

Using Email to Solicit Response in an Establishment Survey

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Office of Survey Methods Research

Federal Committee on Statistical Methodology

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Disclaimer

The opinions expressed in this presentation reflect the views of the authors, and not necessarily those of the Bureau of Labor Statistics



Outline

- Experiment Overview

- Results

 - ▶ Response Rates

 - ▶ Mode Choice

 - ▶ Survival Analysis

 - ▶ Cost Analysis

- Discussion

- Next Steps



Experiment Overview

- Conducted during the November 2016 panel of the Occupational Employment Statistics (OES) survey
 - ▶ OES produces employment and wage estimates for a variety of occupations
- Federal – State cooperative
 - ▶ Individual states collect data



Experiment Overview

- Email vs paper mail for survey invitation



VS



- Commissioner's order 1-16: Cannot use email unless on record
 - ▶ No Google searching, no looking through webpages

Experiment Overview

- Pre-notification letter used

- ▶ Informs respondent about upcoming survey request
- ▶ Respondents to pre-notification letter provide contact info

- Three options to respond

- ▶ Fax
- ▶ Email
- ▶ Phone

Experiment Overview



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET
LANSING

DAVID L. DEVRIES
DIRECTOR

- If you supply your email address, we may request data electronically rather than through the mail.

Please include the following information:

Return Response Date for Updated Contact Inf

Dear Employer,

Soon, the Michigan Department of Technology request for occupational employment information cooperation with the U.S. Department of Labor. If demand for occupational employment information; the job title and wage for each person currently

Establishments like yours are the only source of receives our mailing, please provide us with the following ways:

FAX: 866-637-1925
E-MAIL: OESMICHIGAN@idcf.b
PHONE: 866-637-1920

- If you supply your email address, we may the mail.

Please include the following information:

Contact Person: _____

Mailing Address: _____

Phone #: _____ (Ext.) _____

E-mail Address: _____

FAX Number, if applicable: _____

Your prompt response saves taxpayer dollars. Please have your Schedule # ready and include it with any response. This is found on the third line at the top of this page.

