The use of scanner technology for collecting expenditure data in mixed-mode social science surveys

Andrew Leicester (IFS, UCL)
Zoë Oldfield (IFS)
Outline of today’s presentation

• Data description
  – How is data collected?
  – What are the potential benefits over existing spending data?
• Aims of the project
• Some early findings
  – Expenditure comparisons
• Next steps
  – Plans for further analysis
  – Plans for dissemination
Taylor Nelson Sofres (TNS) data

- GB Fast-Moving Consumer Goods data
  - Recruitment via National Shopper Survey based on characteristics
  - Rewarded with loyalty points
  - Demographics on sign-up; refreshed approx. every 9 months

- Households scan all FMCG items via in-home barcode scanner
  - All purchases brought home from all stores
  - Includes non-barcoded items (random weight, etc)
  - Price data obtained from till receipts, special offers recorded
  - Detailed product information recorded

- Data from Nov 2001–Nov 2007

- Huge data – in a typical week:
  - 18,000 active households
  - £1m of recorded spending
  - 600,000 transactions
Usefulness of data

• Key advantages over current data (e.g. EFS)
  – Very disaggregate: detailed product information, exact prices
  – Panel: observe reaction to events
  – Store of purchase: useful for IO studies
  – Lower data lag times

• Potentially a huge new research agenda
  – Need to understand how and why data differs
  – Driven by mode of data collection / survey design?
Broad project goals

- Compare demographic data
  - Representativeness (cf. Census, EFS)
  - Demographic transitions and attrition (cf. BHPS)

- Compare expenditures
  - Differences in spending (cf. EFS)
  - Differences across goods: top-up? Non-barcoded?
  - Differences across households: impact of design?
  - Variation over time – survey fatigue?

- Lessons for using scanner technology in existing data
  - Strengths/weaknesses
  - Guidelines for researchers using data

- Raise awareness
Some early findings: expenditures compared

- TNS sample: households in first full fortnight of active participation
- Spending on food and drink in both datasets
- Households buy something in both weeks
  - TNS households more likely to record zero spending in one week
- Weekly average expenditures:
  - TNS spending approx. 85% of EFS total
  - Little variation across time
  - Substantial variation across goods
    - Problems in recording fresh produce?
    - Top-up shopping?
    - Relatively low alcohol spending
  - Demographics do not seem to account for differences
Expenditure comparisons 2005
Broad categories of spending

- Total spending (food & drink)
- Food
- Beverages
- Alcohol

EFS, TNS, TNS (adjusted)
Next steps / dissemination

• More detailed spending comparisons
  – Spending by demographics
  – More detailed look across goods

• Comparison of demographics
  – Are different groups over- or under-represented in scanner data?
  – Demographic transitions

• Dissemination plans
  – Publish findings in special issue of journal “Fiscal Studies”, June 2009
    • “Innovations in the measurement of consumption and wealth”
  – Internal presentation/discussion of findings with IFS staff
  – Discussions with TNS