Global versus Specific Questions for the Consumer Expenditure Survey

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Current Specific Questions - Clothing

Now I am going to ask you about clothing expenses. You may find it helpful to refer to receipts, credit card statements or other records to answer the questions.

Since the first of the reference month, have you or has any member of your household purchased any of the following items, for persons age 2 and over either for members of your household or for someone outside your household?

* Read each item on list.

1. Coats, jackets or furs
2. Sport coats or tailored jackets
3. Suits
4. Vests
5. Sweaters or sweater sets
6. Pants, jeans, or shorts

7. Dresses
8. Skirts
9. Shirts, blouses, or tops
10. Undergarments
11. Hosiery
12. Nightwear or loungewear
13. Accessories
14. Swimsuits or warm-up or ski suits
15. Uniforms, for which the cost is not reimbursed
16. Costumes
17. Footwear

99. None/No more items

[For definitions Information Booklet]

[For each positive report above, ask detailed questions]

Second Dimension of Specificity

Information Booklet for Section 9a - CLOTHING AND SEWING MATERIALS

Part A - Clothing (Do not include here -- clothing for children under 2 years of age.)

1. - COATS, JACKETS, AND FURS, including -

down vest	raincoat
fur coat	shawl
jacket	winter coat
outerwear	

…

17. - FOOTWEAR, including -

bedroom slippers dress shoes	
boots	sandals
casual shoes	sneakers, jogging, aerobic, basketball, tennis shoes

Do not include specialized athletic shoes such as for football, soccer, bowling, biking, or baseball.

Third Dimension of Specificity

What did you buy?

* Describe briefly the item purchased._____

Was this (were these) purchased for someone inside or outside of your household?

1. Inside your household
2. Outside your household

For whom was it purchased?

* Enter all that apply, separate with commas.

_____

For whom was this purchased?

* Enter all age/sex categories that apply to the purchase, separate with commas.

40. Male 16 and over
41. Female 16 and over
42. Male 2-15
43. Female 2-15
44. Children under 2 years old

* Enter name of person._____

How many did you purchase?

* Enter number of identical items purchased._____

When did you purchase it/them?_____

How much did it/they cost?_____

Did this include sales tax?

1. Yes
2. No

* Enter 'C' for a combined expense.

1. C
2. Not combined

What other clothing is combined with the item?

4

Differences between Global and Specific Questions and Likely Mechanisms Affecting Survey Estimates

- Global questions:
  - may not be interpreted uniformly
    - each question can be interpreted by respondents as including a different set of expenditures (e.g., Schober and Conrad, 1997; Conrad and Schober, 2000)
  - ask for a wider array of "targets"
    - encoding together vs. separately (e.g., clothing vs. furniture) need to consider all targets (e.g., NCS redesign (Martin, Groves, Matlin and Miller, 1986; Hubble, 1990, 1995) - adds length and complexity
  - require the recall of a greater number of events at the same time
    - higher frequency of events can spur greater use of *estimation* rather than *enumeration* of expenditures (Blair and Burton, 1987; Burton and Blair, 1991; Means and Loftus, 1991; Conrad, Brown and Cashman, 1998)
    - enumeration tends to lead to underreporting
    - for larger categories estimation can also lead to underreporting, but for smaller categories (decomposed into subcategories) estimation can lead to *overreporting* (Belli, Schwarz, Singer and Talarico, 2000)
    - not just overall measurement error bias, but also variance

Differences and Likely Mechanisms Affecting Survey Estimates - Continued

- Global questions:
  - lead to a shorter interview
    - reduce learning across (Silberstein and Jacobs, 1989; Shields and To, 2005) and within waves (Biemer, 2000) of the CE interview
    - may reduce recall (Cannell, Miller, and Oksenberg (1981))
  - may be less susceptible to question order effects
    - when categories are not seen as mutually exclusive, question order effects can arise (e.g., Schwarz, Strack and Mai, 1991; Schwarz and Hippler, 1995)
  - may be more susceptible to social desirability influences
    - e.g., alcohol and question decomposition (Mooney and Gramling, 1991)

  - effectiveness compared to specific questions can vary depending on the particular set of questions
    - encoding together vs. separately (e.g., food vs. furniture)

Measurement Error Bias and Variance

- Both bias *and variance* have estimates for each interview #
- Both can be dependent on the interviewer
- Mean square error of an estimate:

$$MSE = Var(\Theta') + Bias(\Theta')^2$$

- For an estimate of a mean:

$$\hat{Bias}_t = \frac{\sum y_{i,j,t}}{n_t} - \overline{Y}_t \quad \text{and} \quad \hat{Var}_t = \frac{\sum (y_{i,j,t} - \overline{Y}_t)^2}{n_t - 1}$$

where *i* is the respondent, *j* is the interviewer, and *t* is the interview/reinterview number.

BLS Discussion Questions (1 & 2)

1. How accurate are responses to global questions?
   - Depends on the particular questions (e.g., high frequency, where estimation may be a superior strategy)
   - Likely less susceptible to decreases in accuracy over:
     - The course of the interview
     - Subsequent reinterviews (across quarters)

2. Does accuracy vary across expenditure categories?
   - Yes, depending on:
     - How memories of different expenditures are structured for each category
     - Frequency
     - How global are the global questions
   - Bias and variance components will also vary across expenditure categories

BLS Discussion Questions (3 & 4)

3. Can global questions obtain data that are accurate and reliable enough for use by the CE?

   - Additional research is needed
   - Empirical evidence shows promise for some questions (Goldenberg & Steinberg, 2010))
   - Depends on how the global questions are constructed (e.g., the NCVS experience with improving global questions)

4. Detailed questions are known to have measurement error, particularly associated with recall. Do global questions have different sources of measurement error? What issues should be considered when combining data from detailed questions and global questions to produce estimates of total expenditures?

   - Differential bias in global questions is especially concerning as expenditure categories using global questions may receive disproportionately large CPI weights
   - Correlates of measurement error in estimates using specific and global questions need to be identified in order to better understand when differences occur

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Experimentation and Evaluation (5)

5. What should the next steps be for research on this issue for a possible change in CE design?

- Validation studies
    - Sample screened for use of electronic payment methods
    - Reverse record check
    - Compare bias and variance
    - Compare correlates of estimated measurement error
- Changes in reporting
    - Within the instrument (random order of sets of questions)
    - Across waves (vary the recruitment month/season)
- Collect respondent and interviewer reports on cognitive processes
    - Estimation vs. enumeration
    - Incorporate type of examination employed by Jennifer Edgar, in a field implementation
- Evaluate impact on the CPI

BLS Discussion Questions (1-5)

1. How accurate are responses to global questions?

2. Does accuracy vary across expenditure categories?

3. Can global questions obtain data that are accurate and reliable enough for use by the CE?

4. Detailed questions are known to have measurement error, particularly associated with recall. Do global questions have different sources of measurement error? What issues should be considered when combining data from detailed questions and global questions to produce estimates of total expenditures?

5. What should the next steps be for research on this issue for a possible change in CE design?

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