Use of Financial Records in the CE Survey

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U.S. Consumer Expenditure Records Study

Final Report

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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
  - DC Residents
  - Women
  - 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 5 or 10% of correct amount - 53%
  - Over the correct amount - 33%
  - 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% or 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

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**Receipt Details**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Price Before Savings</th>
<th>Price After Savings</th>
<th>Bonus Card Savings</th>
<th>Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROCERY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRENCH FRIED ONIONS</td>
<td>4.13</td>
<td>-1.20</td>
<td>2.93</td>
<td>2 for $4.00</td>
<td></td>
</tr>
<tr>
<td>LT/PLUG 122</td>
<td></td>
<td>2.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MC BAY LEAVES</td>
<td>3.25</td>
<td>2.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEAT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRODUCE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BABY PLD CARR</td>
<td>1.60</td>
<td>-0.60</td>
<td>1.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BABY WHITE OSS</td>
<td>0.40</td>
<td>0.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLEOP 90 CT</td>
<td></td>
<td>2.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IC 3.94 LS @ $0.79/1LB</td>
<td>1.59</td>
<td>1.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GREEN CABBAGE</td>
<td>2.83</td>
<td>2.83</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total**

- Before Savings: $31.43
- After Savings: $28.85
- Credit: $28.85
- Change: $3.00

**Receipt Summary**

- Total Number of Items Sold: 9
- Year-to-Date Savings: $2.58

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**Bill Details**

- Billing Date: 12/14/12
- Transaction Date: 12/22/10
- Amount Due: $161.12
- Payment Due Date: 01/06/13
Coders attempted to fit item descriptions into a 4-tier, 72 category scheme. A subset of items were double-coded for reliability purposes.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Category</th>
<th>Full Match</th>
<th>Mismatch (same top category)</th>
<th>Unmatched</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Food</td>
<td>69.3%</td>
<td>22.4%</td>
<td>8.3%</td>
</tr>
<tr>
<td>2</td>
<td>Food at Home</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Meats, Poultry, Fish, Eggs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Poultry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Personal Care Products and Services</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Item Price

- Present on collected records

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Price</td>
<td>99.3%</td>
</tr>
<tr>
<td>Total Price</td>
<td>98.3%</td>
</tr>
<tr>
<td>Tax (Amount Paid)</td>
<td>64.9%</td>
</tr>
<tr>
<td>Tax Rate</td>
<td>29.4%</td>
</tr>
<tr>
<td>Shipping Cost</td>
<td>0.1%</td>
</tr>
</tbody>
</table>
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>Attribute</th>
<th>Frequency</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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  - At Census:
    - Chris Stringer
    - Richard Schwartz
  - At RTI:
    - Emily Geisen
    - Charles Lau
    - Ashley Richards
    - Joan Wang

- **RIFU Study Team**
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    - Lucilla Tan
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  - At NORC:
    - Lisa Lee
    - Micah Sjoblom
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