Respondent Record Use in the US Consumer Expenditure Survey

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AAPOR 2010

Consumer Expenditure Survey

- ✓ National federal survey, average 65 minutes
- Panel survey, 5 quarterly waves
- Designed to be personal visit (~30% phone)
- Respondents report for the household
- Expenditure questions ranging from large, regular items (mortgage) to small, infrequent (clothing) items
 - → Detailed follow-up questions (description, month, cost, sales tax)
- General philosophy: "more is better"



Respondent Record Use

"Most questions are about expenses your household had or bills you've received. You will find it helpful to have your checkbook register, credit card statements and other records available as you answer the questions."

"Please refer to any billing statements or other records you have when answering these questions."



Respondent Record Use in the CEQ

- Research on CEQ data shows a relationship between record usage and:
 - Reporting levels (Safir & Goldenberg, 2008)
 - **↓ Underreporting** (Tucker, Meekins & Biemer, 2008)
 - → Data quality (Gonzalez & Edgar, 2009)



Data

- April 2006 through March 2008
- Waves 2 through 5
- Interviewer question after interview asking how often respondent used records and what type of records were used
- ≥ 21,011 unique households

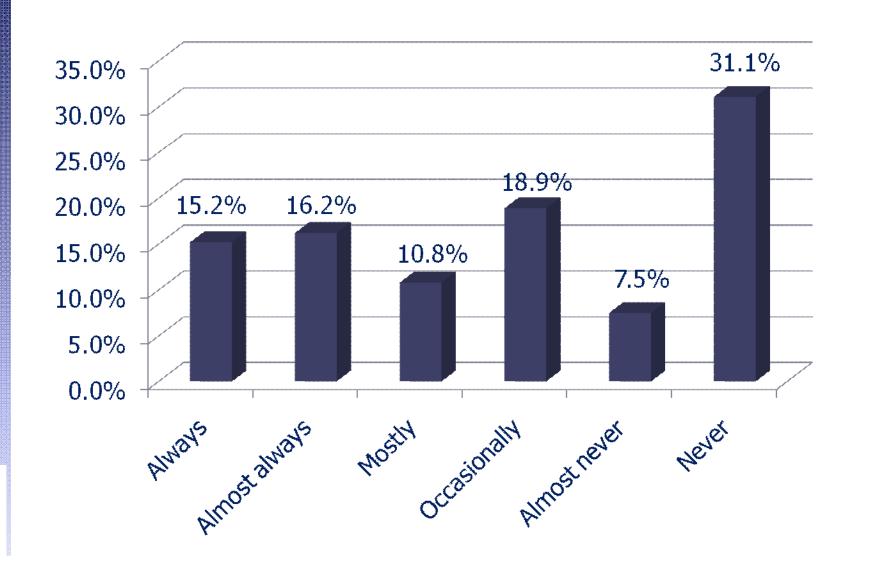


Method

- Compared record use by
 - **→** Respondent characteristics
 - **↓** Household characteristics
 - **→** Interviewer characteristics
- All statistical tests (Chi Square and ANOVA) were statistically significant and not reported
 - ↓ Likely due to sample size



Reported Record Usage



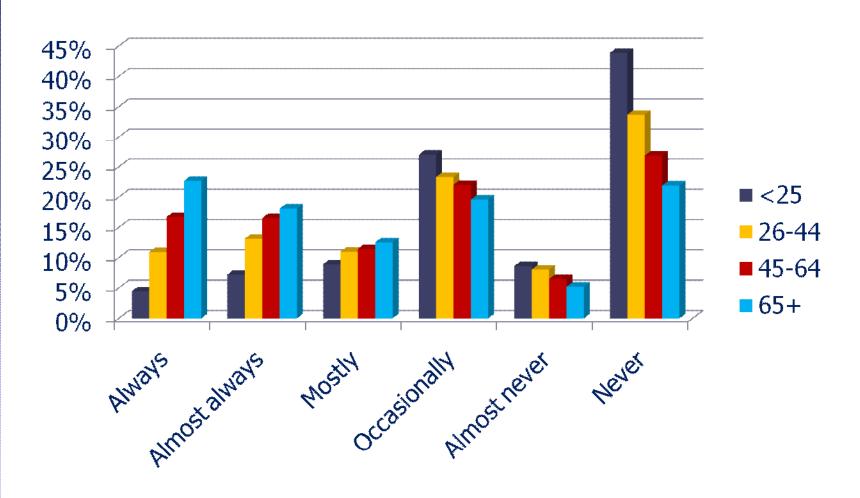


Respondent Characteristics

- Included only unique households
- Several interesting trends in who does and does not use records
- Males were slightly less likely to use records than females

