Data Quality Efforts through Interviewer Feedback

FedCASIC 2021 (virtual)
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NORC at the University of Chicago

Presentation Overview

01 Description of the problem: Interviewer Variance

02 Efforts to reduce interviewer variance on the SCF

03 The role and development of Data Quality Reports on SCF

04 Broader Implications

Overview of the problem

Interviewer Variance on the SCF and beyond

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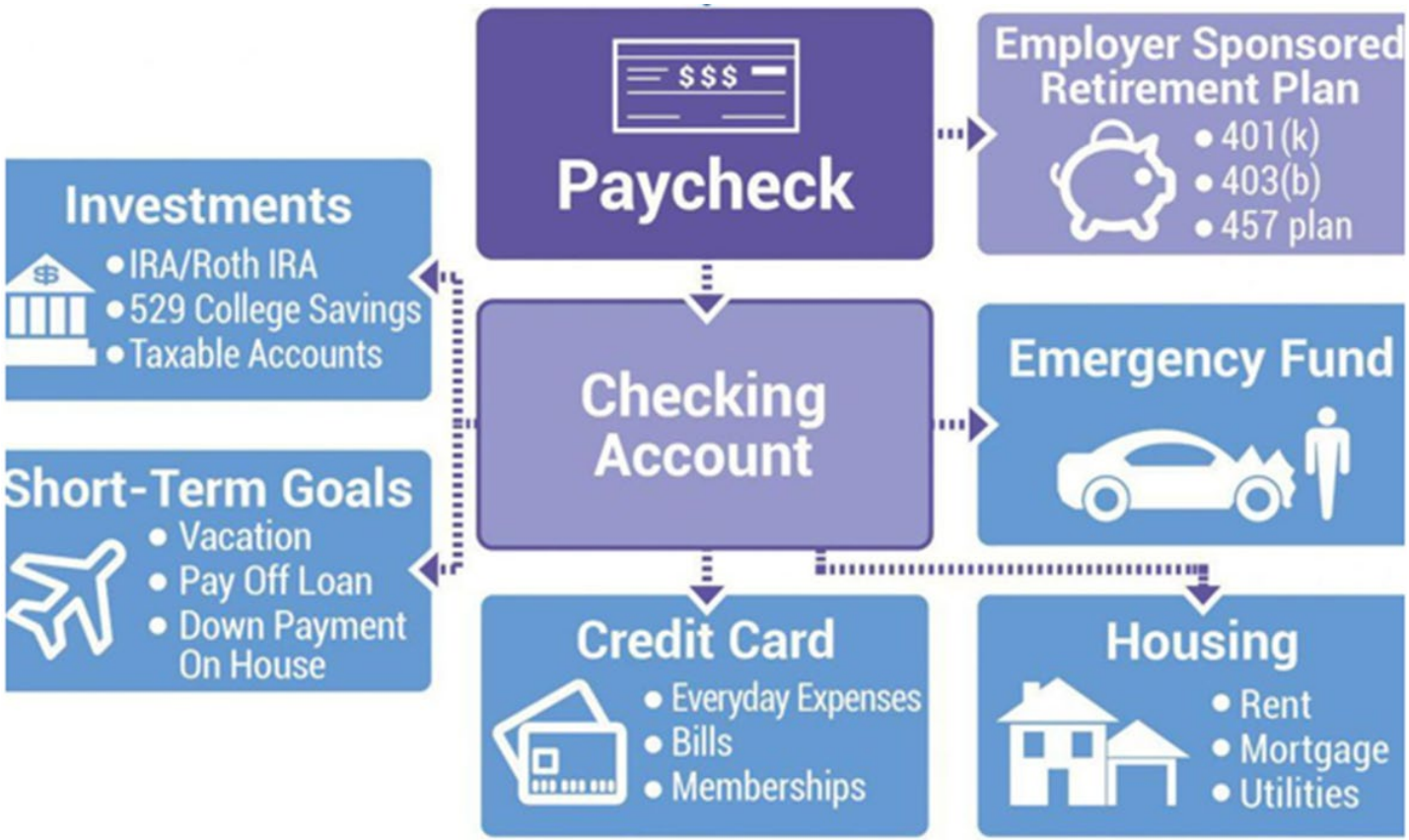
Interviewer variance presents challenges to data quality in survey research.

