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# Influencing Mode Choice in a Multi-Mode Survey

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Geraldine Mooney □ Cheryl De Saw □ Xiaojing Lin  
Andrew Hurwitz □ Flora Lan

**MATHEMATICA**  
Policy Research

# The Research Issue

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## In a Multi-Mode Survey, Can Respondents be Persuaded to Use Our Preferred Mode of Data Collection?

- **Potential Advantages**
  - Lower data collection costs
  
- **Potential Disadvantages**
  - Pushing sample members in a direction they don't want to go, might negatively impact the response rate

# Why are We Interested?

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- **2008 National Survey of Recent College Graduates (NSRCG)**
  - Sponsored by the National Science Foundation
  - Conducted every two to three years since 1974
  - Sample: 18,000 recent bachelor's and master's degree graduates in the sciences, health and engineering
- **Increasing Data Collection Costs**
  - Locating challenge
  - Difficult to motivate
- **2008 NSRCG Mode and Incentive Experiment**
  - Looked at the extent to which incentives and mode can be used to increase web completions and/or response rates

# Web Completes in Multiple Mode Surveys

## Web Outcomes When Web and Paper Offered Simultaneously:

- **Quigley et al (2000):** In a sample of active military personal, military wives, civilians and reservists, 23% responded by web
  - 73% when web and paper were offered sequentially, although the response rate dropped slightly
- **Schonlau, Asch, and Can (2003):** In a sample of high school graduates going off to college, about 1/3 responded by web
- **Millar and Dillman (2011):** In a sample of college students, 53% responded by web when both email and postal reminders were sent
  - 43% if only postal reminders were sent

# Response Rates in Multi-Mode Surveys

## Multi-Mode Approach : A Viable Means for Combating Declining Response Rates But Results Not Uniform

- Groves & Kahn (1979), Tarnai & Paxton (2004): Respondents have mode preferences; multi-mode surveys
- Dillman (2009), Mooney et. al. (2007): Rather than increase response rate, additional modes migrate completes from one mode to another
- Millar & Dillman (2011): “Modest” support for choice lowering response; when offered sequentially, web and paper are as effective as paper only
- Grigorian (2008): 2006 Survey of Doctorate Recipients offered sample members their preferred mode when possible, did not improve response
- Olson, Smyth, Wood (2010): In a mode preference study, regardless of mode preference, when offered first, respondents responded by paper

# 2008 NSRCG Incentive and Mode Choice Experiment

Randomly assigned sample (17,851) into 8 groups defined by:

- **Initial Response Mode: Two Alternatives**
  - **Web Only:** Paper questionnaire not sent until the 2<sup>nd</sup> survey mailing
  - **Web/Paper:** Paper questionnaire sent in both the initial and 2<sup>nd</sup> survey mailings
- **Incentive Amount (postpaid):** None, \$20, \$20-\$30 differential
- **Timing of the Incentive:** 1<sup>st</sup> mailing or 2<sup>nd</sup> mailing

Compared web completes/response rates at 3 time points

- **T1:** Immediately Prior to Second Mailing (12/8/08)
- **T2:** At Start of CATI Follow-Up (12/17/08)
- **T3:** Six Weeks After Start of CATI Follow-Up (1/28/09)

# 2008 NSRCG Treatment Groups

Groups	First Mailing	Second Mailing	Sample Size
Web First			
Group 1	No incentive	No incentive	3,569
Group 2	\$20	\$20	1,785
Group 3	No incentive	\$20/\$30 web	1,786
Mail/Web			
Group 4	No incentive	No incentive	3,571
Group 5	\$20	\$20	1,784
Group 6	No incentive	\$20/\$30 web	1,786
Group 7	\$20/\$30 web	\$20/\$30 web	1,785
Group 8	No incentive	\$20	1,785
<b>Total</b>			<b>17,851</b>

# Limiting the Initial Mode Research Questions

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- **Will limiting the initial response mode to web only:**
  - **Increase web completes over simultaneously offering both paper and web?**
    - **Our expectation: Yes**
  - **Negatively impact the response rate in a multi-mode survey?**
    - **Our expectation: No**



# The Differential Incentive Research Questions

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- **Will Offering a Differential Incentive that Favors Web Completes:**
  - **Increase web completes more than no incentive or an incentive that rewards completes in any mode equally?**
    - **Our expectation: Yes**
  - **Increase the overall response rate more than an incentive that rewards all completes equally?**
    - **Our expectation: Yes**

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# Findings

# Limiting Initial Response Mode to Web Only: Impact on Web Completes

Table 1. Percent Web Completes by Initial Mode

Groups	N	Prior to Second Mailing	Start of CATI Follow-Up	After Six Weeks of CATI
Web First Total (1-3)	7,140	97.0%	95.3%	75.5%
Web/paper Total (4-6)	7,141	58.9%	59.4%	57.9%