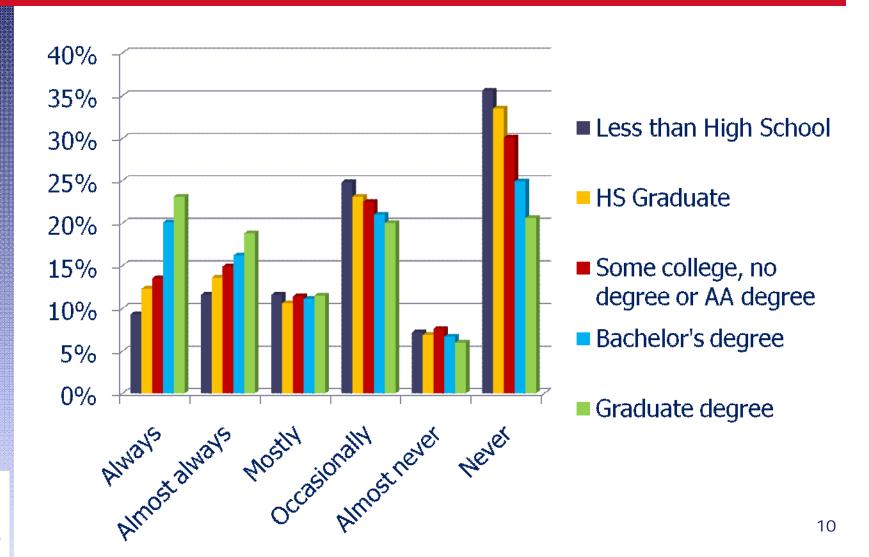


By Age





By Education





Household Characteristics: Family Size and Type

- As family size increased, the likelihood that a respondent will use records decreases
 - ↓ Exception: two-person households were the most likely to use records
- Husband and wife only households were most likely to use records
 - → Single consumers and 'other' household types were least likely

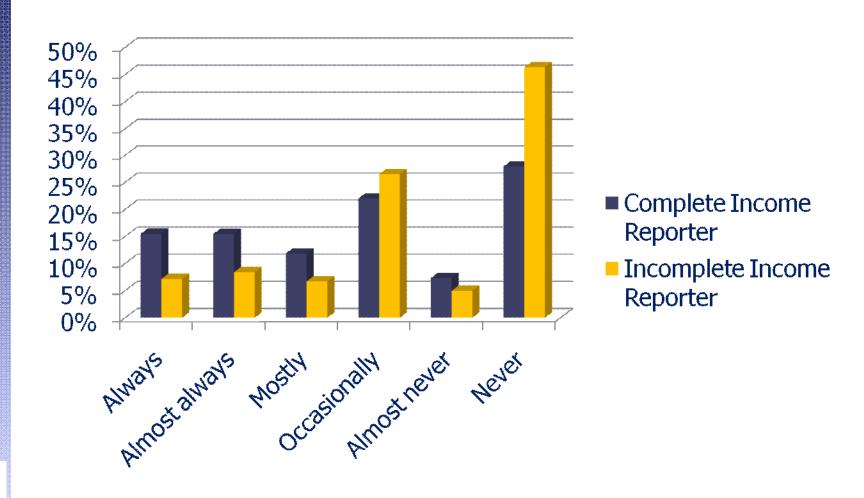


Household Characteristics: Tenure

- Homeowners without a mortgage were most likely to use records
- Households residing in student housing were least likely use records



