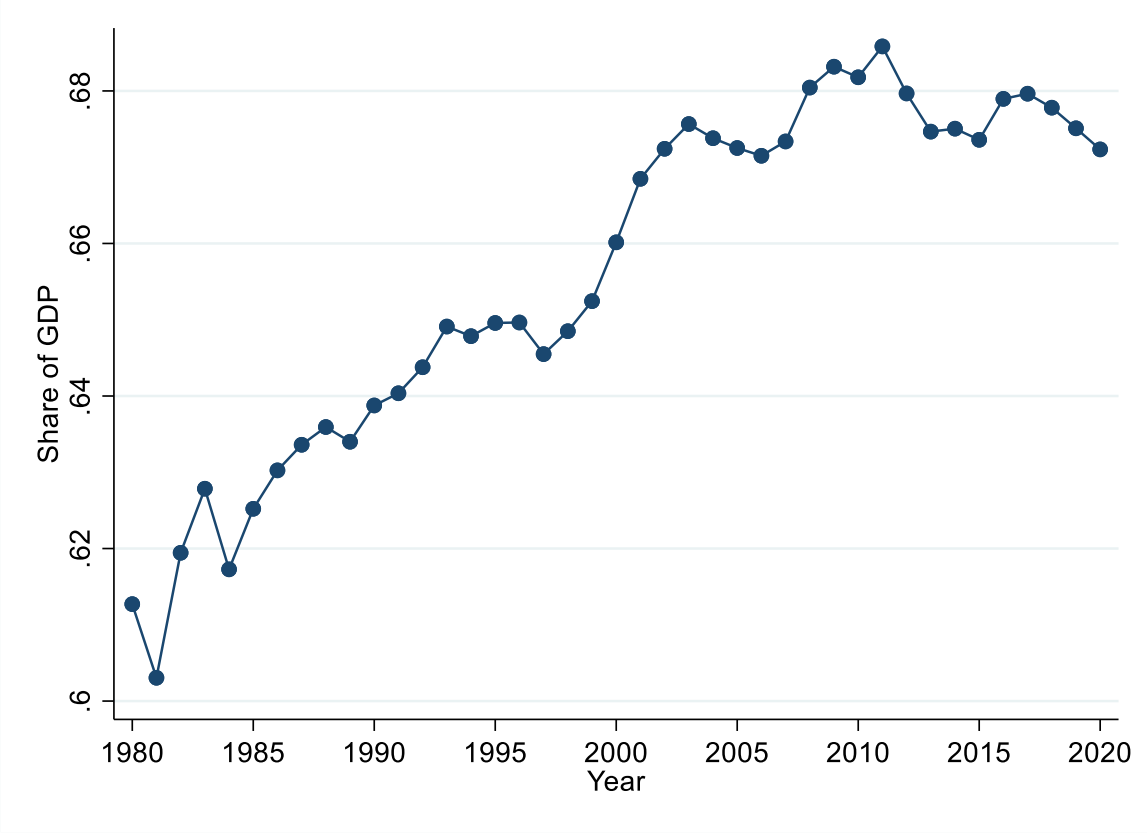
Background

- Consumption spending is the most relevant component of GDP



Consumption matters

- When consumers lose confidence, the economy slows down (even if reverse causality, there's still powerful multiplier effects)
- Stabilization policies and fiscal packages are typically introduced with the consumer in mind
- Theory: Consumption is believed to be a better measure of welfare than income

Three broad issues

1. Which questions are of interest to policy-makers?
2. Consumption vs spending
3. Which data?

Which questions are of interest to policy-makers?

- Lots of interest in understanding how consumers respond to tax or welfare policy reforms that change the level of (or expectations about future) economic resources ("MPC")

- Main issues

  - MPC heterogeneity $\rightarrow$ "Targeting" of policies to maximize aggregate impact

  - Dependence on nature of income change:
    - anticipation vs. shock
    - permanent vs. transitory
    - small vs. large
    - tax vs. transfer
    - "medium" (check in the mail, payroll, coupon)
    - "context" (balance sheet position, state of business cycle, age)

Other questions of interest (1)

- Distributional issues
  - Consumption inequality vs. income inequality
    - Inequality in welfare? What do we know?
  - Consumption mobility within and between generations
    - Very little research due to lack of long panel data
  - Distributional accounts