Interviewer Variance

- What is it?
- What are some causes?
- What are the challenges in addressing it?

Interviewer variance plays an important role in data quality on the SCF.

Variance is amplified by SCF Complexity



Case-level feedback is one method of addressing the complexity of data quality on the SCF.

Field Interviewer Role

- main conduit between the complex survey instrument and survey respondents

Reducing interviewer variance

The role of continuous training

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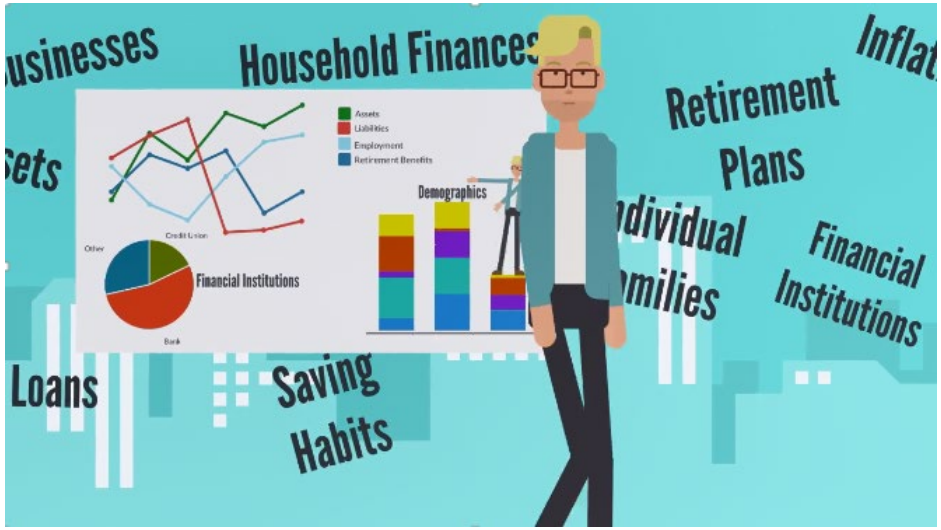
SCF training starts **before** data collection and continues **throughout** the field period.

Before data collection

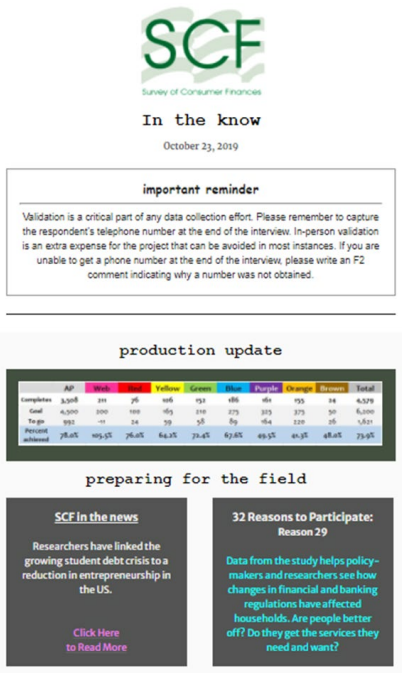
- Home study
- Approximately a week of in-person training



SCF training starts **before** data collection and continues **throughout** the field period.

During data collection

- Weekly FI memo created by the **central office**
- Weekly calls/check-ins with **field managers and peers**
- Feedback from **the Board** on the data quality of each interview
  - The main focus of this talk



SCF
Survey of Consumer Finances

In the know

October 23, 2019

important reminder

Validation is a critical part of any data collection effort. Please remember to capture the respondent's telephone number at the end of the interview. In-person validation is an extra expense for the project that can be avoided in most instances. If you are unable to get a phone number at the end of the interview, please write an F2 comment indicating why a number was not obtained.

