

Administrative Records as a Potential Source of Data for Expenditure Surveys

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Overview

- Westat's work with National Academy of Sciences
 - > Redesign CE Survey
 - > Administrative data
- Current CE methods
- Problem of measurement error

Overview

- Administrative data obtained by respondent
 - > Prompted recall interview
- Administrative data obtained from retailers
- Feasibility of using administrative data

Consumer Expenditure Survey

- Source of data on consumer spending
 - > Consumer Price Index
- Two parts
 - > Diary Survey
 - > Quarterly Interview Survey
- Respondents report all expenditures for all people in their households
- Survey is to be redesigned
- BLS contracted with NAS

Current CE methods

- Depend upon accuracy of respondents' memory and willingness to keep records
- Onus is upon the respondent
 - > Remember or document that expenditures occurred
 - > Remember or document details about the expenditures
- Evidence of underreporting

Causes of measurement error

- CE is burdensome
 - > Quarterly Interview averages 1 hour
 - > Recall is difficult
 - > Proxy reporting for other household members
 - > High burden leads to errors (“satisficing,” nonresponse; interviewer shortcuts)
- Recall leads to error
 - > Omissions, telescoping, estimation
 - > Failures to remember (e.g., expense amounts)

Proposed redesign

- Respondents provide data, instead of remembering data
 - > Download financial files
 - > Keep receipts
- Respondents then receive a prompted recall interview
- Retailers provide loyalty card data

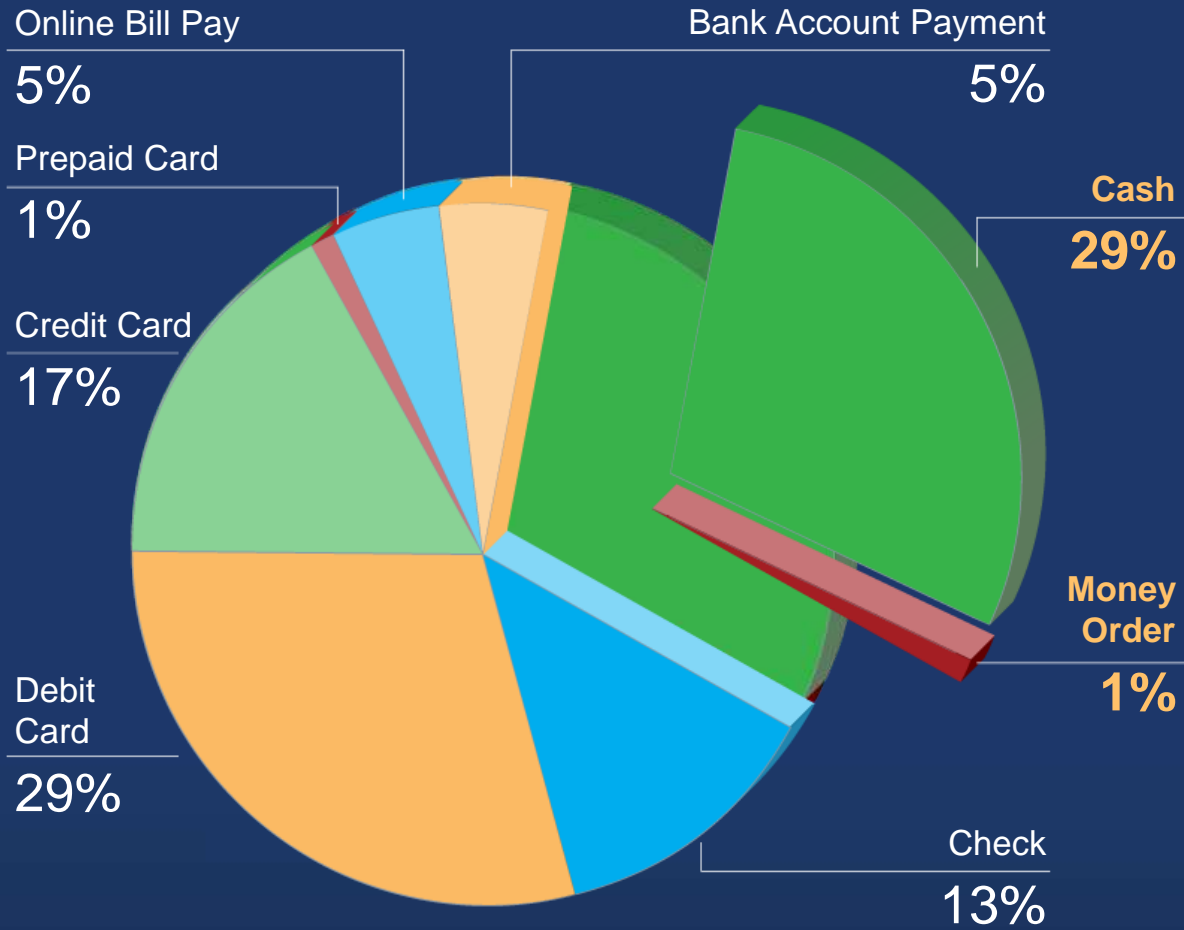
How can administrative records help?

