Motivated Misreporting in the Consumer Expenditure Household Survey

Stephanie Eckman

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Motivated Misreporting

- Clothing questions reliably generate motivated misreporting
- Effect stronger over questions within section
- However: not always as expected

<table>
<thead>
<tr>
<th>Mode</th>
<th>Screening</th>
<th>Filters</th>
<th>Loops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-Face</td>
<td>US</td>
<td>US</td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td>US</td>
<td>US, DE</td>
<td></td>
</tr>
<tr>
<td>Web</td>
<td></td>
<td>US, NL</td>
<td>DE</td>
</tr>
</tbody>
</table>
Has anyone in this household had any expenses for:
Oil change, lubrication or oil filter?

Yes

Did this expense include labor?
In what month?
What was the total cost?

Yes

May
$49.99

Has anyone in this household had any expenses for:
Tire purchases or mounting?

Yes?
This sequence is repeated dozens of times during each interview and may affect respondent behavior.

It seems likely that respondents learn quickly in the first interview, and are reminded in each successive one, that the interview will last longer if they answer “yes” to these screening questions.

Fifty percent of field representatives said that it happened frequently or very frequently.

Measuring What We Spend: Towards a New Consumer Expenditure Survey
(2013, 84-85)
Research Questions

- **Paper 1:** Do Rs engage in **motivated misreporting** in Wave 1?

- **Paper 2:** Do Rs in **later waves** engage in **more motivated misreporting**?
Motivated Misreporting in Wave 1 of CE

Does misreporting occur in Wave 1?

Eckman (2020) Under Review
Has anyone in this household had any expenses for:
Oil change, lubrication or oil filter?
Yes
Did this expense include labor?
Yes
In what month?
May
What was the total cost?
$49.99
Has anyone in this household had any expenses for:
Tire purchases or mounting?
Yes?
Has anyone in this household had any expenses for:
Oil change, lubrication or oil filter?
Yes

Has anyone in this household had any expenses for:
Tire purchases or mounting?
No

Has anyone in this household had any expenses for:
Tire repair?
Yes
CE asks filters only in interleaved format

Web survey in both formats
How to Measure MM in CE

- CE asks filters only in interleaved format
- Web survey in both formats

<table>
<thead>
<tr>
<th></th>
<th>Interleafed</th>
<th>Grouped</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumer Expenditure</strong></td>
<td>980 cases 15,680 filters</td>
<td></td>
</tr>
<tr>
<td><strong>Web Survey</strong></td>
<td>1,119 cases 17,904 filters</td>
<td>1,079 cases 17,264 filters</td>
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How to Measure MM in CE

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Multiple imputation of Yes/No to filter question
  - 6 models
  - 5 predictions from each model

Predictors:
  - Format (grouped or interleaved)
  - Survey (CE or web)
  - Item
  - Section order
  - Respondent & HH characteristics
<table>
<thead>
<tr>
<th></th>
<th>Interleafed % triggered</th>
<th>Grouped % triggered</th>
<th>Difference % points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Expenditure</td>
<td>33.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web Survey</td>
<td>36.8</td>
<td>42.9</td>
<td>6.1 %points (0.80)</td>
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### Results

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<tr>
<td><strong>Consumer Expenditure</strong></td>
<td>33.5</td>
<td>38.5</td>
<td>5.1 %points (1.5)</td>
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Motivated Misreporting in Waves 2 - 4 of CE

Does misreporting *increase* in later waves?


Eckman & Bach (2020) Under Review
## Selecting Cases for Analysis

<table>
<thead>
<tr>
<th>Month</th>
<th>Panel A</th>
<th>Panel D</th>
<th>Panel G</th>
<th>Panel J</th>
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<tbody>
<tr>
<td>Jan 2016</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr 2016</td>
<td>2</td>
<td>1</td>
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<td></td>
</tr>
<tr>
<td>Jul 2016</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Oct 2016</td>
<td>4</td>
<td>3 *</td>
<td>2 *</td>
<td>1 *</td>
</tr>
<tr>
<td>Jan 2017</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td></td>
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<td>4</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Jul 2017</td>
<td></td>
<td></td>
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<td>4</td>
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<tr>
<td>Variable</td>
<td>Motivated Misreporting Expects</td>
<td></td>
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<tr>
<td>-------------------------</td>
<td>--------------------------------</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Purchases</td>
<td>Fewer purchases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Price rounded</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># prices rounded for case-wave</td>
<td>More rounding</td>
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<td></td>
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<tr>
<td><strong>Price missing</strong></td>
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<tr>
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<td>More missing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Results

Number of Purchases

Wave
Results

Number of Rounded Amounts

Number of Missing Amounts

Wave
Discussion

- Paper 1: Underreporting in Wave 1

- Paper 2: Data quality gets *better* over waves
  - Attrition: those who *would* underreport drop out

- How do we make interleaved format better?
Thank You

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All papers available here: https://osf.io/mv3pq/