The impact of incentives on response rates to an online business survey

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Abstract

Falling survey response rates are an issue as they potentially reduce reliability and introduce non-response bias. In light of this, the use of participation incentives has become commonplace and numerous studies show that they have a positive effect on survey response rates. However, much of the evidence about incentive effectiveness has been generated from surveys of the general public rather than business populations. Furthermore, those studies that have been conducted amongst business populations (or meta-analyses of these studies) sometimes draw contradictory conclusions. These studies, as a whole, also contain three gaps: 1) some commonly used incentive types are excluded, e.g. charity donations, 2) the survey sponsor is usually an academic rather than commercial organisation, and 3) the ‘multiplier’ effect of combining different incentive types isn’t explored. This paper reports an experiment designed to add to the body of knowledge and fill these gaps. It finds that incentives do have a statistically significant impact on survey response rates amongst business populations and two specific incentive types are most powerful – the offer of a charity donation and this offer combined with entry into a low value, high odds prize draw.
Introduction

Respondents are a market researcher’s raw material. Without them, an industry focussed on exploring people’s opinions, would have no opinions to explore.

Of course, a doomsday scenario where respondent support for market research dries up altogether is unlikely. However, several studies show that survey response rates have fallen substantially over the years (Frohlich, 2001; de Leeuw & de Heer, 2002; Bartel-Sheehan, 2006). For example, Baruch & Holtom (2008) found that in the 20 years between 1975 and 1995 response rates to academic surveys had fallen from 64.4% to 48.4%. Although this decline then stabilised between 1995 and 2005, the issue of low response rates is still a concern.

Without a sufficiently large sampling frame to compensate, low response rates have the potential to impact the reliability of a survey. And regardless of the absolute response, low response rates tend to increase non-response bias (Schneider & Johnson, 1995). This bias, caused by those responding to the survey being meaningfully different from those who do not, in turn impacts a researcher’s ability to generalise conclusions from the survey to the wider population under study.

Recognising the potential dangers posed by low response rates, the market research and academic communities have invested considerable effort into better understanding the issue. There have been two broad strands of activity in this respect: a focus on the barriers to survey participation and a focus on the motivators of survey participation.

The barriers to survey participation

Some have focussed on exploring why people don’t respond to surveys so that action can be taken to remove these barriers. These studies into the reasons for non-response typically reveal that a lack of opportunity, time and/or interest are the major causes of non-response across different populations. For example, in a study of the reasons for non-response to a postal business survey, Fenton-O’Creevy (1996) found that:

- 28% of non-responders said they were too busy
- 22% said it was company policy not to participate in surveys
- 14% didn’t feel the survey was relevant to them

Kaner et al (1998) found similar reasons when they telephoned non-responders to a postal survey of GPs. In this study:

- 34% of non-responders said the survey had got lost in paperwork
- 21% said that they were too busy
- 16% said that questionnaires were routinely ‘binned’ (suggesting a lack of interest)

And in their study of non-responders to a postal survey on respiratory health Ronmark et al (2009) also found a similar pattern:

- 24% of non-responders said they lacked the time
- 22% said they had no memory of receiving the questionnaire
- 21% felt the study was of little or no importance
The motivators of survey participation

The second strand of research into non-response has sought to understand why people do respond to surveys.

For example, Brüggen et al (2011) asked 3,815 members of a Belgian online survey panel why they had participated in a survey. A cluster analysis of the reasons given suggests that there are three segments in the survey taking population:

- 48% are ‘Intrinsics’ primarily motivated by enjoyment of the survey process and the act of sharing their opinion
- 27% are ‘Voicing Assistants’ who, like the ‘Intrinsics’, are motivated by giving an opinion but also a desire to help those conducting the research
- 25% are ‘Reward Seekers’ who are motivated purely by personal gain and participate in surveys to receive the financial incentives offered

These groupings are similar to those found by Porst & von Briel (1995). When they asked respondents to a telephone survey why they had participated, three groupings were identified:

- 38% gave survey related reasons (most commonly interest or curiosity)
- 31% gave altruistic reasons (most commonly a belief that surveys are important)
- 30% gave personal reasons (most commonly that they felt they’d made a commitment)

Similarly, in their meta-analysis of studies concerning response enhancing mechanisms Edwards et al (2009) found that topic interest and survey rewards are the most powerful drivers of participation.

