

2017 ECONOMIC CENSUS CONTACT STRATEGY: USING DATA TO MAKE DECISIONS

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Disclaimer: Any views expressed are those of the author and not necessarily those of the U.S. Census Bureau.

Development of Collection Strategy

- Goals:
 - With shrinking budgets and declining response trends, implement cost effective data collection strategies to maximize response
 - Mitigate risks of our first Economic Census with 100% web data collection*
 - Attain final unit response rate goal of 80%
- Methods:
 - Focus groups and cognitive testing of respondents
 - Results from randomized experiments
 - Lessons learned from the 2012 Economic Census and other economic surveys

**Given the impact of the 2017 hurricanes on the Islands Areas, paper forms will be included in the initial mailing for those Single Units (including Spanish for Puerto Rico)*

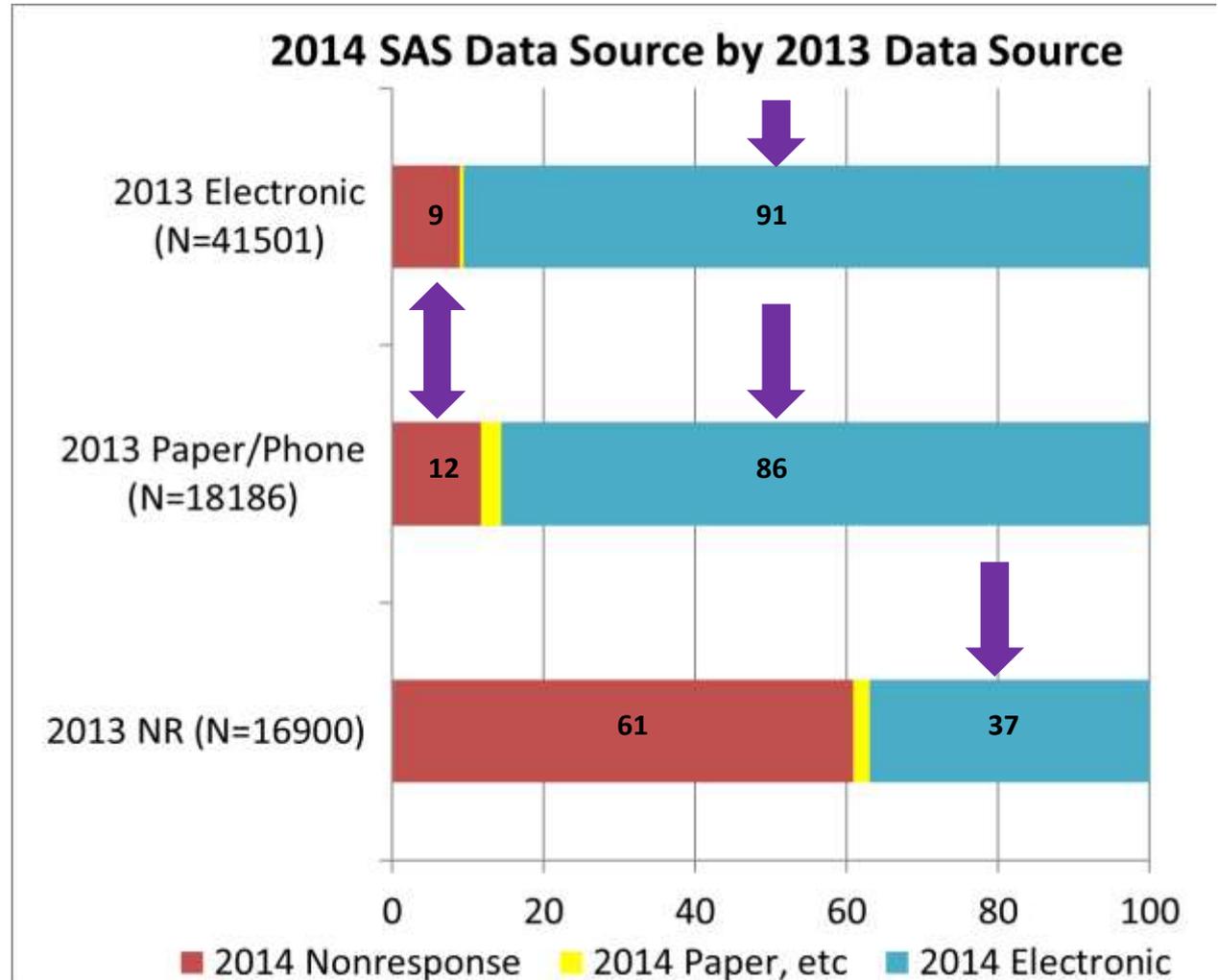
Implementation of All Electronic Reporting in Annual Surveys