- Provide more complete, accurate record of purchases
- Decrease respondent burden

Respondents download financial files

- A large proportion of transactions leave an electronic record

Which transactions leave an electronic record that could be used for CE data collection?



Total = 64.5 transactions per consumer per month, 2009

Percentage of transactions that leave an electronic record, 2009

	% with e-records
Bill payments	87.0%
Online payments	98.0%
Retail, service, person-to-person transactions	59.3%
<hr/>	
All transactions	71.0%

Proposed CE redesign: use of personal records

- Ask respondents to download electronic information from
 - > Credit card
 - > Bank
 - > Mortgage
 - > Any other online source
- Respondents send file to repository

EXPORT OPTIONS

Please Select One

Please Select One

Quicken (.QFX)

Quickbooks (.QBO)

Microsoft Money
(.OFX)

Microsoft Excel
(.CSV)

Online Banking

Account Activity Checking XXXX-XXXX-XXXX-3456

Date	Description	Withdrawals	Deposits	Balance
10/21/2011	Check 245	\$125.00		\$5463.24
10/20/2011	ACH Credit		\$350.45	\$5588.24
10/20/2011	ATM Withdrawal	\$200.00		\$5237.79
10/09/2011	ACH Payment	\$24.55		\$5437.79
10/08/2011	Deposit		\$45.00	\$5462.34

Electronic records do not provide all the data required by CE survey

- Show total payment but not items purchased
- Do not show details required by CE survey
 - > Such as, was purchased item for someone outside the household





Keeping a Record

- Types of records
 - > Receipts from retailers
 - Paper
 - E-receipts
 - > On-line receipts
 - > Short paper form describing purchase
- Respondents send receipts to repository
 - > Scan
 - > Mail





Acme Clothing

PURCHASE

GLOVES 20.00
0088377056874 614/61

SHIRT 25.00
0088377048965 822/41

*MANAGER'S SPECIAL -5.00

YOUR PRICE 20.00

SHOES 125.00
0088377036952 7752/61

*BONUS CARD SAVINGS -20%

YOUR PRICE 100.00

Sub Total 120.00
5.000 RGLR Tax 8.00
Total 128.00

Credit Card
088302 XXX
xxxxxxxxxxxx1234

CUSTOMER COPY

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Credit Card
088302 XXX
xxxxxxxxxxxx1234

CUSTOMER COPY

Repository matches purchases, generates web survey

- Compares
 - > Purchases documented in receipts
 - > Purchases documented in financial data files
- Matches by total cost, date
- Generates web survey
 - > CE-relevant questions for each purchase

Example

- Repository finds
 - > Expenditure for \$20.25 in credit card data file
 - > Receipt for \$20.25 which lists
 - Hammer \$15.00
 - Nails \$3.00
 - Tax \$2.25
 - > Match data file with receipt

Example

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**On July 25, you purchased
a HAMMER for \$15.
Was this purchase for someone
in your household list?**