Implications for research practitioners

When these barriers to and motivators of survey participation are considered together, there are four practical implications for research practitioners:

- Ensure that potential respondents receive and notice the survey (e.g. with online surveys run invitation emails through spam testers, carefully consider the email subject line so that it stands out, send reminders)
- Minimise the effort and time investment needed to respond (i.e. keep the survey short) and inform potential respondents of this
- Position the survey carefully. It should be seen as relevant, interesting and enjoyable. An appeal should also be made to the altruistic motivations of respondents by emphasising the importance of the survey and how participating will help the survey sponsor
- Offer a tangible reward for participation. This will appeal to ‘Reward Seekers’ and create an equitable value exchange with those who would otherwise not participate because of a lack of time or interest (i.e. the reward compensates for the time expended or boredom experienced by participating)

Given the widespread use of participation rewards in commercial research and the extensive body of literature which exists regarding the effectiveness of this practice, further examination of the latter point is of value.
The role and impact of survey incentives

Various meta-analyses have shown that offering survey participation incentives increases response rates to a statistically significant degree (e.g. Yu & Cooper, 1988; Hopkins & Gullickson, 1992; Church, 1993; Singer et al, 1999; Gortiz, 2006). One of the most recent and widest reaching of these meta-analyses was conducted by Singer & Ye (2013). Following their systematic review of relevant studies published in 14 academic journals in the period 2002 – 2012, Singer & Ye (2013) conclude that “incentives increase response rates to surveys in all modes”. They also report a hierarchy of incentive effectiveness:

- Monetary incentives increase response rates more than gifts
- Pre-paid monetary incentives are more effective than promised incentives or lotteries
- As monetary incentives increase, so too do response rates (with diminishing returns)

So the guidance for research practitioners is clear – incentives should be used and ideally these should take the form of a pre-paid monetary incentive.

However, a caveat should be applied to this advice. The majority of studies concerning the impact of incentives on response rates have been undertaken using surveys of the general public. As such, conclusions drawn from these studies may not necessarily hold true in relation to surveys of business populations (B2B research), especially as business surveys see significantly lower response rates than their consumer counterparts (Schneider & Johnson, 1995; Greer et al, 2000).

Indeed, Baruch & Holtom (2008) conclude from their meta-analysis of 490 studies conducted between 2000 and 2005 that incentives have no significant impact on response rates amongst business populations. Anseel & Choragwicka (2010) draw similar conclusions from their meta-analysis of 2,037 surveys published in 12 journals between 1995 and 2008. This analysis found no meaningful link between incentives and response rates amongst business populations with Anseel & Choragwicka drawing the conclusion that “contrary to common sense, incentives do not seem to lead to higher response rates”.

Care should be taken when interpreting these findings though. In both cases the meta-analysis was of studies that happened to use a survey to explore another topic, rather than studies designed explicitly to explore the impact of incentives on response rates. The case for caution is strengthened by the existence of a number of studies in the latter category which do show a strong link between response rates and incentivisation in business surveys. For example:

- In a postal survey of Australian pharmacists, Paul, Walsh & Tzelepis (2005) found that the promise of a AUS $20 voucher increased the response rate from 53.5% to 65.9%
- In a postal survey of physicians in Hong Kong, Leung et al (2002) found that response rates were higher among those offered incentives (19.8% response rate vs. 16.8%) and a promised cash incentive was more effective than a promised lottery incentive (27.3% vs. 19.4%)
- Jobber et al (1991) found that including a gift of a bookmark in a postal survey of Managing Directors in Singapore, Malaysia and Thailand increased response rates from 16% to 22.8% (the offer to share survey results on completion had some impact but at 19.4% this was not significant)
- In a postal survey of transportation and logistics managers in the US, Schneider & Johnson (1995) found that if the sponsor was a commercial organisation then a $1 pre-paid incentive increased response rates by 8.9% when coupled with an ego appeal and 16.7% if coupled with a social utility appeal
In an online survey of members of a professional sales association, Bosnjak & Tuten (2003) found that offering to include respondents in a prize draw increased the response rate from 26.6% to 35.9%. Contrary to findings from studies of incentive impact in consumer surveys, a pre-paid incentive lowered the response rate compared to the control group but not significantly (25.6%), and a promised payment raised it but again not significantly (27.3%).

Filling some knowledge gaps

This review suggests that the guidance to B2B research practitioners on the use of survey incentives is less clear than that available to their consumer research cousins. Meta-analyses seem to suggest that incentives have no impact on response rates to business surveys, yet a number of individual studies directly exploring the issue suggest that they do. Furthermore, some of these studies draw opposite conclusions on the impact of different incentive types. For example, Leung et al (2002) found a cash incentive was more effective than a lottery incentive, whereas Bosnjak & Tuten (2003) found the reverse.