Household Characteristics: Income Reporting





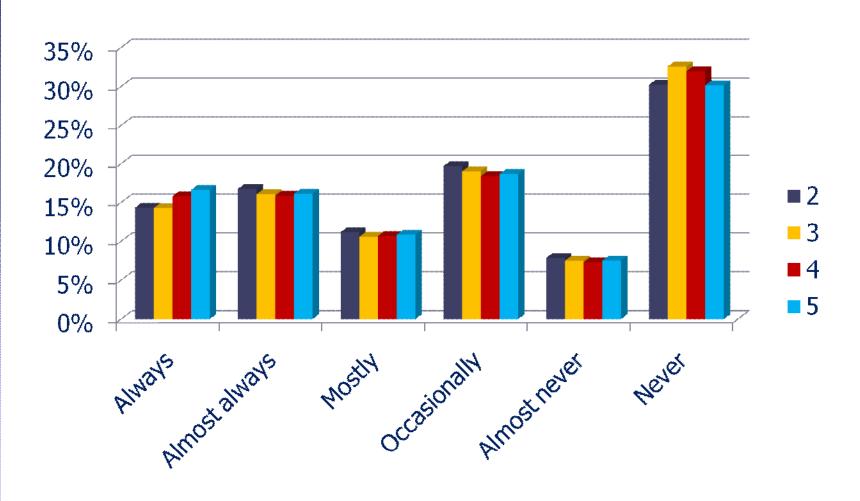
Interview Characteristics

Interviews where:

- The advance letter was reported to have been received were more likely to use records
- The advance letter was not received were more likely to never use records
- The Information Booklet was used were more likely to use records
- The Information Booklet was not used were more likely to never use records

