

# 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, E 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

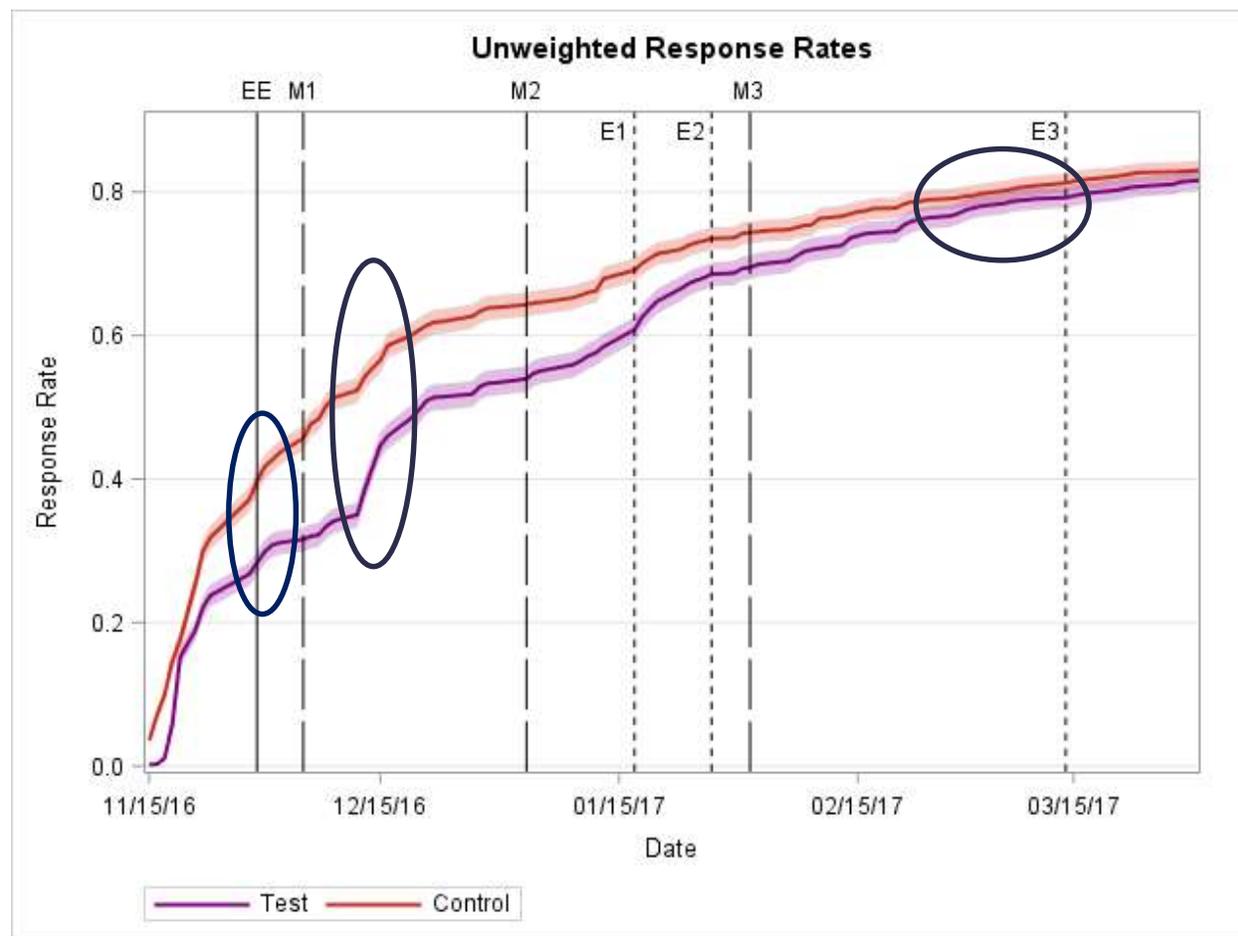
- Study currently underway to investigate establishment characteristics of units that respond to pre-notification letters

# 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
<b>Test Ends - standard data collection procedures</b>			
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