production update

	AP	Web	Red	Yellow	Green	Blue	Purple	Orange	Brown	Total
Completes	3,508	211	76	106	152	186	161	155	74	4,579
Goal	4,500	200	100	165	210	275	325	375	50	6,200
To go	992	-11	24	59	58	89	164	220	26	1,621
Percent achieved	78.0%	105.5%	76.0%	64.2%	72.4%	67.6%	49.5%	41.3%	48.0%	73.9%

preparing for the field

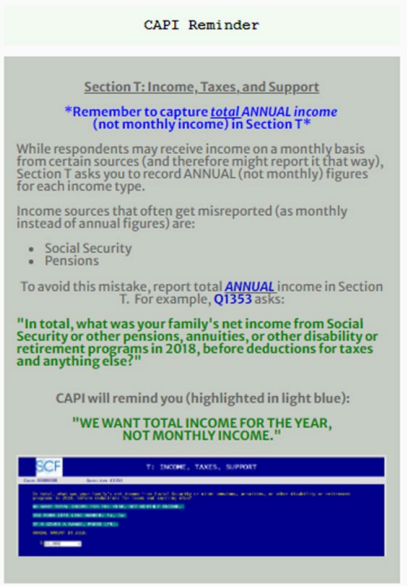
SCF in the news

Researchers have linked the growing student debt crisis to a reduction in entrepreneurship in the US.

Click Here to Read More

32 Reasons to Participate: Reason 29

Data from the study helps policy-makers and researchers see how changes in financial and banking regulations have affected households. Are people better off? Do they get the services they need and want?



CAPI Reminder

Section T: Income, Taxes, and Support

*Remember to capture *total ANNUAL income* (not monthly income) in Section T*

While respondents may receive income on a monthly basis from certain sources (and therefore might report it that way), Section T asks you to record ANNUAL (not monthly) figures for each income type.

Income sources that often get misreported (as monthly instead of annual figures) are:

- Social Security
- Pensions

To avoid this mistake, report total *ANNUAL* income in Section T. For example, Q1353 asks:

"In total, what was your family's net income from Social Security or other pensions, annuities, or other disability or retirement programs in 2018, before deductions for taxes and anything else?"

CAPI will remind you (highlighted in light blue):

"WE WANT TOTAL INCOME FOR THE YEAR, NOT MONTHLY INCOME."

Each interview is analyzed for data quality by Board economists.

- Case-level feedback began in 2004
- Reviews include:
  - Data quality error flags (if applicable)
  - Written case summary

other_comments		pr1	pr2	pr3	pr4	pr5	pr6	pr7	pr8	pr9	op1	op2	op3	b1
Jane, thank you so much for your hard work with this interview! Your comments were very helpful, particularly explaining R's arrangement with his former employers, how he has a contract and can bring his clients through his company but is technically working for himself. Thank you again!		f	t	f	f	f	t	f	f	f	f	f	f	f

Data Quality Reports

A tool to reduce interviewer variance

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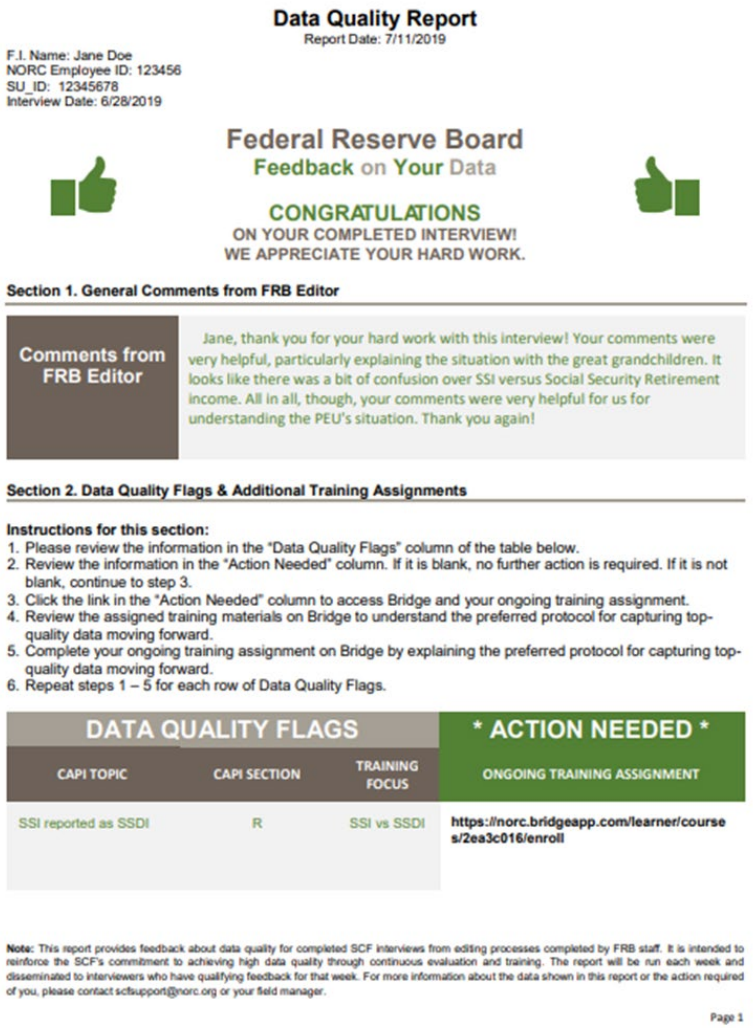
In 2019, Data Quality Reports were created to make Board feedback more accessible and actionable.