- Home production
  - Demand: Explaining consumption puzzles
  - Supply: Business cycle effects
  - Measurement of its value $\rightarrow$ satellite national accounts
  - No time use data coupled with spending info

Other questions of interest (2)

- Within-household allocation of spending
  - Intrahousehold consumption inequality
  - Strategic behavior: labor supply and fertility choices
  - Need “private” consumption info

- Interdependent preferences
  - Social network effects
  - “Social” multipliers – policies can have real effects even if budget neutral and no heterogeneity
  - Intertemporal vs. intratemporal distortions
  - Hard to reconstruct reference groups from available data

Consumption vs. Spending

- Much of the debate on rising inequality or poverty is phrased in terms of income (or components of income, like wages and earnings) or wealth (Piketty)

- Ideally, we would like to know if whatever forces have caused income inequality to rise have also led to increasing disparities in welfare, well-being, living standards, etc.

- For economists, individual well-being is captured by: u=u(consumption, leisure)

Looking at Spending, Thinking about Consumption

- Problem: In u(c,l) the variable that matters is c=consumption, but in survey data we typically observe x=spending

- Why does $c \neq x$? And why does it matter for the measurement of inequality?
  1. Spending includes purchases of durables – ideally consumption would include spending on nondurables and services from durables
  2. Some consumption is received in kind (private or public transfers)
  3. Some consumption is home-produced, using time and goods
  4. The same spending x may be associated to different consumption amounts c if people pay different prices for the goods they purchase

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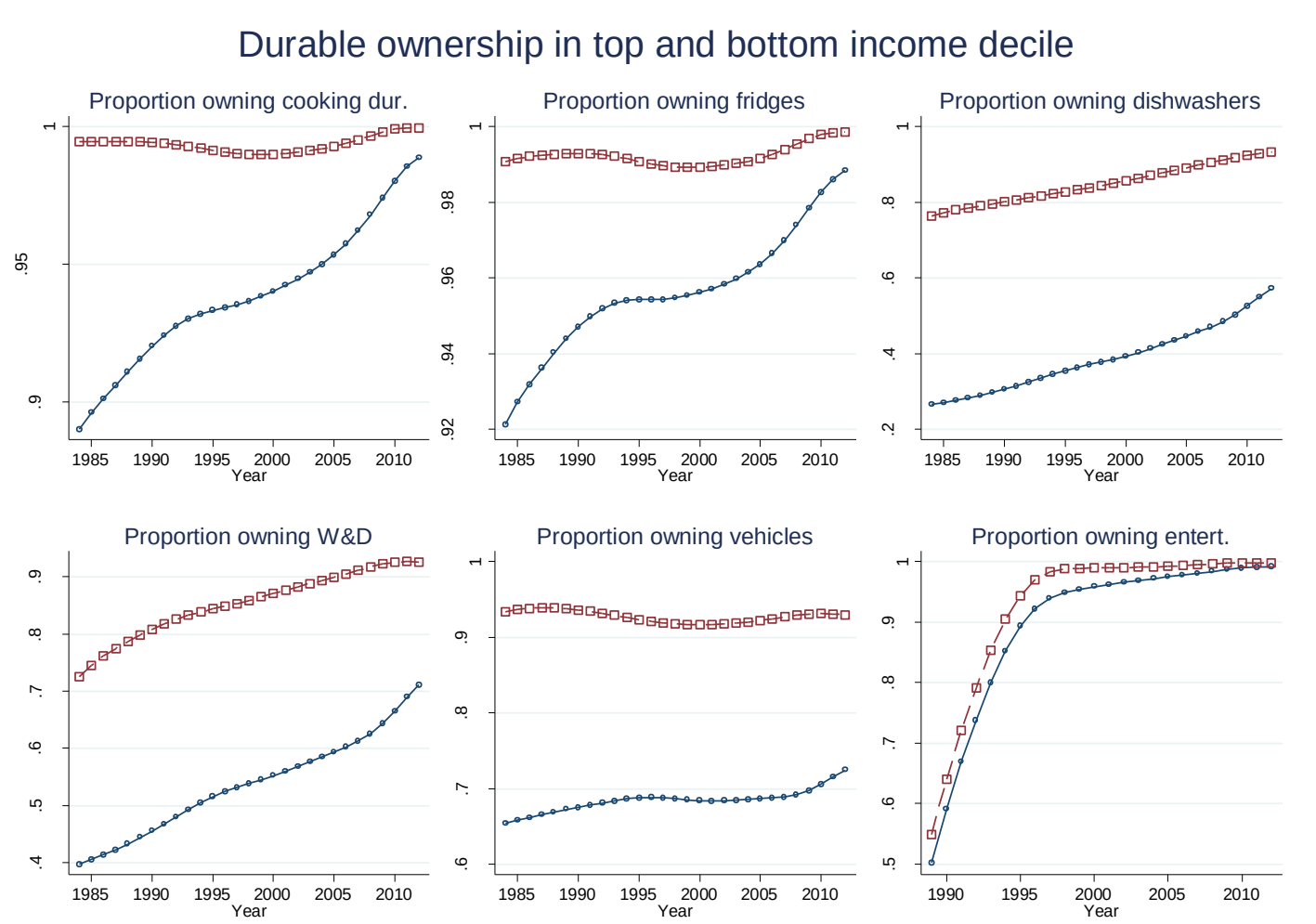
Durables ownership (or availability)