3032 W. GRAND BOULEVARD • SUITE 9-150 • DETROIT, MICHIGAN 48202 • www.michigan.gov • (313) 456-3120

Contact Person: _____

Mailing Address: _____

Phone #: _____ (Ext.) _____

E-mail Address: _____

FAX Number, if applicable: _____



Experiment Overview

- Pre-notification letter

- ▶ 36,360 sent

- ▶ 6,649 returned with email address

- 17.27% response rate

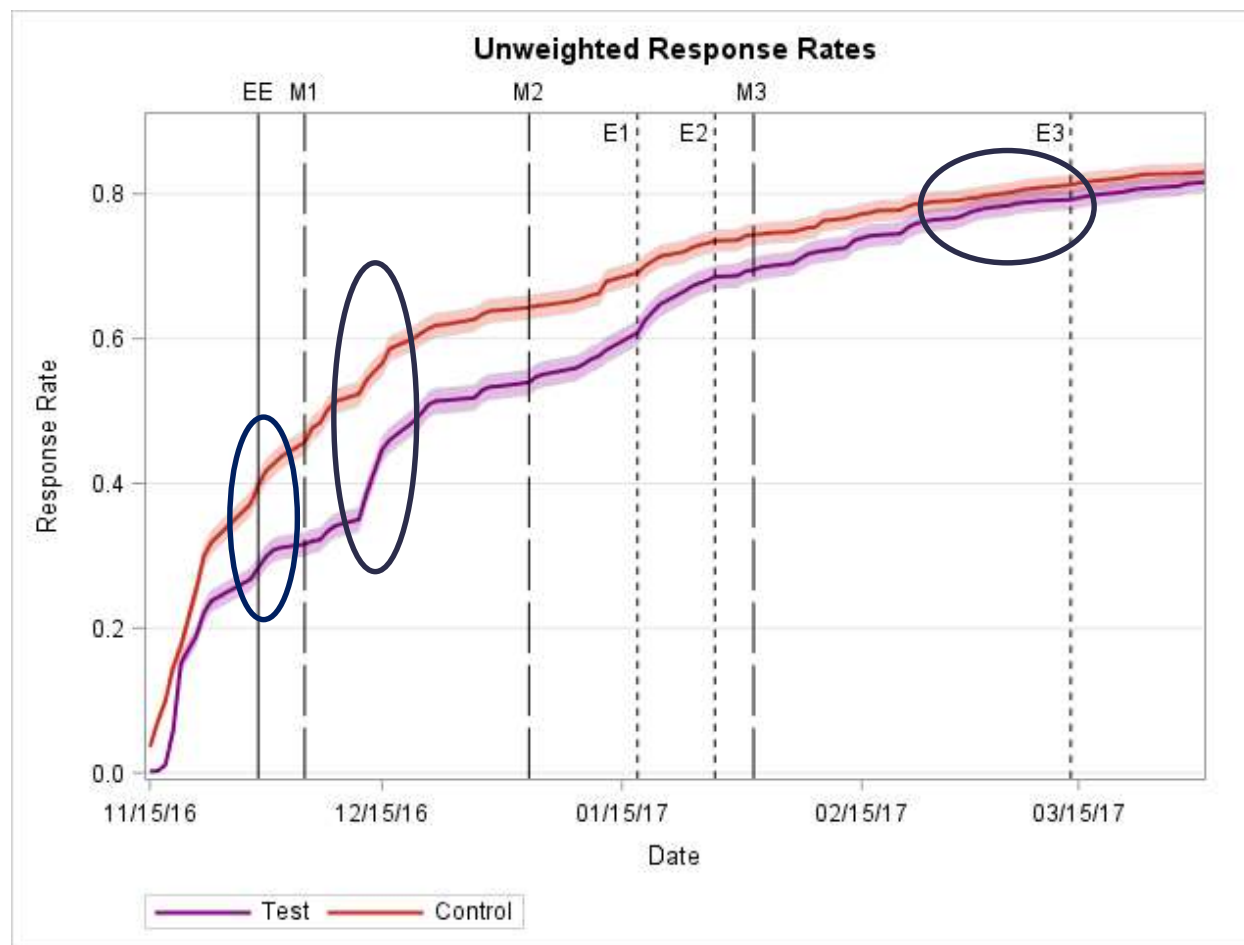
- Study currently underway to investigate establishment characteristics of units that respond to pre-notification letters

Experiment Overview

Date	Intervention	Group	Cost
October 3-7	Pre-notification mailing	All	\$0.74
November 7-10	Initial mailing	Control	\$0.74 or \$1.44
November 15	Initial Email	Test	\$0.00
Test Ends - standard data collection procedures			
December 5-9	First follow-up mailing	All	\$0.74
January 3-6	Second follow-up mailing	All	\$0.74 or \$1.44
January 17	First follow-up Email	All	\$0.00
February 1-3	Third follow-up mailing	All	\$1.44
February 14	Second follow-up Email	All	\$0.00
March 14	Third follow-up Email	All	\$0.00



Results – Response Rates




Results – Response Rates

Variable	Description	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Group	Email vs paper mail invite	✓	✓	✓	✓	✓	✓	✓
Size Class	Size of an establishment based on frame employment data (9 classes)		✓					✓
MSA Size	Size of the MSA an establishment is located in based on CPS population			✓			✓	✓
NAICS2	Two digit NAICS code				✓			
State	State in which the establishment is located					✓	✓	✓

