Use of Financial Records in the CE Survey

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CE Methods Methods Symposium
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U.S. Consumer Expenditure Records Study

Final Report

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F I N A L  R E P O R T

Records Information and Feasibility of Use Study

PRESENTED TO:
Bureau of Labor Statistics
2 Massachusetts Ave NE
Washington, DC 20212

PRESENTED BY:
NORC at the University of Chicago

August 31, 2011
CE Records Study

- **Goals**
  - What records are available and from whom?
  - How do participants’ self-reports compare to those records?

- **Methods**
  - 115 participants from North Carolina and DC
  - 2 visits, 1 week apart
    - Visit 1 – Shortened CEQ interview (9 Sections)
    - Visit 2 – Comparison of financial records to self-reports
CE Records Study
What records are available and from whom?

- Records were provided for 36% of the 3,039 expenditures reported in Visit 1.
- Participant characteristics positively associated with having records:
  - Non-Hispanic Whites
  - Women
  - DC Residents
  - Home Owners
- Expenditure characteristics positively associated with having records:
  - Recent Purchases
  - More Expensive Purchases
CE Records Study

How do participants’ self-reports compare to those records?

- Over- and Under- reporting were not common
  - 81 items (3%) on records but not reported in Visit 1
  - 34 items (1%) reported erroneously in Visit 1

- Participants’ accuracy in reporting expenditure amounts was low
  - Matched record exactly - 30%
  - Within 10% of correct amount - 53%
  - >5-10% over the correct amount - 33%
  - >5-10% under the correct amount - 37%

- On average, participants were off by 36%
- Over- and Under- estimation tended to cancel each other out
How much better are records than self-reports?

In this sample, much more accurate

How useful are records in actual practice?
Tin Box

- Ask respondents to gather their records
  - Prospectively
  - Retrospectively
- Provide those records to interviewer for scanning/data entry
<table>
<thead>
<tr>
<th>Date</th>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/22/10</td>
<td>BABY PLD CARR</td>
<td>Fresh Vegetables</td>
<td>1.50</td>
</tr>
<tr>
<td>12/22/10</td>
<td>CELERY 30 CT</td>
<td>Fresh Vegetables</td>
<td>1.99</td>
</tr>
<tr>
<td>12/22/10</td>
<td>GREEN CABBAGE</td>
<td>Fresh Vegetables</td>
<td>2.80</td>
</tr>
<tr>
<td>12/14/12</td>
<td>XFINITY Internet</td>
<td>Cable, Satellite, and Internet Services</td>
<td>55.95</td>
</tr>
</tbody>
</table>
Types of Financial Records

• Point-of-Purchase Receipts
• Bills
• Website Printouts
• E-mail Receipts
• Bank Statements
• Credit Card Statements
• Written Notes
• Financial Software Printouts
• Package Invoices
• Service Invoices
Records Information and Feasibility of Use (RIFU) Study

- **Goals**
  - What information necessary for completing the CE surveys is available on financial records?
  - What additional information can be collected from records?

- **Methods**
  - 152 participants from the Chicago area
  - 2 visits, 2 weeks apart
    - Visit 1 – Explain record collection task
    - Visit 2 – Scan records, questions about the interview experience
  - Enter data from records into database
RIFU Study

- 2,985 records were provided
  - Average: 19.6/household
  - Range: 0 – 232 records/household
  - 86.3% of records were receipts, only 0.8% were bills

- 9,903 items contained on the records
  - Average: 3.9 items/record
  - Range: 1 – 133 items/record
  - 69.5% of items were classified as food purchases, 9.3% as housing, 4.4% as apparel
Transaction Date

- Present on 98.3% of collected records
**Item Description**

- Coders attempted to fit item descriptions into a 4-tier, 72 category scheme.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Food</td>
</tr>
<tr>
<td>2</td>
<td>Food at Home</td>
</tr>
<tr>
<td>3</td>
<td>Meats, Poultry, Fish, Eggs</td>
</tr>
<tr>
<td>4</td>
<td>Poultry</td>
</tr>
<tr>
<td>1</td>
<td>Personal Care Products and Services</td>
</tr>
</tbody>
</table>

- A subset of items were double-coded for reliability purposes.

<table>
<thead>
<tr>
<th>Match Status</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Match</td>
<td>69.3%</td>
</tr>
<tr>
<td>Mismatch (same top category)</td>
<td>22.4%</td>
</tr>
<tr>
<td>Unmatched</td>
<td>8.3%</td>
</tr>
</tbody>
</table>
### Item Price

- Present on collected records

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Item Price</strong></td>
<td>99.3%</td>
</tr>
<tr>
<td><strong>Total Price</strong></td>
<td>98.3%</td>
</tr>
<tr>
<td><strong>Tax (Amount Paid)</strong></td>
<td>64.9%</td>
</tr>
<tr>
<td><strong>Tax Rate</strong></td>
<td>29.4%</td>
</tr>
<tr>
<td><strong>Shipping Cost</strong></td>
<td>0.1%</td>
</tr>
</tbody>
</table>

![Receipt Image]
Outlet Information

• Present on collected records

<table>
<thead>
<tr>
<th>Outlet Name</th>
<th>89.3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outlet Address</td>
<td>88.6%</td>
</tr>
<tr>
<td>Outlet Phone Number</td>
<td>84.6%</td>
</tr>
</tbody>
</table>
**Personally Identifiable Information (PII)**

- Present on collected records

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent Name</td>
<td>9.1%</td>
</tr>
<tr>
<td>Respondent Address</td>
<td>2.7%</td>
</tr>
<tr>
<td>Respondent Phone Number</td>
<td>1.4%</td>
</tr>
<tr>
<td>Credit Card Number (Full)</td>
<td>0.3%</td>
</tr>
<tr>
<td>Credit Card Number (Last 4)</td>
<td>41.4%</td>
</tr>
<tr>
<td>Customer ID</td>
<td>10.9%</td>
</tr>
</tbody>
</table>
Information Not on Records

- Food and Drinks Away From Home
  - Meal (breakfast, lunch, dinner, snack/other)
  - Outlet Type (fast food, full service)
- Food and Drinks for Home Consumption
  - Packaging (fresh, frozen, bottled/canned, other)
- Clothing, Shoes, Jewelry, and Accessories
  - Gender
  - Age
Conclusions

- Comparison of self-reports and records revealed some over/under reporting and extensive over/under estimation.
- Collecting records for all household expenses is difficult.
- Records, by themselves, provide a lot, but not all, of the information CE needs; respondent interaction is still needed.
Future Challenges

- Collecting a comprehensive set of records
  - Collecting more online/digital records
- Capturing transactions that do not yield records
- Easily and accurately converting records into tabular data
Special Thanks

- **CE Records Study Team**
  - At BLS:
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    - Chris Stringer
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    - Emily Geisen
    - Charles Lau
    - Ashley Richards
    - Joan Wang

- **RIFU Study Team**
  - At BLS:
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    - Lucilla Tan
    - Jennifer Edgar
    - Jeanette Davis
  - At NORC:
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