- Provided no paper forms for 2014 Annual Retail Trade Survey (ARTS), Annual Wholesale Trade Survey (AWTS), and Services Annual Survey (SAS)
 - Reduced collection costs (estimated savings of 24.3% over prior year – approx. \$358K)
 - Nearly 100% electronic reporting*
 - Improved timeliness of response
 - Successful conversion of prior paper response to electronic
- Expanded use of all electronic reporting to more surveys prior to 2017 Economic Census

**If respondent was unable to report online, referred to analysts for assistance*

2014 SAS - Successful Conversion of Paper Response to Electronic

- In 2013, SAS had 70.3% electronic response vs 99.4% electronic in 2014
- 91% of prior electronic responders responded electronically again
- 86% of prior paper responders converted to electronic response
- Nonresponse rates similar for prior paper and electronic responders
- Got response from large portion (37%) of prior non-respondents



Randomized Experiments Methodology

- Used annual, industry-specific and cross-industry mandatory surveys to implement experiments to test aspects of collection strategy
- Random assignment to treatments
- Control for survey factors
 - Certainty vs. non-certainty cases
 - Prior year response status (response vs. nonresponse)
 - Form type (industry sub-groups)
- Measures = check-in rates, unweighted response rates, time to respond
- Use of successful strategies expanded to additional annual surveys

Contact Strategy Experiments

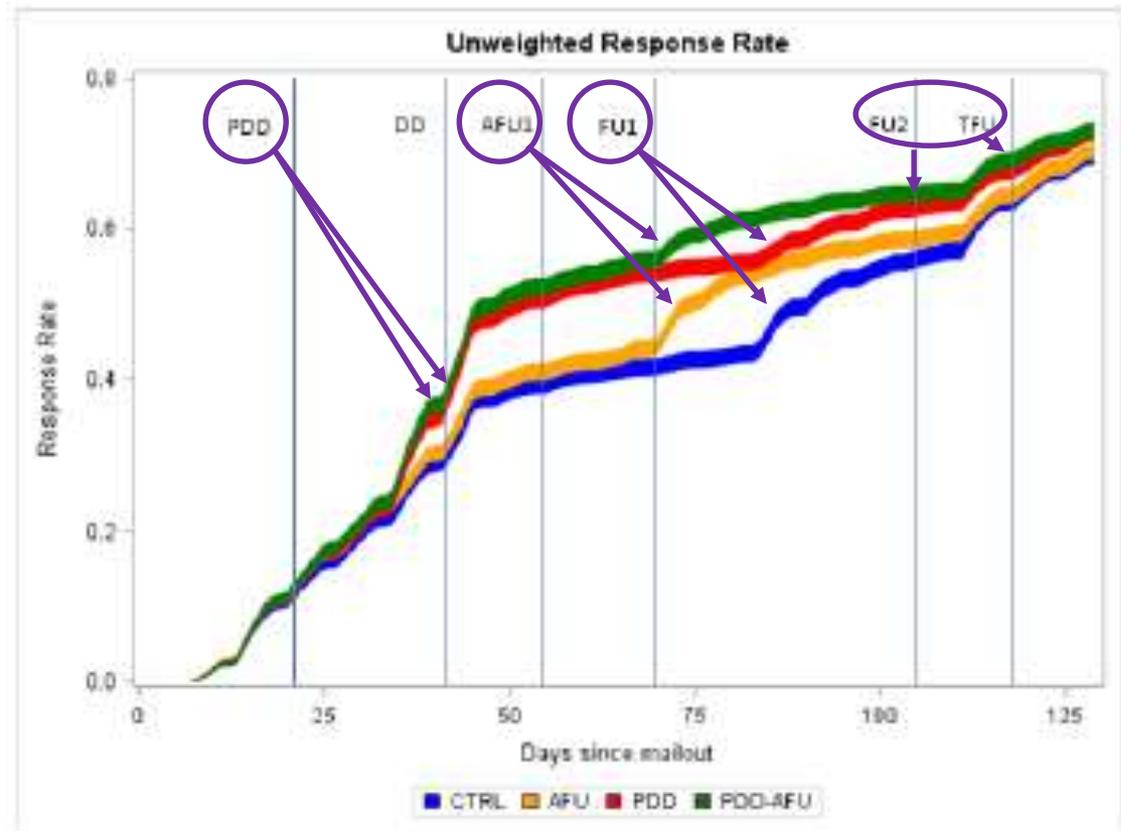
- Contact Sequence Experiment
- Certified Follow-up Experiment
- Use of Adaptive Design: Targeted Certified Follow-up Experiment
- Messaging and Envelope Testing