- No model found Group to be a significant predictor of response



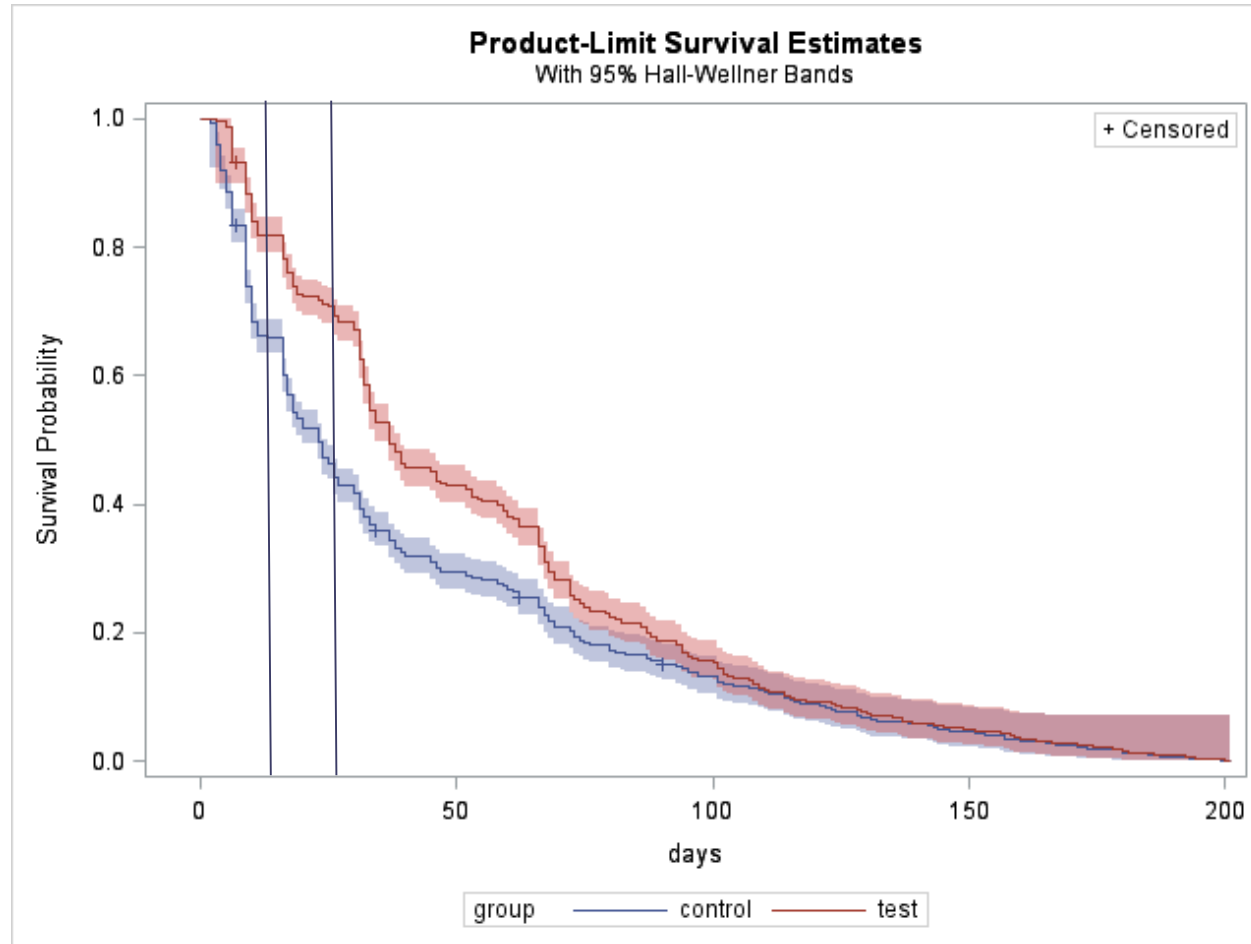
Results – Mode Choice



Collection Mode	Group	
	Control	Test
Survey Form	37.62%	11.86%
Web Instrument	47.91%	74.25%
Hard Copy Printout	0.08%	0.12%
Phone Call	2.66%	3.39%
Email	7.29%	7.55%
Fax	4.44%	2.82%

- All models found Group to be a significant, positive predictor of response by web instrument