- Transformed board feedback into user-friendly reports
- 1 report for each interview
- Accomplished through the use of
  - EXCEL
  - SAS
  - Mail Merge
  - Email notifications
  - Internal Server
  - Learning management system



Data Quality Report
Report Date: 7/11/2019

F.I. Name: Jane Doe
NORC Employee ID: 123456
SU_ID: 12345678
Interview Date: 6/28/2019

Federal Reserve Board
Feedback on Your Data

CONGRATULATIONS
ON YOUR COMPLETED INTERVIEW!
WE APPRECIATE YOUR HARD WORK.

Section 1. General Comments from FRB Editor

Comments from FRB Editor	Jane, thank you for your hard work with this interview! Your comments were very helpful, particularly explaining the situation with the great grandchildren. It looks like there was a bit of confusion over SSI versus Social Security Retirement income. All in all, though, your comments were very helpful for us for understanding the PEU's situation. Thank you again!

Section 2. Data Quality Flags & Additional Training Assignments

Instructions for this section:
1. Please review the information in the "Data Quality Flags" column of the table below.
2. Review the information in the "Action Needed" column. If it is blank, no further action is required. If it is not blank, continue to step 3.
3. Click the link in the "Action Needed" column to access Bridge and your ongoing training assignment.
4. Review the assigned training materials on Bridge to understand the preferred protocol for capturing top-quality data moving forward.
5. Complete your ongoing training assignment on Bridge by explaining the preferred protocol for capturing top-quality data moving forward.
6. Repeat steps 1 – 5 for each row of Data Quality Flags.

DATA QUALITY FLAGS			* ACTION NEEDED *
CAPI TOPIC	CAPI SECTION	TRAINING FOCUS	ONGOING TRAINING ASSIGNMENT
SSI reported as SSDI	R	SSI vs SSDI	https://norc.bridgeapp.com/learner/courses/2ea3c016/enroll

Note: This report provides feedback about data quality for completed SCF interviews from editing processes completed by FRB staff. It is intended to reinforce the SCF's commitment to achieving high data quality through continuous evaluation and training. The report will be run each week and disseminated to interviewers who have qualifying feedback for that week. For more information about the data shown in this report or the action required of you, please contact scfsupport@norc.org or your field manager.

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Creating the infrastructure for Data Quality Reports was a multi-step process.

- Leveraged existing interviewer error flags:
  - Over 50 data quality flags had been created from analyses of common interviewer errors
- Pre-mapped error flags to:
  - Survey section
  - Training focus
  - Re-training courses

Approximately 50 error flags were pre-mapped before data collection.