Contact Sequence Experiment

- 2014 Annual Retail Trade Survey (ARTS)
- Strategies tested:
 - Adding a reminder prior to due date – received week before due date reinforces due date and legitimacy of survey request
 - Accelerating follow-up after due date – pulled 1st follow-up soon after due date

Sequence Experiment – Response Rates

- By due date, panels receiving reminder prior to due date had significantly higher response
- After 1st Follow-up, panels with accelerated follow-up had response come in sooner
- Panels began to converge, but those with due date reminder or accelerated follow-up had higher response at the time of 2nd Follow-up (Certified) and Telephone Follow-up



Sequence Experiment - Findings

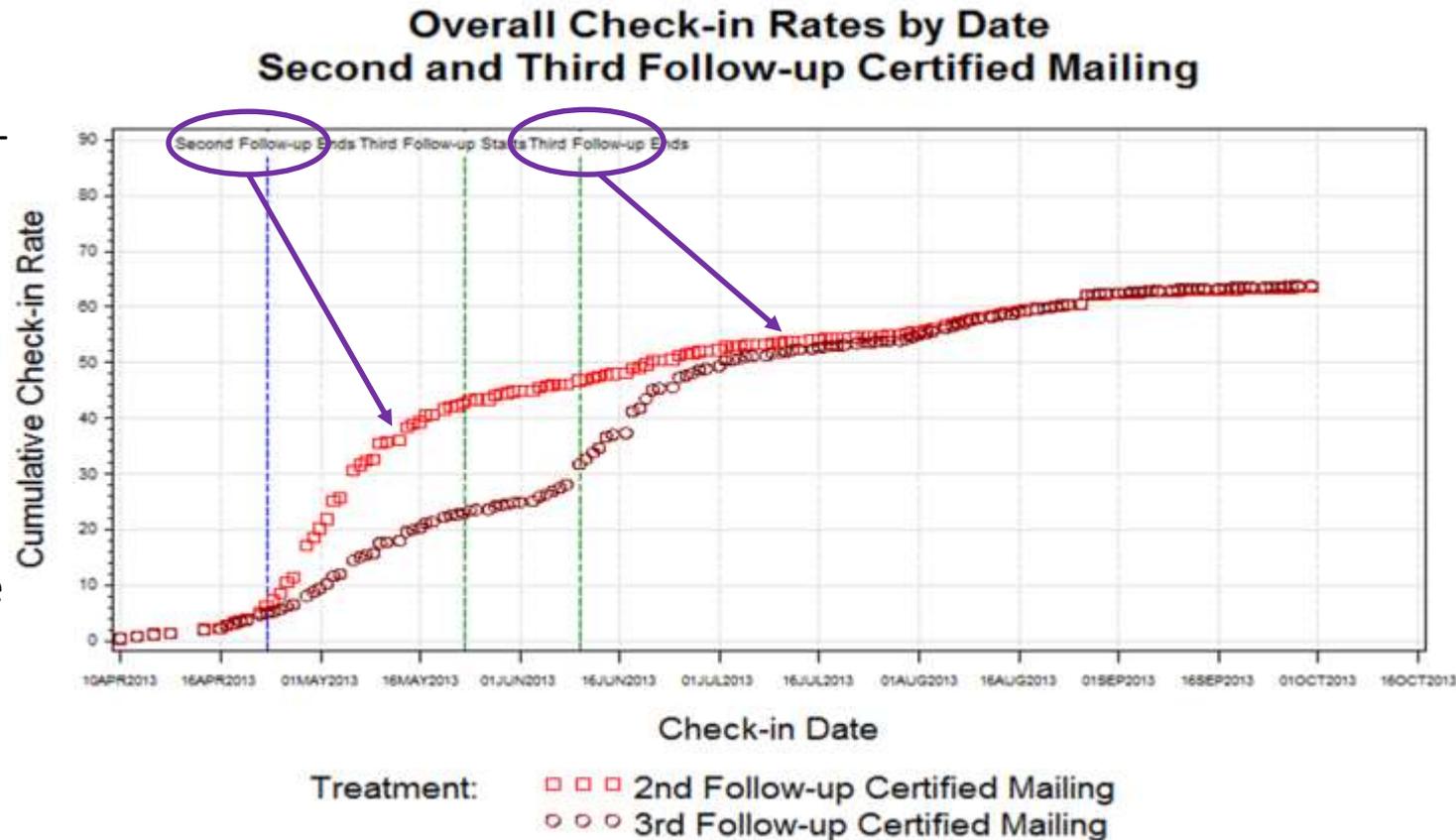
- Adding reminder prior to due date increased timeliness of response and reduced need for more costly follow-up
- Accelerated mail follow-up increased timeliness of response
- Combined treatment showed the greatest effect