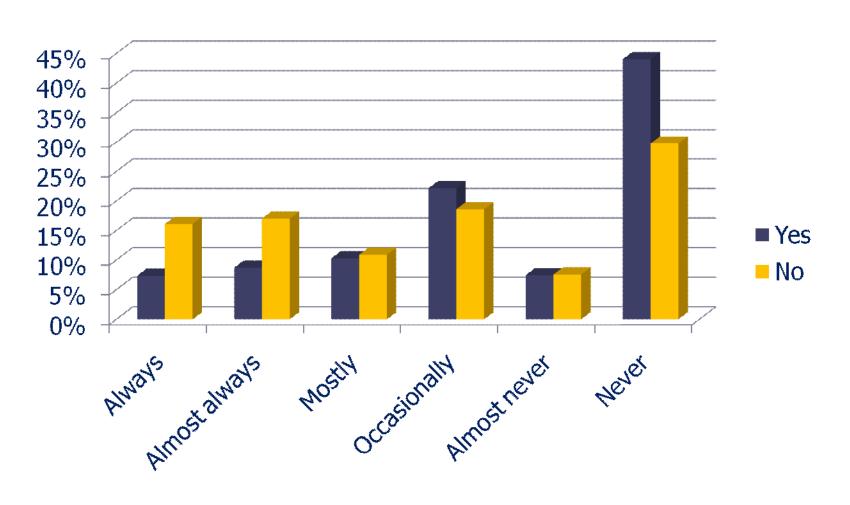


Interview Characteristics: By Wave



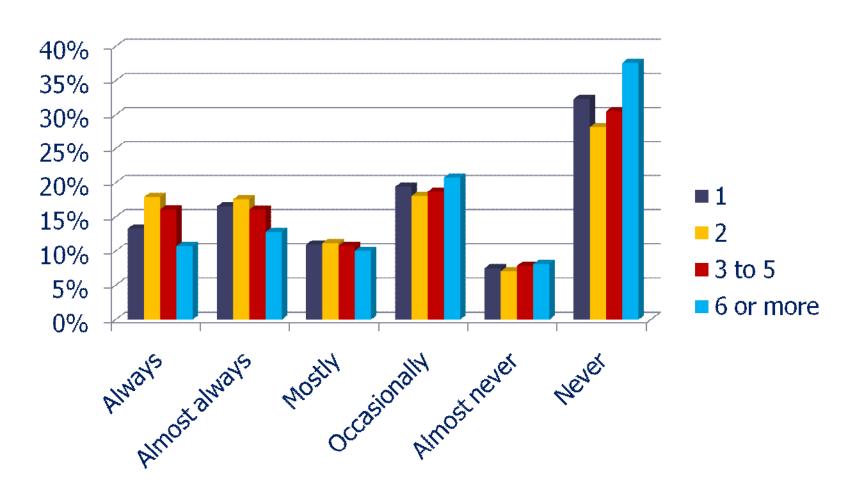


Interview Characteristics: Converted Refusals



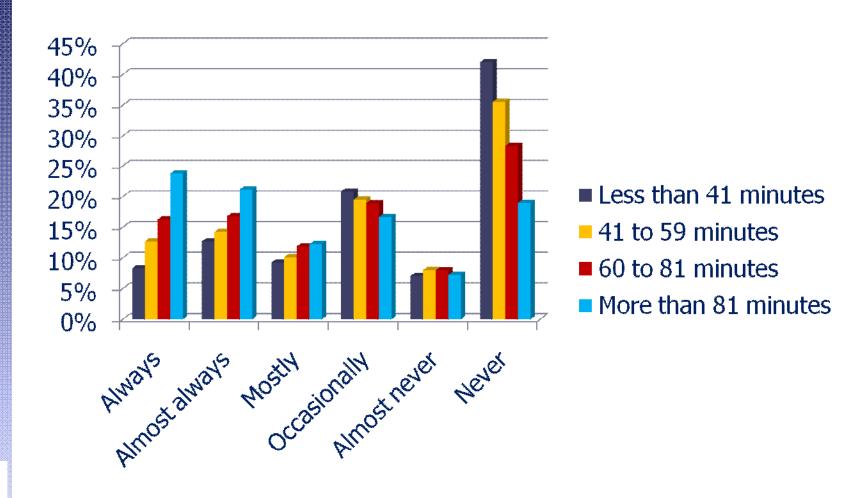


Interview Characteristics: Number of Contacts





Interview Characteristics: Interview Length





Interview Characteristics: Section Length

- Some specific CEQ sections probably benefit most from the use of records, (utilities, health-insurance and income)
- Respondents who used records took longer to complete these sections than respondents who did not
- This trend found in sections not thought to benefit from records (entertainment) too
- Record usage relates to longer interviewing time, regardless of topic



Interview Characteristics: Reporting Rates

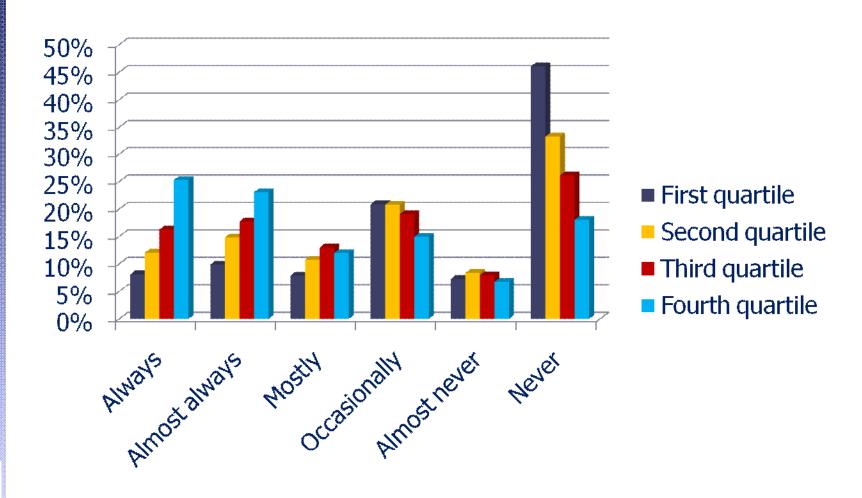
Number of expenditures ranged from 0 to 179 items