*P-value < .001 at all key data collection points*

# Limiting Initial Response Mode to Web Only: Impact on Response Rates

Table 2. Response Rates by Initial Mode

Groups	N	Prior to Second Mailing	Start of CATI Follow-Up	After Six Weeks of CATI
Web First Total (1-3)	7,140	18.4%	22.0%	44.4%
Web/Paper Total (4-6)	7,141	19.7%	22.8%	44.3%

*No significant difference between mode comparison groups*

# Differential Incentive: Web Completes in Web First Groups

Table 3. Percent Web Completes by Type of Incentive

Web First Groups	Incentive	Mailing	N	Prior to Second Mailing	Start of CATI Follow-Up	After Six Weeks of CATI
3	\$20-\$30	2 <sup>nd</sup> Mailing	1,786	98.0%	95.6%	79.9%
2	\$20	Both Mailings	1,785	96.2%	94.8%	78.7%
1	None		3,569	96.8%	95.3%	71.6%

# Differential Incentive: Web Completes in Web/Paper Groups

Table 4. Percent Web Completes By Type of Incentive

Web/Paper Groups	Incentive	Mailing	N	Prior to Second Mailing	Start of CATI Follow-Up	After Six Weeks of CATI
7	\$20-\$30	Both Mailings	1,785	91.6%	91.1%	81.7%
6	\$20-\$30	2 <sup>nd</sup> Mailing	1,786	56.8%	62.1%	64.7%
5	\$20	Both Mailings	1,784	64.7%	64.7%	59.8%
8	\$20	2 <sup>nd</sup> Mailing	1,785	54.5%	56.3%	54.3%
4	None		3,571	57.0%	58.1%	53.6%

Group 7 vs. Group 5  $p < .001$  at all 3 times points  
 Group 6 vs. Group 8  $p < .001$  at 3rd time point

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# Differential Incentive: Response Rate Comparisons

Table 5 Response Rates by Initial Response Mode and Type of Incentive

Group	Incentive	Prior to Second Mailing	Start of CATI Follow-Up	After Six Weeks of CATI
<b>Web First</b>				
1	None	16.0%	17.9%	40.0%
2	\$20/\$20 both mailings	24.0%	29.1%	48.2%
3	None/\$20/30	16.6%	<b>23.1%</b>	<b>49.5%</b>
<b>Paper/Web</b>				
4	None	16.7%	18.8%	39.8%
5	\$20/\$20 both mailings	26.3%***	<b>29.7%***</b>	<b>49.9%*</b>
6	None/\$20/30	19.3%	24.0%	47.7%
7	\$20/\$30 both mailings	28.6%	<b>32.7%**</b>	<b>52.8%*</b>
8	None/\$20	17.9	22.6%	46.4%

Group 7 vs. Group 5  $p < .05$  at T2\*\* and  $p < .1$  at T3\*

Group 3 vs. Group 5  $p < .0001$  at T1, T2\*\*\* and  $p < .1$  at T3\*

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# Conclusions

# Our Main “Take Away” Points

- **Limiting the initial response mode to web only**
  - Significantly increased web completes
  - No negative impact on response rate
- **The differential incentive**
  - Significantly increased web completes among the Web/Paper groups
  - Modest impact on response rates
- **Of the 3 groups with the highest response rates, 2 offered differential incentives. Why might that be?**
  - Using Barry Schwartz’s Paradox of Choice (2004) thesis, Millar and Dillman (2011) suggest choice increases cognitive burden, thus lowering response, especially if no compelling reason for mode choice is evident
  - A differential incentive, by rewarding one mode over another, provides a compelling reason, thus minimizing cognitive burden while rewarding respondents for choosing our preferred mode

# Best Practices for Influencing Web Completes

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- **Use a sequential approach**
  - Begin with web only
  - Introduce paper questionnaire in the 2<sup>nd</sup> mailing
- **Include a differential incentive in the 2<sup>nd</sup> mailing**
  - Minimizes the cognitive burden associated with selecting a mode
  - Rewards respondent for using our preferred mode

# For More Information

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- **Please contact:**
  - **Author 1**
    - [gmooney@mathematica-mpr.com](mailto:gmooney@mathematica-mpr.com)
  - **Author 2**
    - [cdeSaw@mathematica-mpr.com](mailto:cdeSaw@mathematica-mpr.com)
  - **Author 3**
    - [ahurwitz@mathematica-mpr.com](mailto:ahurwitz@mathematica-mpr.com)
  - **Author 4**
    - [xlin@mathematica-mpr.com](mailto:xlin@mathematica-mpr.com)
  - **Author 4**
    - [flan@nsf.gov](mailto:flan@nsf.gov)