2012 Economic Census Certified Follow-up Experiment

- 2012 Economic Census
- Strategies tested:
 - Certified vs. non-certified mailing for 2nd Follow-up: certified sticker on envelope demonstrates that it is an authentic, official request
 - Is certified mailing more effective as 2nd or 3rd Follow-up?

2012 Economic Census Certified Follow-up Experiment – Check-in Rates

- After 2nd Follow-up, panel with Certified letters had higher response
- After other panel receives Certified letter, panels converge



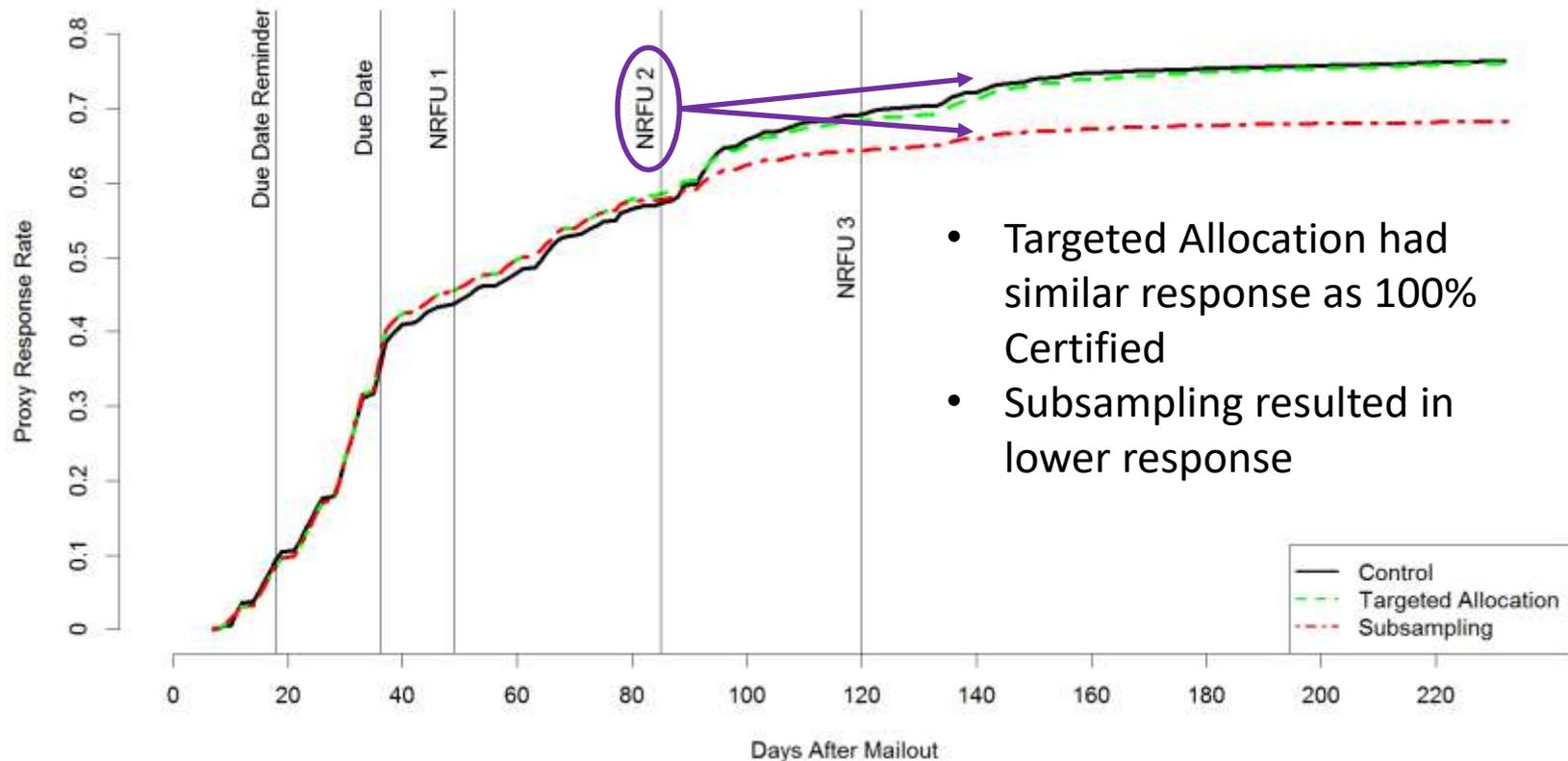
2012 Economic Census Certified Follow-up Experiment - Findings