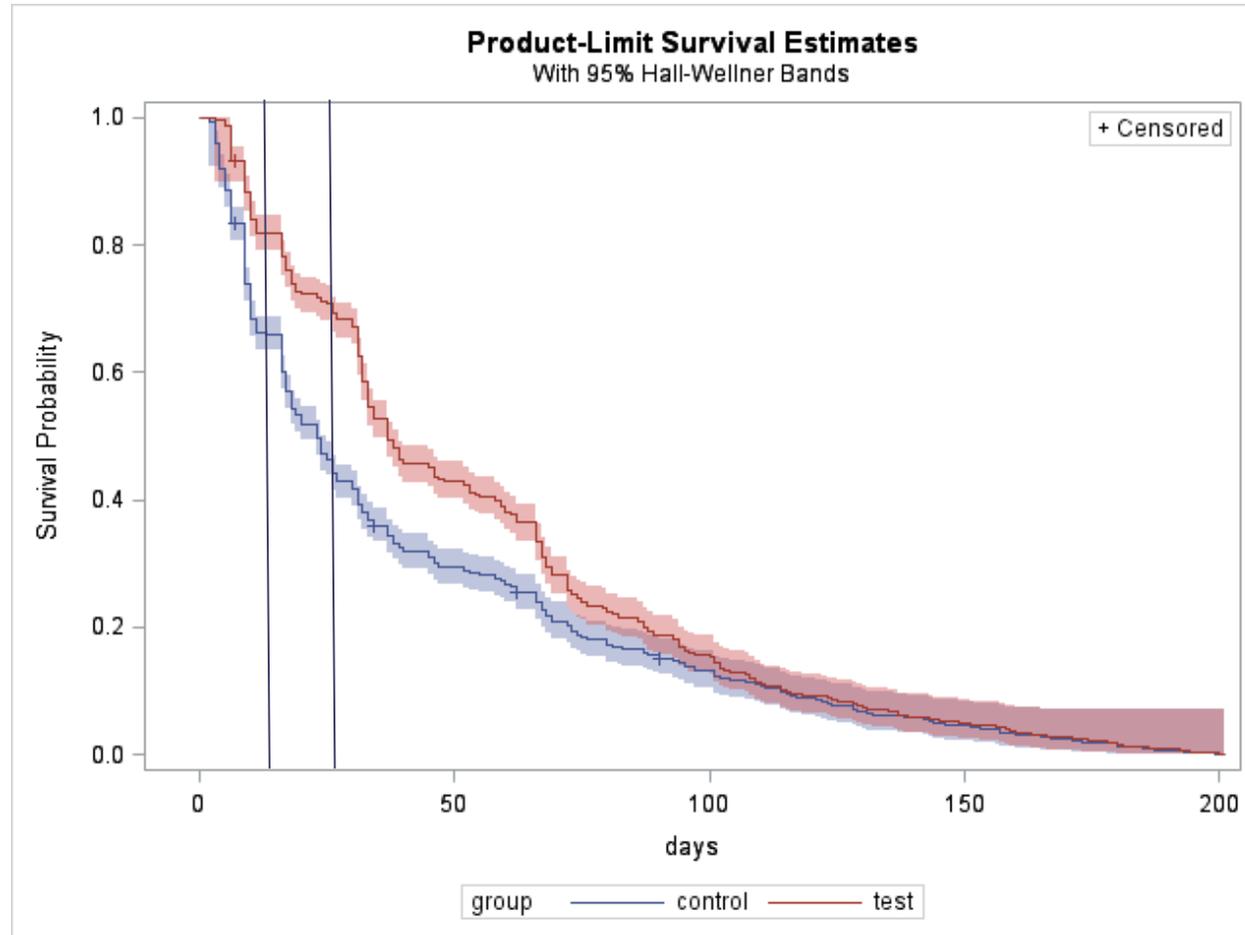
# Results – Mode Choice



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 <sup>1</sup>	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

<sup>1</sup>Reference 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
<b>Test Ends - standard data collectin procedures</b>			
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# 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

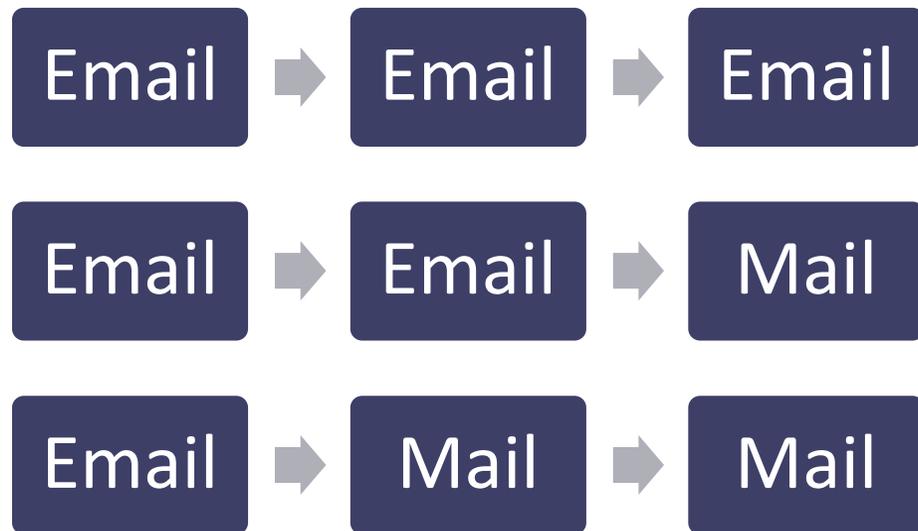
# Discussion - Summary

- 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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