Error Flag	CAPI Section	Training Focus	Training Link
'pr1' => 'Reported homeowner status doesn\'t match comments',	D	Determing housing status	https://norc.bridgeapp.com/l
'pr2' => 'Multiple mortgages reported together ',	D	Mortgages	https://norc.bridgeapp.com/l
'pr3' => 'Mortgage amount owed is greater than amount borrowed',	D	Mortgages	https://norc.bridgeapp.com/l
'pr4' => 'Second mortgage misreported as HELOC',	D	Mortgages	https://norc.bridgeapp.com/l
'pr5' => 'Mortgage is ARM but not reported as such (or vice versa)',	D	Mortgages	https://norc.bridgeapp.com/l
'pr6' => 'NPEU in HH and rental amount may include NPEU\'s share',	D	Determing housing status	https://norc.bridgeapp.com/l
'pr7' => 'R lives in Section 8 housing but no market rent given in comment',	D	Determing housing status	https://norc.bridgeapp.com/l
'pr8' => 'Nursing home reported as rental',	D	Determing housing status	https://norc.bridgeapp.com/l
'pr9' => 'Coop fees reported with property taxes',	D	Types of housing	https://norc.bridgeapp.com/l
'pr10' => 'NPEU was homeowner, not PEU',	D	Determing housing status	https://norc.bridgeapp.com/l
'pr11' => 'Unclear homeowner versus renter status, no comments',	D	Determing housing status	https://norc.bridgeapp.com/l
'pr12' => 'HELOC misreported as second mortgage',	D	Mortgages	https://norc.bridgeapp.com/l
'op1' => 'Multiple mortgages reported together',	E	Mortgages	https://norc.bridgeapp.com/l
'op2' => 'Amount owed is greater than amount borrowed',	E	Other real estate	https://norc.bridgeapp.com/l
'op3' => 'No rent reported for rental property',	E	Other real estate	https://norc.bridgeapp.com/l
'op4' => 'Rent reported for property listed as non-rental',	E	Other real estate	https://norc.bridgeapp.com/l
'b1' => 'Active business misreported as non-active',	F	Businesses	https://norc.bridgeapp.com/l
'b2' => 'No business in Section F but business in Section R',	F	Businesses	https://norc.bridgeapp.com/l
'b3' => 'Unexplained zero net worth in business',	F	Businesses	https://norc.bridgeapp.com/l
'b4' => 'Percent ownership and Rs share confused',	F	Businesses	https://norc.bridgeapp.com/l
'b5' => 'Non-active business misreported as active',	F	Businesses	https://norc.bridgeapp.com/l
'fa1' => 'Multiple checking/savings accounts reported together',	N	Financial assets	https://norc.bridgeapp.com/l
'fa2' => 'IRA really a 401(k)-type job pension',	N,R	Pensions vs financial assets	https://norc.bridgeapp.com/l

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Creating reports was ongoing throughout data collection.

- Created
  - In batches, using EXCEL, SAS, and mail merge
- Delivered
  - Via our internal server
  - Email notification
- Monitored
  - in our learning management system

Moving forward, we would like to:

- Further automate the creation and delivery of reports
  - Reduce some of the steps
  - Streamline technology needed
- Systematically evaluate the impacts of Data Quality Reports on:
  - Interviewer error (at the individual and group levels)
  - Data quality (by question, flag, topic, section, and overall)
- Gain a deeper understanding of the sources and correlations of interviewer variance on the SCF
  - Such as: region, age, experience, etc.

Broader implications

Interviewer feedback as a tool to reduce variance

NORC at the University of Chicago

Interviewer feedback can be used as a tool to reduce interviewer variance and enhance data quality.

Challenge:

- Identify and address interviewer variance in a way that fits within project timeline and resources

Solution Presented:

- Identify past or potential common interviewer error that could serve as error flags
- Front-load work by pre-mapping error flags to training materials & courses
- Conduct routine reviews of completed cases to generate reports

Interviewer feedback can be used as a tool to reduce interviewer variance and enhance data quality.

Broader Implications:

- Processes presented here are customizable and scalable
  - Flexibility in number and scope of error flags
  - Flexibility in how many interviewer cases are selected for review
- Reports provide a roadmap for other large surveys wishing to enhance data quality through reduced interviewer variance.
  - Semi-automated
  - Individually tailored

Thank you.

Heather Sawyer, PhD
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NORC at the University of Chicago
Sawyer-heather@norc.org

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