A review of the literature also reveals a number of gaps in our knowledge which there would be value in filling:

- Much, but not all, of the research is based on postal surveys. This provides useful indications, but nowadays practitioners typically utilise web- and telephone-surveys
- None of the available studies seem to test all of the incentives commonly deployed in business surveys, with a notable omission being charity donations
- Most of the studies test the impact of different incentives in isolation, and don’t explore whether using them in combination has a ‘multiplier’ effect
- The majority of the research has been conducted by academic institutions and respondents made aware of this fact. As response patterns have been found to differ between academic and commercial surveys (Schneider & Johnson, 1995; Edwards et al, 2002), this may mean that the advice to commercial practitioners differs

The experiment outlined in this paper has been designed to add to our body of knowledge and address some of these knowledge gaps by:

- Ascertaining whether or not incentives impact response rates to business surveys
- Identifying the relative power of different incentive types and whether there is a multiplier effect where combining incentives has a greater impact on response rates than offering them in isolation
- Exploring the above in the context of commercially sponsored online surveys (the most widely used type according to ESOMAR) so that any guidance is fully applicable to commercial practitioners

To do so, a population of business people was divided into a control group and several experimental groups, each designed to test the impact of different incentive types on survey response rates. Each group was then invited to participate in an online survey. By observing differences in response rate between groups conclusions can be drawn about the impact of different types incentive.
The experiment

Sampling

To create a sample for the survey, a database of potential respondents was sourced from an independent list provider. Whilst past experience shows that using a ‘cold’ list like this would most likely result in a low response rate overall, it also ensured that there was no potential for any relationship with the research sponsor impacting response rates (therefore providing a ‘cleaner’ measure of the impact of incentives).

These contacts were randomly selected by the list provider from their wider database, and profiled to ensure that:

- They had a personal work email address (rather than a generic address such as info@). This would help to maximise invitation email receipt and open rates
- They worked in a finance role (e.g. Financial Director, CFO, Financial Controller) for a company based in the UK. Focussing solely on financial roles would allow the creation of a survey (and summary report in the relevant experimental group) likely to be of interest to the entire sample
- Collectively these companies represented the structure of the UK business population by region, industry sector and company size (employee numbers). This would ensure that the study was representative and findings could be confidently applied to other business surveys

This resulted in a sample containing 23,342 individuals employed by 23,342 different companies.

The control and experimental groups

A random number generator was then used to allocate each of these 23,342 individuals to one of eleven groups. Group one – the control group – would receive no incentive. The remaining groups would be experimental groups used to test the impact of four commonly used incentives in isolation and combination. These incentives, all contingent on the survey being completed, were:

- A £5 donation to Cancer Research UK (charity donation)
- Entry into a lottery for 1 of 10 £50 Amazon vouchers (higher odds/lower value lottery)
- Entry into a lottery for 1 £500 Amazon voucher (lower odds/higher value lottery)
- A short report on ‘The Challenges Facing the Finance Profession’ based on the survey findings (information)
Combining these different incentives into all possible permutations resulted in the following distribution (Table 1):

<table>
<thead>
<tr>
<th>Group</th>
<th>Incentive A</th>
<th>Plus incentive B</th>
<th>Total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control (no incentive)</td>
<td>-</td>
<td>2,122</td>
</tr>
<tr>
<td>2</td>
<td>Charity donation</td>
<td>-</td>
<td>2,122</td>
</tr>
<tr>
<td>3</td>
<td>Charity donation</td>
<td>Lower odds/higher value lottery</td>
<td>2,122</td>
</tr>
<tr>
<td>4</td>
<td>Charity donation</td>
<td>Higher odds/lower value lottery</td>
<td>2,122</td>
</tr>
<tr>
<td>5</td>
<td>Charity donation</td>
<td>Information</td>
<td>2,122</td>
</tr>
<tr>
<td>6</td>
<td>Lower odds/higher value lottery</td>
<td>-</td>
<td>2,122</td>
</tr>
<tr>
<td>7</td>
<td>Lower odds/higher value lottery</td>
<td>Higher odds/lower value lottery</td>
<td>2,122</td>
</tr>
<tr>
<td>8</td>
<td>Lower odds/higher value lottery</td>
<td>Information</td>
<td>2,122</td>
</tr>
<tr>
<td>9</td>
<td>Higher odds/lower value lottery</td>
<td>-</td>
<td>2,122</td>
</tr>
<tr>
<td>10</td>
<td>Higher odds/lower value lottery</td>
<td>Information</td>
<td>2,122</td>
</tr>
<tr>
<td>11</td>
<td>Information</td>
<td>-</td>
<td>2,122</td>
</tr>
</tbody>
</table>