- Certified follow-up increased check-in rate more than non-certified
- More cost effective to use certified in later follow-up
 - Certified letter cost is about 5 times standard letter
 - Use for more reluctant respondents

Use of Adaptive Design: Targeted Certified Follow-up Experiment

- 2015 Annual Survey of Manufactures (ASM) Single Units (SUs)
- Adaptive design strategies tested:
 - Targeted Allocation: Targeted selection of cases to receive certified follow-up with remainder receiving standard follow-up vs. 100% certified follow-up
 - Subsampling: Probability subsampling to receive certified follow-up (with remainder receiving no further follow-up) vs. 100% certified follow-up
- Optimal Allocation – Larger subsamples in industries with low response rates
- Treatment applied during 2nd nonresponse follow-up (NRFU2)

Targeted Certified Follow-up Experiment – 2015 ASM SU Response Rates



Use of Adaptive Design: Targeted Certified Follow-up Experiment - Findings

- Targeted allocation for certified follow-up works well, yielding same quality at reduced cost
 - Similar unit response rates
 - Similar data quality for the studied variables
 - Some improvements in selected variables
 - No evidence of degraded quality in any variables
- Easy and quick to implement

Messaging and Envelope Testing

Strategy Component	Survey	Findings
Messaging to promote electronic reporting	2014 COS	Electronic reporting messages reduced responses via paper and increased internet responses for smaller companies
Flyers with various messages (uses of data, electronic reporting)	2015 SAS	Did not improve overall response and mixed results on subgroups
Red ink on envelopes	2014 AWTS	No effect on overall response but increased response for prior nonresponders while not hurting other response
Half-page envelope size	2015 AWTS	Larger envelope had statistically negative effect on check-in rates and time to respond (although not of practical significance)
Pressure-sealed envelopes for due date reminder and follow-up	2016 Refile; 2016 COS/ASM	Using pressure-sealed envelopes gained processing improvements with minimal effect on check-in rates

Collection Strategy Best Practices: Applying Research Findings

- 100% web data collection (no paper forms)*
- Letter-only mailings (no flyer) emphasize mandatory & confidential, electronic reporting, purpose & uses of data collected; red ink to emphasize due date on envelopes
- Due date reminder and accelerated standard follow-up
- Pressure-sealed envelopes for due date reminder and follow-ups
- Targeted allocation for certified follow-up to lowest responding industries (and sending standard mailings to remainder)

**For Island Areas, paper forms will be included in the initial mailing for Single Units. For all Single Units, if respondent is unable to report online, phone center will collect key items via phone.*

Collection Strategy Best Practices: Additional Lessons Learned From Annuals

- Mailout after new year to reduce perceived response burden
- One specific due date to make it relevant
- Use standardized formulas to determine timing of due date and contacts
- Contact strategy moves from least expensive method to most expensive; increased intensity
- The last mail follow-up uses letter from the Office of General Counsel (OGC) to emphasize legal reporting requirements
- Targeting telephone follow-up to lowest responding industries and impact companies to balance response coverage and reduce costs

Contact Strategy – 2017 Economic Census

MUs and Priority SUs (Includes DDR & OGC):



All Other SUs:



- Planned initial mailout to all units in late Jan 2018 (instead of Oct-Dec 2017) with mid-March due date
- Based on flat-line funding, key aspects of contact strategy best practices were maintained for 2017 Economic Census but re-planned
 - Mailout delayed to May 1 with June 12 due date
 - Due Date Reminder (DDR) limited to Multi-Units (MUs) and Large and Priority Single Units (SUs)
 - Targeted Certified Follow-up delayed to FY19

Summary

- Iterative implementation of contact strategy research through the use of annual survey programs has provided invaluable information to improve our methods
- Testing has enabled data-driven decisions, leading to a comprehensive, integrated, cost-effective contact strategy to maximize response for the 2017 Economic Census

Thank you!

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