Effects of Incentive Amount and Type on Web Survey Response Rates

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Presentation Overview

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  – Using incentives to increase response rates
  – Hypotheses
  – Related work

• Methods
  – Survey and sample description
  – Experimental conditions

• Results

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Introduction
Challenge

- The National College Ready Survey (NCRS) is a web-administered survey of school principals
  - Sponsored by the Bill & Melinda Gates Foundation
  - Four waves of data collection
- Principals face many competing demands on
  - Personal time and availability
  - School participation in research
- These factors can affect principals’ willingness to respond to survey requests
Using Incentives to Increase Response Rates

• The NCRS offers significant ($50) post-paid incentives for completion
  – Increase response
  – Minimize costs

• Wave 2 included an incentive experiment to inform future data collection

• Incentives can help increase response rates and sample representativeness, but depends on a number of factors

• Web administration poses unique administrative challenges
  – Cash is more effective than gifts
  – Pre-paid incentives are most effective, but difficult to administer via web
Hypotheses

• H1: Offering a differential incentive for completion within the first three weeks of the field period will yield higher response rates both early on and overall

• H2: Providing a pre-paid incentive before data collection yield higher response rates due to the “norm of reciprocity”

• H3: Providing a pre-paid incentive to nonresponders midway through the field period will yield higher response rates
Related Work

• Pre-paid incentives
  – Often more effective than post-paid or “promised” incentives (Singer and Ye 2013; Göritz 2010)

• Early response or “early bird” incentives
  – Can be more effective than even pre-paid incentives (LeClere et al. 2012)

• Refusal conversion incentives
  – Some studies point to only using refusal conversion payments (Singer and Ye 2013)
  – But is this ethically problematic or unfair? (Presser 2008)
Incentive Experiment

Based on these hypotheses, we implemented an experiment to compare the relative effectiveness of

- $50 post-completion incentive + additional $50 for completion in first three weeks
- $50 post-completion incentive + $25 pre-paid incentive

Control condition

- $50 post-completion incentive only
  - Subgroup eligible for $25 refusal conversion incentive

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard incentive</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
<td>$50</td>
</tr>
<tr>
<td>Additional incentive</td>
<td>$50 (early response)</td>
<td>$25 (pre-pay)</td>
<td>$25 (refusal conversion)</td>
<td>None</td>
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<tr>
<td>Total possible incentive</td>
<td>$100</td>
<td>$75</td>
<td>$75</td>
<td>$50</td>
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</tbody>
</table>
Methods
Data Collection Activities

• Mode: Web-only
  – 39 questions, 15 minutes

• Data collection consisted of
  – Invitation email and postal mailing
  – Weekly email reminders
  – Monthly reminder calls to non-completers

• Incentive administration: Amazon.com gift card code
  – Pre-payment sent via email and postal letter
    • Included Amazon.com $25 gift card code and web address for Amazon.com
  – Post-payment sent via email
    • Included gift card code, payment amount, link to Amazon.com, and redemption instructions
  – Post-payments sent approximately every 8–10 days after survey completion
Sample Description (1)

- Size: $n = 2,034$
- Composition: Elementary, middle, and high school principals
- Selection method: Stratified probability proportional to size (PPS)
- Field period: 10/30/13–3/31/14 (21 weeks)
- Sample was fielded in four different groups during the data collection period
  - Group 1: $n = 1,062$; in the field for 21 weeks
  - Group 2: $n = 259$; in the field for 17 weeks
  - Group 3: $n = 402$; in the field for 12 weeks
  - Group 4: $n = 311$; in the field for 5.5 weeks
**Sample Description (2)**

- $50 post-pay incentive, plus

<table>
<thead>
<tr>
<th></th>
<th>$50 (early response)</th>
<th>$25 (pre-pay)</th>
<th>$25 (refusal conversion)</th>
<th>None (control)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>560</td>
<td>560</td>
<td>280</td>
<td>280</td>
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<tr>
<td>Sample released</td>
<td>523</td>
<td>524</td>
<td>262</td>
<td>258</td>
</tr>
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</table>
Results
Results: $100 Early Response Incentive

**p < 0.05
Results: Early Response (cont.)

The graph shows the early response incentive and post-pay only over time. The y-axis represents the percentage response, ranging from 0 to 100. The x-axis represents the time intervals from 2 weeks to 18 weeks, with early response cutoff indicated by a vertical dashed line. The blue line represents the early response incentive, while the green line represents post-pay only. The graph illustrates the progression of response rates over time.
Results: $25 Pre-Paid Incentive

**p < 0.05
Results: $25 Refusal Conversion (Overall)

**p < 0.05
Results: $25 Refusal Conversion (Targeted)

*p < 0.10
Results: Time in Field

<table>
<thead>
<tr>
<th>Incentive</th>
<th>Average days-to-complete</th>
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<tbody>
<tr>
<td></td>
<td>Treatment group</td>
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<tr>
<td>Early response incentive</td>
<td>41.8**</td>
</tr>
<tr>
<td>Pre-paid incentive</td>
<td>46.1</td>
</tr>
<tr>
<td>Nonresponse conversion incentive</td>
<td>55.3***</td>
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</tbody>
</table>

***p < 0.01, **p < 0.05
Summary
Overall Impact of Incentives

• Early response incentive
  – Higher response rate within the incentive period
    • Significant effects overall and among most subgroups
  – No effect on final response rates
    • Effect diminished immediately following the incentive period
    • No difference in response rates by the second half of data collection
  – Reduced average time in field by 1 week

• Pre-paid incentive
  – No significant effect on response rates or length of time to complete
    • Post-paid incentive significantly more effective in two subgroups

• Refusal conversion incentive
  – No significant effect on response rates overall
  – Among those eligible for incentive, did show some evidence of effect
  – Increased average time to complete
Discussion
Areas for Further Investigation

- Cash vs. electronic incentive administration: Effects of incentive delivery
- Incentive amounts: Is bigger always better?
- Timing of early response period
- Effects on data quality
Citations


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