Despite previous studies suggesting that pre-paid incentives would be highly effective, we did not include an experimental group to test this. This decision was reached following a pilot exercise where 100 randomly selected contacts were paid £2.50 in advance through PayPal, and then sent an email mentioning the PayPal payment and inviting them to complete the survey. This pilot revealed that only three of the 100 individuals sent a payment actually claimed it, suggesting that using pre-incentives in online research is impractical amongst a business audience (potentially as recipients of the payment believe it is ‘bait’ in a ‘phising’ scam).

**The survey invitation email**

All 23,342 potential respondents were then sent an email inviting them to participate in a short survey. This email:

- Had been tested with a spam testing tool to maximise delivery rates
- Was sent to all groups on the same day in a four hour time period
- Was identical between groups apart from the participation incentive offered
- Emphasised the short length (5 minutes) and interesting nature of the survey
- Contained a statement providing reassurance about the confidentiality of responses
- Contained cues which would reassure the recipient about the legitimacy of the sender, Circle Research, e.g. contact phone number, named individual to contact, registered company address, trade body membership details
This initial mailing resulted in 2,403 email addresses being removed from the sample as emails could not be delivered (e.g. address no longer in use). This impacted the sample for each group as follows (table 2):

Table 2: Invitation email delivery rates by group

<table>
<thead>
<tr>
<th>Group</th>
<th>Incentive A</th>
<th>Plus incentive B</th>
<th>Sample reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control (no incentive)</td>
<td>-</td>
<td>1,922</td>
</tr>
<tr>
<td>2</td>
<td>Charity donation</td>
<td>-</td>
<td>1,922</td>
</tr>
<tr>
<td>3</td>
<td>Charity donation</td>
<td>Lower odds/higher value lottery</td>
<td>1,890</td>
</tr>
<tr>
<td>4</td>
<td>Charity donation</td>
<td>Higher odds/lower value lottery</td>
<td>1,896</td>
</tr>
<tr>
<td>5</td>
<td>Charity donation</td>
<td>Information</td>
<td>1,906</td>
</tr>
<tr>
<td>6</td>
<td>Lower odds/higher value lottery</td>
<td>-</td>
<td>1,908</td>
</tr>
<tr>
<td>7</td>
<td>Lower odds/higher value lottery</td>
<td>Higher odds/lower value lottery</td>
<td>1,882</td>
</tr>
<tr>
<td>8</td>
<td>Lower odds/higher value lottery</td>
<td>Information</td>
<td>1,911</td>
</tr>
<tr>
<td>9</td>
<td>Higher odds/lower value lottery</td>
<td>-</td>
<td>1,896</td>
</tr>
<tr>
<td>10</td>
<td>Higher odds/lower value lottery</td>
<td>Information</td>
<td>1,896</td>
</tr>
<tr>
<td>11</td>
<td>Information</td>
<td>-</td>
<td>1,910</td>
</tr>
</tbody>
</table>

After one week, those yet to enter the survey and those who had only partially completed it were sent a reminder email. A second and final reminder email was sent two days after this.

The survey

Those clicking on the survey link contained in the invitation email were automatically redirected to a survey website. The survey was designed to be relatively short (16 questions), be user friendly (e.g. mobile optimised interface) and centre on a topic of interest to finance professionals (e.g. major trends impacting the profession).

The results

A total of 53 individuals entered the survey (0.25% response rate), 42 answered one or more question (0.20%) and 28 answered all questions (0.13%). By group, these responses were distributed as follows (table 3):