 $\sqrt{1}$ Mean = 29.4

→ Standard deviation = 17.5



Reporting Rates



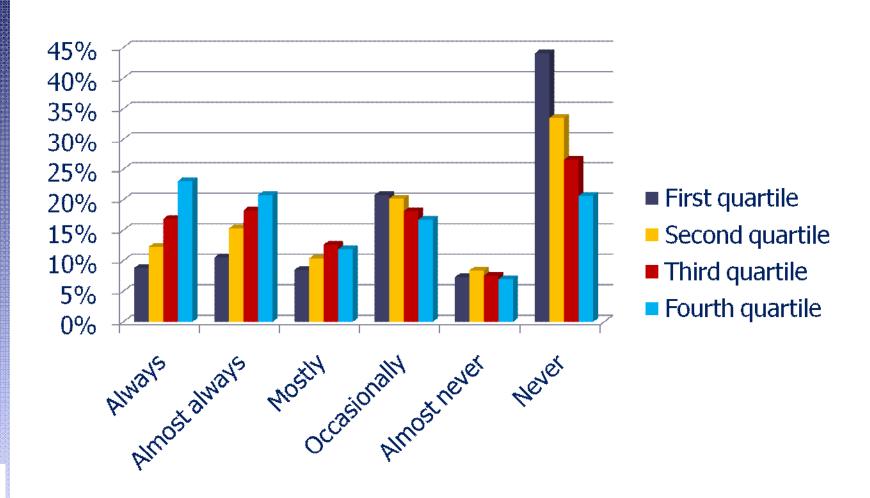


Expenditure Amounts

- ★ Total expenditure amount reported by each respondent ranged from \$0 to \$424,981
 - $\sqrt{1000}$ Mean = \$5,180
 - **¬** Standard deviation = \$8,566



Expenditure Amounts



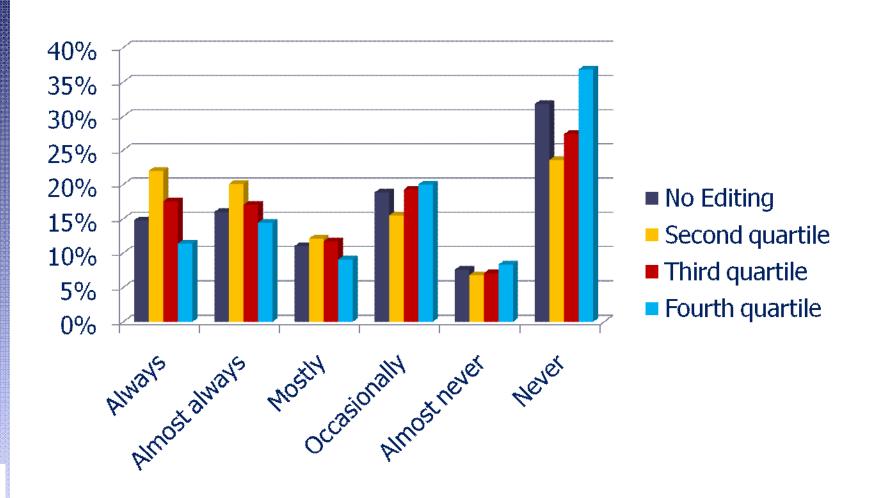


Data Quality

- Any type of editing required (imputation or allocation) was identified per expenditure report and summed across an interview
- Proportion of editing calculated
 - Ranged from 0.0 (no editing required) to 1.0 (all reports required editing)
- Forty two percent of interviews required no editing
- ★ The mean proportion was 0.12, with a standard deviation of 0.16



Data Quality





Summary

- Certain types of respondents (females, older, highly educated) and households (two person, homeowners) were more likely to use records
- Respondents who reported receiving the advance letter, and used the Information Booklet were more likely to use records
- Respondents who had to be convinced to participate were less likely to use records
- ✓ Using records is related to longer interviews, more reports and higher reports....



... but....

Conclusions

...record usage was not consistently related to higher quality data quality

So, what should we conclude?

- Record use likely increases respondent burden: is it worth it?
- Should we be collecting records rather than respondent answers?
- Is more really better?



Next Steps: Additional Analysis

- Existing data
 - → Multivariate analysis: mitigating variables between data quantity and quality?
- New data
 - → Section level record usage
 - → Information about how respondents use records
 - → What "always" vs. "almost always" means to interviewers



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