What are the Odds? Lotteries versus Cash Incentives. Response Rates, Cost and Data Quality for a Web Survey of Low-Income Former and Current College Students

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Effects of incentives in general

• Singer 2002; Singer and Ye forthcoming
  • Pre-incentives are most effective with SAQ’s, but difficult to administer by web
  • Cash is king; better than gifts
  • Effectiveness sometimes varies by population and characteristics of population members
Effects of incentives in lotteries and web surveys

- Research is limited
- Goritz 2006
  - Meta-analysis of 32 experimental comparisons
  - Overall, incentives increase response rates but only by about 4.2%
- Singer and Ye (forthcoming)
  - Offer updates to Goritz’s meta-analysis
  - Incentives increase response rates (when compared to a no incentive condition) but
    - Lotteries are
      - Not any more effective in web than mail
      - Not particularly effective overall
    - Few studies compare lotteries to other types of incentives and results are mixed
Effects of incentives in lotteries and web surveys

• Laguilles, Williams, and Saunders 2011
  • 4 web surveys of college students
  • Lottery incentives: iPods and $50 dining gift cards
  • Incentives raised response rates differently for each gender
Central research questions

- Compared to a no post-incentive condition, are lotteries effective?
- Does the type of lottery offered matter?
- Is a lower-valued but guaranteed cash post-incentive more effective than a higher-valued cash lottery in increasing response rates?
- Are lotteries cost-effective?
- Does offering respondents a post-incentive reduce data quality?
- Are different kinds of post-incentives more (or less) effective with different subgroups?
WISCAID study design: Overview

• Panel study of Pell Grant eligible students
  • 1200 scholarship recipients / 1800 control group
• First wave in 2008 as entering students
• Full sample of 3,000, our experiment stratified by
  • Type of school
  • Previous completion status
  • N = ~750 per group
• 12 page SAQ asked about
  • Recent education, jobs and career aspirations
  • Civic engagement
WISCAID study design: Current wave of data collection

- Web with mail follow-up
  - Postal invitation letter with URL ($5) (Day 1)
  - Email invitation (Day 12)
  - 1st email reminder (Day 19)
  - 2nd email reminder (Day 25)
  - Mode switch: Postal mailing (Day 45)
WISCAID study design: Experimental groups

- Rs randomly assigned to:
  - No post-incentive (control)
  - Lottery - $50 (paid to 25 winners)
  - Lottery – iPad (1 winner)
  - $10 post-incentive
Text introducing incentives

- “After you complete the questionnaire, you will be entered into a random drawing to win $50. Your chances of winning the lottery are approximately 1 in 15.”

- “After you complete the questionnaire, you will be entered into a random drawing to win an iPad. Your chances of winning the lottery are approximately 1 in 375.”

- “After you complete the questionnaire, we’ll send you $10 to thank you.”
Analysis

- Examine effects of post-incentives on
  - Response rates
  - Costs
  - Data quality
  - Differential response
Response rates by treatment – Web Only

Control: 3.6% 6.2% 7.5% 9.1%
Lottery $50: 4.3% 5.5% 8.0% 7.6%
Lottery iPad: 6.2% 10.0% 12.3%
$10 Post: 10.5% 15.0%

Control: 26% Lottery $50: 25% Lottery iPad: 32% $10 Post: 35%
Response rates by treatment – With mail SAQ mailing

- **Control**: 37%
  - 9.1% (Red)
  - 7.5% (Orange)
  - 6.2% (Brown)
  - 7.5% (Blue)
- **Lottery $50**: 35%
  - 9.8% (Red)
  - 4.3% (Orange)
  - 5.5% (Brown)
  - 8.0% (Blue)
- **Lottery iPad**: 42%
  - 10.7% (Red)
  - 3.2% (Orange)
  - 6.2% (Brown)
  - 12.3% (Blue)
- **$10 Post**: 49%
  - 10.7% (Red)
  - 4.2% (Orange)
  - 5.6% (Brown)
  - 15.0% (Blue)
## Costs per complete by post incentive

<table>
<thead>
<tr>
<th></th>
<th>Control Group</th>
<th>$50 Lottery (25 winners)</th>
<th>iPad Lottery (1 winner)</th>
<th>$10 Post</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Costs of Post-Incentive</td>
<td>$0</td>
<td>$1,250</td>
<td>$600</td>
<td>$3,650</td>
</tr>
<tr>
<td>Total Variable Costs</td>
<td>$8,061</td>
<td>$9,446</td>
<td>$8,701</td>
<td>$12,353</td>
</tr>
<tr>
<td>Cost Per Complete</td>
<td>$29.42</td>
<td>$35.92</td>
<td>$27.45</td>
<td>$33.84</td>
</tr>
<tr>
<td><strong>AAPOR 1 RR Web + Mail</strong></td>
<td>36.7%</td>
<td>35.2%</td>
<td>42.4%</td>
<td>48.7%</td>
</tr>
<tr>
<td><strong>Total Number of Completes</strong></td>
<td>274</td>
<td>263</td>
<td>317</td>
<td>365</td>
</tr>
</tbody>
</table>
Data quality: Percent of cases with any missing data

- Control: 18%
- Lottery $50: 21%
- Lottery iPad: 20%
- $10 Post: 19%
Data quality: Total time to complete survey

- Control: 552 seconds
- $50 Lottery: 579 seconds
- iPad Lottery: 610 seconds
- $10 Cash: 564 seconds
Response rates – By gender

- Male:
  - Control: 26%
  - Check Lottery: 30%
  - iPad Lottery: 40%
  - Cash: 41%

- Female:
  - Control: 44%
  - Check Lottery: 39%
  - iPad Lottery: 44%
  - Cash: 55%
Overall response rate by type of student

- 4-year: 48%
- 2-year: 37%
- WTCS: 33%
Response rates – By type of student

- 4-Year:
  - Control: 41%
  - Check Lottery: 40%
  - iPad Lottery: 53%
  - Cash: 56%

- 2-Year:
  - Control: 33%
  - Check Lottery: 30%
  - iPad Lottery: 39%
  - Cash: 45%

- WTCS:
  - Control: 32%
  - Check Lottery: 30%
  - iPad Lottery: 31%
  - Cash: 41%
Other differential response

- Past participation
  - Pattern was similar for 2008 respondents vs nonrespondents

- Expected Family Contribution (EFC)
  - No difference for Control & $50 Lottery
  - Higher EFC, higher response to iPad & $10 Cash

- Parental education
  - No difference for Control & $50 Lottery
  - Both parents with some college equaled huge boost for $10 Cash, and to lesser degree iPad
Discussion

- Findings:
  - Response rates highest for $10 Post
  - Single winner iPad Lottery much more effective than multi-winner $50 lottery
  - No post = multi-winner $50 lottery
  - Women responded differently than men
  - 4 year different from WTCS
- Conditional incentives
  - Guaranteed vs. chance at lottery
  - Perception of odds
  - Size of prize
  - Item novelty will change over time
Discussion

- Variables differ according to availability, relative ease of weighting
  - Gender, school type are
    - Frequently available in administrative sample
    - Relatively simple and typically complete
  - Family income and family education
    - Much less likely known or available
    - Harder to interpret
    - Require managing missing data even when available
Discussion

Affect on future data collection

• How will a panel react to subsequent incentives and lotteries?
• Will experience of losing affect respondents?
• “I used to get paid to do this.”
Thank You!

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