$$I_{1985} = \left(c_n^{rich} + \theta x_d^{rich}\right) - \left(c_n^{poor}\right) = \Delta c_n + \theta x_d^{rich}$$

$$I_{2010} = \left(c_n^{rich} + \theta x_d^{rich}\right) - \left(c_n^{poor} + \theta x_d^{rich}\right) = \Delta c_n$$

Inequality is higher if ignoring services from durables (assuming quality is the same, etc)

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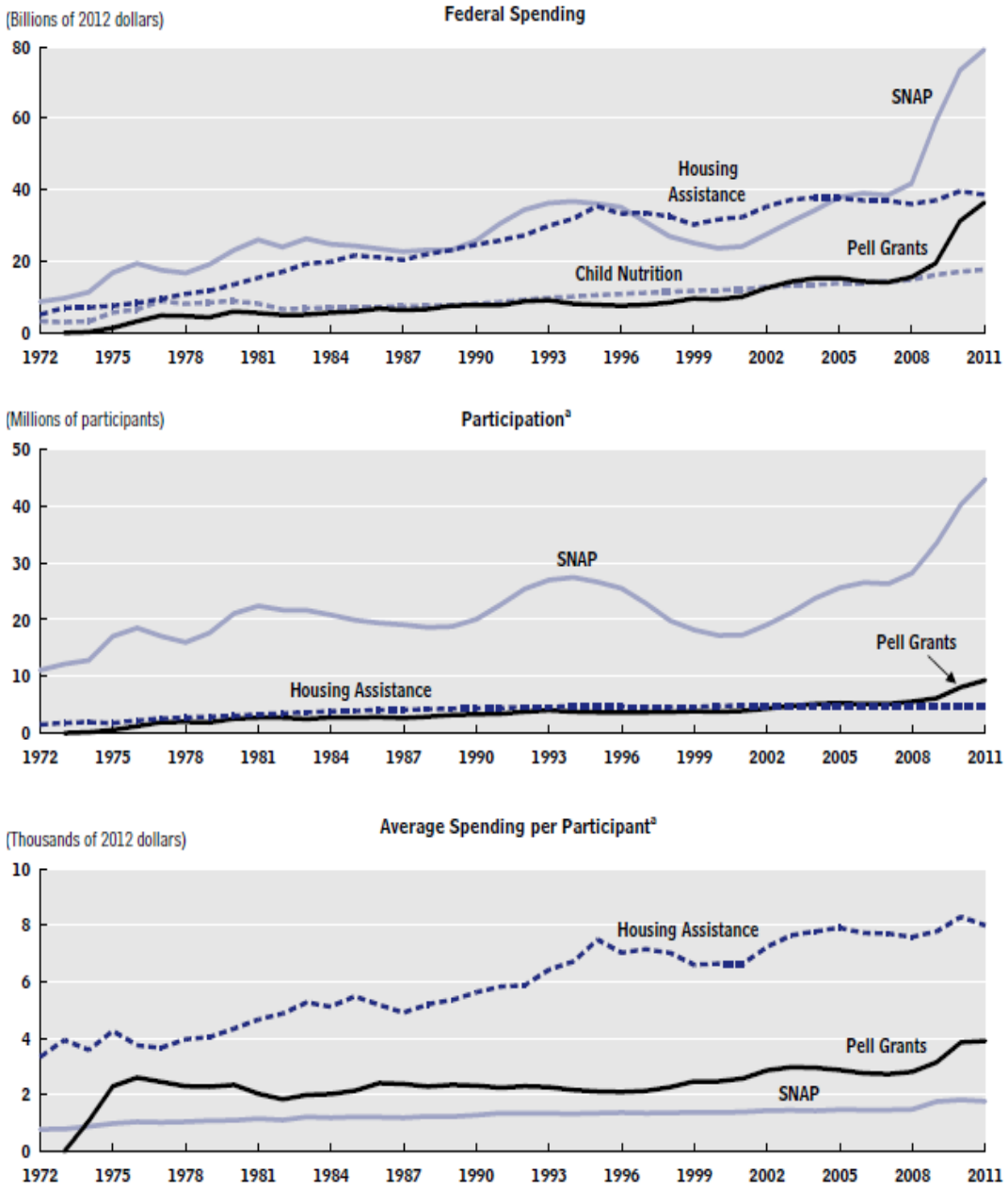
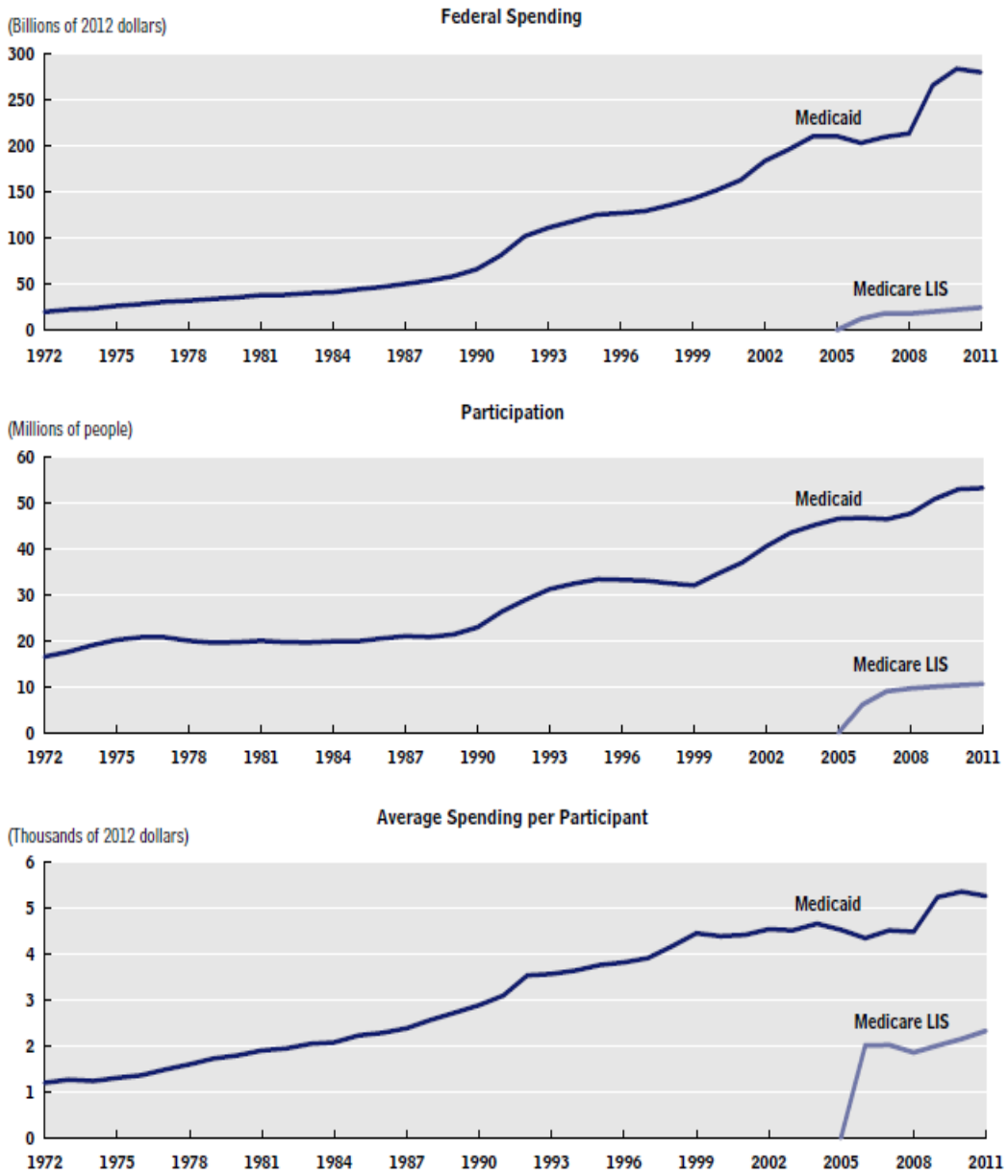
Growth in Selected Means-Tested Programs That Assist with Nutrition, Housing, and Education, 1972 to 2011