Yes No



Jon's Hardware
100 Main Street
Somerville, NJ

PURCHASE	
HAMMER	15.00
NAILS	3.00
Sub Total	18.00
Tax (12%)	2.25
Total	20.25

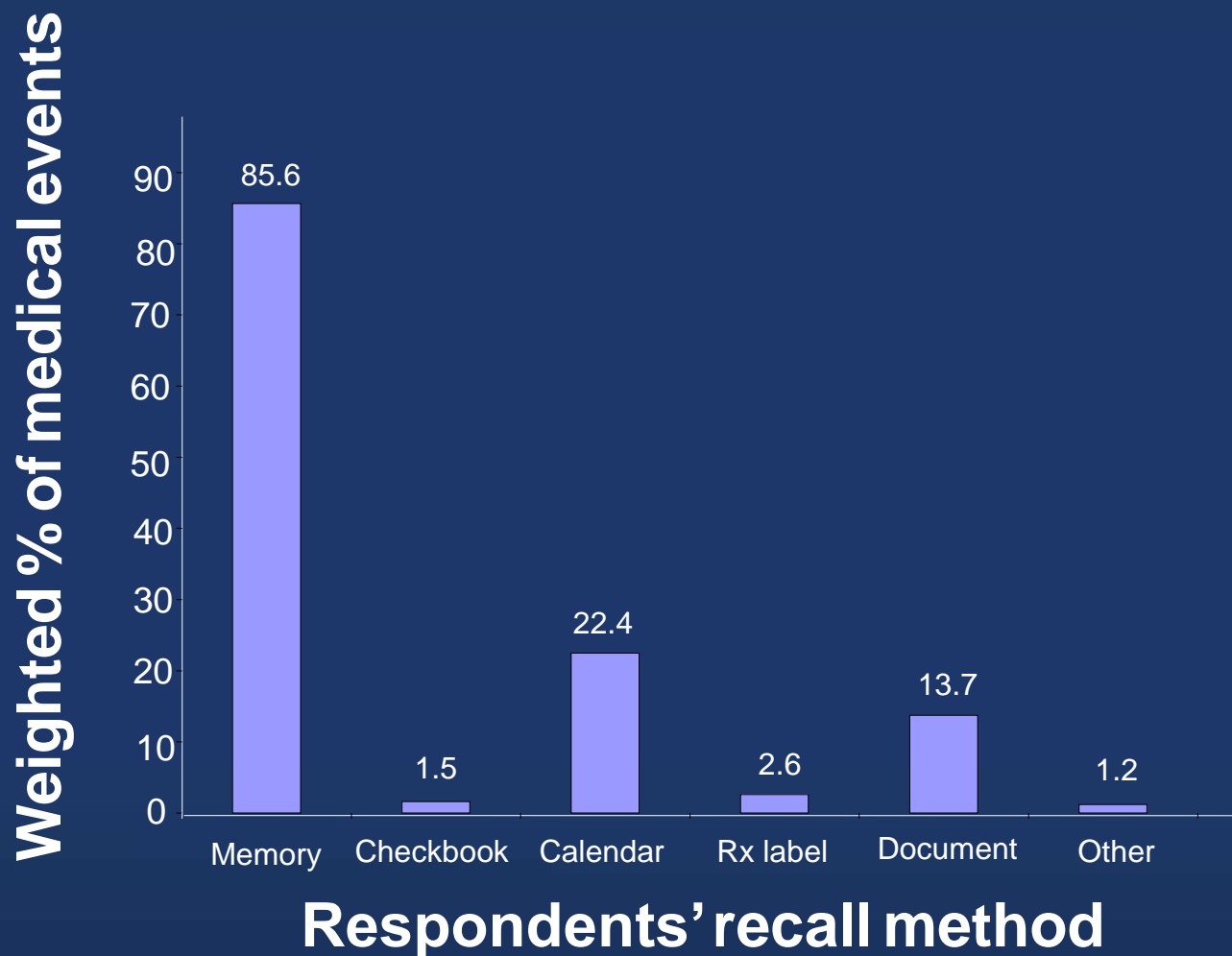
Customer Copy

CUSTOMER COPY

Potential drawbacks

- Respondents may not comply
 - > May be reluctant to download, provide financial files
 - > May discard receipts
- Unbanked respondents do not have financial files to download
 - > Bias: underrepresent lower-income respondents
- Effect on measurement error uncertain

Respondents' recall methods in the Medical Expenditure Survey

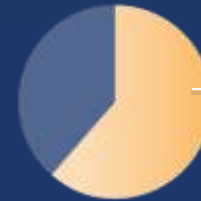


Administrative records from retailers

- Approach major retail chains
- Ask for purchasing histories
- Identify respondent households by loyalty card number
- Use information to improve data quality
 - > Fill in data missing from respondents' reports
 - > Obtain a measure of accuracy, completeness of respondents' reports

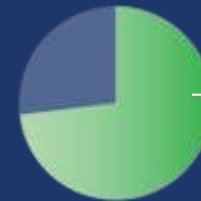
With consolidation in retail industry, relatively few retail chains

- 20 largest grocery chains



Total Sales
61.6%

- Walgreens, CVS, Rite Aid



Total
Pharmacy
Sales
73.2%

- Sam's Club, Costco



Warehouse
Club Sales
89.5%

Cooperation from several chains =
Data for a high proportion of CU expenditures

Retailers mine loyalty card data

- Some mine loyalty card data themselves
- Some use data mining firms
 - > Provide business intelligence
 - > Target advertising, coupons to consumers' purchases
- Retailers and data mining firms do not routinely share loyalty card data about individual customers

But, there have been exceptions

- Retailers have provided individual customers' data to the federal government
- CDC investigated a salmonella outbreak
 - > Obtained loyalty card buying data from Costco
 - > Found that victims all bought a particular meat product

But, there have been exceptions

- Recalls of dangerous products
- Costco, King Soopers, Safeway, and Krogers used loyalty card data to alert customers who purchased recalled products
 - > Toy with a choking hazard
 - > Spoiled seasonings

But, there have been exceptions

- In the 1990s, Arbitron persuaded some retailers, including A&P, to provide purchasing data
 - > Households in Arbitron's consumer panel
 - > Arbitron gave the retailers market research analysis in return
- Would retailers provide loyalty card data about CE respondents?

Potential problems with data from retailers

- Respondents without loyalty cards
- Loyalty cards shared or not used
- Non-compliant retailers
- Retailers without loyalty cards
 - > Walmart
- Cost versus data quality

Conclusions

- Administrative data potentially might reduce CE respondent burden, improve CE data quality
 - > Data files from financial institutions
 - > Receipts
 - > Combined with prompted recall interview
 - > Loyalty card data from retailers
- How should the CE program be redesigned?

Thank you!

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