How Do Different Cues Affect Proxy Reporting of Transit Use?

Brett McBride

Division of Consumer Expenditure Surveys

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Consumer Expenditure Survey

- Consumer Expenditure Quarterly Interview Survey
  - Interviewer asks a HH respondent to report less-frequent and recurrent expenses
  - 3-month reference period
Proxy Reporting

- Assumption: Proxy reports are of poorer quality
- Certain behaviors associated with spending can limit issues with proxy reporting (Kojetin & Miller, 1993):
  - Conversation
  - Participation
  - Observation
Proxy Reporting (cont.)

- Certain expenditures more observable than others

- Hypothesis: Adding person-directed cues to question about less observable expense will increase reporting
Public Transportation Question Changes

2017 quarter 1

1) Do [you or any members of your household] use mass transportation services such as a bus, subway, mini-bus or train? (Do not include expenses covered by employer-provided transit subsidies. Include commuter rail, light rail, and trolleys as mass transit)

2017 quarter 2

1) Do [you/you or any members of your household] pay out-of-pocket for public transportation services such as bus, subway, train, or passenger ferry?
Public Transportation Question Changes

2017 quarter 1 - No (person) cues

1) Do [you or any members of your household] use mass transportation services such as a bus, subway, minibus or train? (Include … Do not include…)

2) What is the usual MONTHLY cost to use mass transit to go to - Work?

3) What is the usual MONTHLY cost to use mass transit to go to - School?

4) What is the usual MONTHLY cost to use mass transit to go to - Other places?

2017 quarter 2 - Person cues

1) Do [you/you or any members of your household] pay out-of-pocket for public transportation services such as bus, subway, train, or passenger ferry?

2) What are the names of all household members who use mass transit?

3) What is [your/NAME's] usual out-of-pocket cost?

4) (-Select time period)
   1) Day (to Q5)
   2) Week
   3) Month

5) How many days per week usually?
Findings: Fewer Reporting, but Increased Amounts

- Overall proportion of HHs reporting (non-subsidized) public transportation expenses declined [not significant]
- Amounts reported (for HHs reporting amount) increased

<table>
<thead>
<tr>
<th></th>
<th>No Cues (N=495)</th>
<th>Cues (N=443)</th>
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<tbody>
<tr>
<td>Mean*</td>
<td>$75.13</td>
<td>$89.45</td>
</tr>
<tr>
<td>Median*</td>
<td>$40.00</td>
<td>$50.00</td>
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*Significant difference; Wilcoxon-Mann-Whitney; Z=2.56, Pr>Z = 0.011
Findings: Large Change in Amounts for 2+ HHs

Multi-member HHs (N=591)

- Increase in median amounts from $50 to $80
Findings: Large Change in Amounts for 2+ HHs

Multi-member HHs (N=591)

- Increase in median amounts from $50 to $80
- Within multi-member HHs getting cues (for HHs reporting amount), 36% proxy reported an amount
Findings: Limited Change in Amounts for Single HHs

Multi-member HHs (N=591)

Single-member HHs (N=347)
Summary

- Proportion of HHs reporting any public transportation expense did not change after person cues added to question
- Amounts reported by HHs with expenses significantly higher after person cues added
- Examining change in amounts by HH size, increase attributable to higher amounts in HHs with multiple members
Conclusion

Caveats

- Analysis did not control for other factors
- Unclear if increase in amounts reported for others (2+ HHs) led to the overall increase in amounts reported
  - Proxy reporting was occurring in multi-member HHs

Take Away

- Person cues a potential tool to improve accuracy of proxy reporting
Contact Information

Brett McBride
Senior Economist
Division of Consumer Expenditure Surveys
www.bls.gov/cex
202-691-5136
mcbride.brett@bls.gov