- Between 1972 and 2011 SNAP ("food stamps") grew in size (from 0.2 to 0.5% of GDP), participation (from 5.3 to 14.3% of the US population), and generosity (from $800 to $1,800 avg. per beneficiary)

- So did other programs

Growth in Selected Means-Tested Programs That Provide Health Care, 1972 to 2011



Source: Congressional Budget Office.

Medicaid

- In 1972 spending was 0.4% of GDP
- In 2011: 1.8%.

- Participation went from 7.9% to 17% of the US population

- Avg. spending for participants grew from $1,200 to $5,300 (2012 $)

$$I_{1985} = \left(c^{rich}\right) - \left(c^{poor}\right) = \Delta c$$
$$I_{2010} = \left(c^{rich}\right) - \left(c^{poor} + t\right) = \Delta c - t$$

Inequality is higher if ignoring the monetary value of in-kind transfers

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Prices and consumption inequality

- Various issues:
  - “Quality” effects (keeping shopping experience constant) may induce spending inequality, but no consumption inequality ($p^{organic}q$ vs $p^{OGM}q$)
  - “Shopping” effects (keeping quality constant) may induce spending inequality, but no consumption inequality ($p^{Walmart}q$ vs $p^{Whole\ Foods}q$)
  - Increase in international trade (i.e., “China syndrome”) reduces quite substantially prices of certain goods that the poor consume more than the rich
    - Poor people can now afford goods they could not afford in the past, or consume more of what they were already consuming

Which data?

From macro to micro

- Over the last 30 years, it has been understood that micro data are the only credible way to understand agents' behavior
  - The "representative agent" exists now mostly in textbooks
  - Heterogeneous agent models have become the norm
  - The study of distributions is key
- But we need access to micro data on consumption, and of good quality
- Not a problem if error in consumption is classical, but lots of evidence that it isn't

Data Sources to study spending behavior in the US

- Consumer Expenditure Survey (CE)
  - The only truly comprehensive source of micro-level spending data in the US
  - Interview vs. Diary
- Panel Study of Income Dynamics (PSID)
- HRS-CAMS
- Others
  - SIPP
  - …
  - Scanner data
  - Proprietary credit card/financial aggregator data

Known Issues with the CE

- Panel component is short (4 quarters at most)
- Match with NIPA trends is problematic
  - Classical measurement error assumption appears violated, at least for some components (CE/PCE coverage ratios change across goods)
  - Some evidence that high income households participates less and understate their spending, especially of luxuries
- CE has information on income and assets; but data collection strategies are different than for spending
- No time use; no subjective expectations; “histories”; health; prices (and geography quite broad, at least for public releases); etc.

Enrich CEX?

- Trade-offs
  - Surveys are already quite long
  - Adding extra info could induce or increase survey fatigue, item non-response
- Ideas to free up interview time and increase depth
  - Rotate subject matters across waves (does not need to be permanent)
  - Match with administrative records
  - Random assignment to “modules”
    - But need larger sizes to get precise answers

Thanks!

- For a full list of references, please see my recent book with T. Japppelli