Results – Survival Analysis



Results – Survival Analysis

Variable	Model S1	Model S2	Model S3
	Hazard	Hazard	Hazard
Group ¹	0.809 **	0.795 **	0.802 **
Size Class 2		0.906 *	
Size Class 3		0.904 *	
Size Class 4		0.823 **	
Size Class 5		0.603 **	
Size Class 6		0.609 **	
Size Class 7		0.556 **	
Size Class 8		0.561 **	
Size Class 9		0.576 **	
MSA Size 2			0.973
MSA Size 3			1.000
MSA Size 4			0.916
MSA Size 5			0.763 **

*p < 0.05 **p < 0.01

¹Reference is the Control Group

- All models found Group to be a significant negative predictor of time until failure



Results – Cost Analysis

Date	Intervention	Group	Cost
October 3-7	Pre-notification mailing	All	\$0.74
November 7-10	Initial mailing	Control	\$0.74 or \$1.44
November 15	Initial Email	Test	\$0.00
Test Ends - standard data collectin procedures			
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March 14	Third follow-up Email	All	\$0.00



Results – Cost Analysis

- Units with less than 50 employees on frame data were sent a web invite letter and a hard copy of the survey packet
- Units with 50 or more employees just received a letter
 - ▶ Exception in Minnesota where the cutoff is 25 employees
 - ▶ Survey packet mailing cost is \$1.44 (print and postage)
 - ▶ Letter cost is \$0.74 (print and postage)

Results – Cost Analysis

- Units that did not respond with web instrument were charged \$0.64 for processing
 - ▶ Print-out, facsimile, survey packet, phone, email
 - ▶ All require human data entry

Results – Cost Analysis

- When web is charged a \$0.00 processing fee
 - ▶ Control: \$3.97 per response
 - ▶ Test: \$2.92 per response
 - Reduction of 26% in cost
- When web is charged a \$0.64 processing fee
 - ▶ Control: \$4.28 per response
 - ▶ Test: \$3.40 per response
 - Reduction of 21% in cost

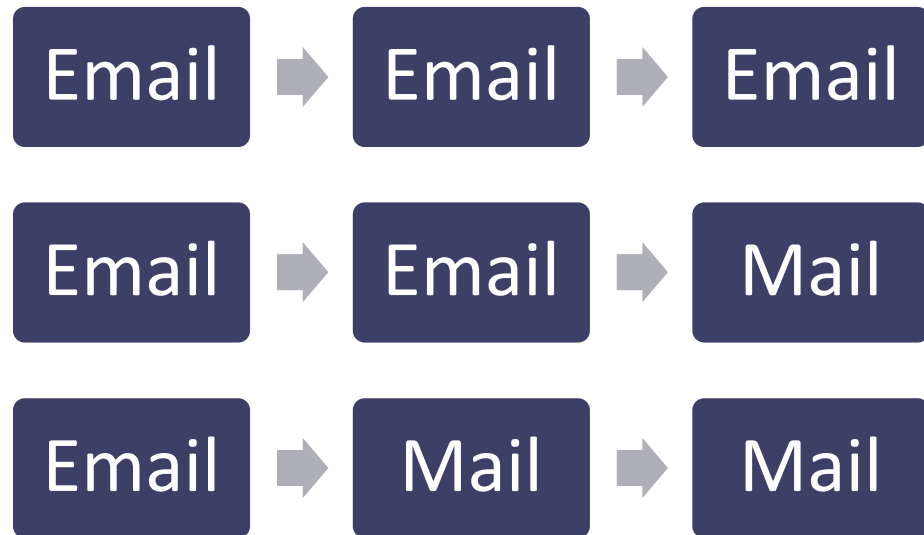
Discussion - Summary

- Test units achieved an overall response rate equivalent to the Control units
- Test units were more likely to respond via the web instrument
- Test units responded at a slower pace
- Test units were cheaper to collect per response



Next Steps – Optimal Mode Sequence

- OES is currently fielding an experiment to determine the optimal sequence of modes for non-response follow up
 - ▶ Through a non-production sample so results will be ‘cleaner’



Next Steps – Pre-notification Analysis

- Are certain businesses more or less likely to respond to the prenotification letter?
 - ▶ This will guide future efforts to increase response to the prenotification letter
 - ▶ May lead to a tailored data collection approach

Contact Information

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