Table 3: Survey response rates by group

<table>
<thead>
<tr>
<th>Group</th>
<th>Sample reached</th>
<th>Entered survey</th>
<th>Response rate</th>
<th>Answered 1/≥1 question</th>
<th>Response rate</th>
<th>Answered all questions</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,922</td>
<td>2</td>
<td>0.10%</td>
<td>1</td>
<td>0.05%</td>
<td>-</td>
<td>0.00%</td>
</tr>
<tr>
<td>2</td>
<td>1,922</td>
<td>13</td>
<td>0.68%</td>
<td>12</td>
<td>0.62%</td>
<td>7</td>
<td>0.36%</td>
</tr>
<tr>
<td>3</td>
<td>1,890</td>
<td>2</td>
<td>0.11%</td>
<td>2</td>
<td>0.11%</td>
<td>1</td>
<td>0.05%</td>
</tr>
<tr>
<td>4</td>
<td>1,896</td>
<td>11</td>
<td>0.58%</td>
<td>10</td>
<td>0.53%</td>
<td>8</td>
<td>0.42%</td>
</tr>
<tr>
<td>5</td>
<td>1,906</td>
<td>1</td>
<td>0.05%</td>
<td>1</td>
<td>0.05%</td>
<td>1</td>
<td>0.05%</td>
</tr>
<tr>
<td>6</td>
<td>1,908</td>
<td>4</td>
<td>0.21%</td>
<td>3</td>
<td>0.16%</td>
<td>3</td>
<td>0.16%</td>
</tr>
<tr>
<td>7</td>
<td>1,882</td>
<td>6</td>
<td>0.32%</td>
<td>4</td>
<td>0.21%</td>
<td>1</td>
<td>0.05%</td>
</tr>
<tr>
<td>8</td>
<td>1,911</td>
<td>1</td>
<td>0.05%</td>
<td>-</td>
<td>0.00%</td>
<td>-</td>
<td>0.00%</td>
</tr>
<tr>
<td>9</td>
<td>1,896</td>
<td>3</td>
<td>0.16%</td>
<td>3</td>
<td>0.16%</td>
<td>1</td>
<td>0.05%</td>
</tr>
<tr>
<td>10</td>
<td>1,896</td>
<td>5</td>
<td>0.26%</td>
<td>2</td>
<td>0.11%</td>
<td>2</td>
<td>0.11%</td>
</tr>
<tr>
<td>11</td>
<td>1,910</td>
<td>5</td>
<td>0.26%</td>
<td>4</td>
<td>0.21%</td>
<td>4</td>
<td>0.21%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20,939</td>
<td>53</td>
<td>0.25%</td>
<td>42</td>
<td>0.20%</td>
<td>28</td>
<td>0.13%</td>
</tr>
</tbody>
</table>
Those answering one or more question (i.e. partially or fully completing the survey) were defined as having responded as this behaviour shows some level of support for the survey (whereas simply entering the survey and not answering any questions does not). On this basis, two experimental groups accounted for more than half of all survey responses (chart 1).

**Chart 1: Response rate by group as a percentage of all responses**

<table>
<thead>
<tr>
<th>Group</th>
<th>Sample</th>
<th>Response rate</th>
<th>P value</th>
<th>Statistical significance at 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1,922</td>
<td>0.62%</td>
<td>0.002</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>1,890</td>
<td>0.11%</td>
<td>0.572</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>1,896</td>
<td>0.53%</td>
<td>0.006</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>1,906</td>
<td>0.05%</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>1,908</td>
<td>0.16%</td>
<td>0.293</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>1,882</td>
<td>0.21%</td>
<td>0.17</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>1,911</td>
<td>0.00%</td>
<td>0.328</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>1,896</td>
<td>0.16%</td>
<td>0.293</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>1,896</td>
<td>0.11%</td>
<td>0.572</td>
<td>No</td>
</tr>
<tr>
<td>11</td>
<td>1,910</td>
<td>0.21%</td>
<td>0.169</td>
<td>No</td>
</tr>
</tbody>
</table>

When the absolute response rate for each experimental group is compared to that received in the control group, groups two and four also show statistically significant differences. No other experimental group created a response rate which was significantly higher than that seen in the control group.
Conclusions

This experiment has three key implications for those surveying business audiences using an online methodology.

First, it implies that having an actual relationship (e.g. them being customers) or a perceived relationship (e.g. survey coming from a well-known brand) with the target audience is an important determinant of response rate. The ‘cold’ list used in this experiment generated a very low response rate of 0.2%. In contrast, an unpublished analysis by Circle Research of 397 online surveys of business audiences where a respondent relationship did exist saw an average response rate of 18%.

Second, when 100 people were paid £2.50 in advance through PayPal, only three accepted the payment. This suggests that using pre-paid incentives in online research amongst business audiences is impractical (potentially as recipients of the payment believe it is ‘bait’ in a ‘phising’ scam).

Third, it suggests that those surveying business audiences should make use of incentives, with two specific incentive types most likely to maximise response rates - a charity donation or a charity donation plus entry into a higher odds, lower value lottery. These two incentives accounted for 53% of all survey responses in this experiment and showed a significant difference from the control group.

However, these findings on incentive effectiveness should be taken as indicative rather than conclusive. The two experimental groups in question generated a statistically significant difference, but the response rate was just 0.62% and 0.52% respectively (compared to 0.05% in the control group). As such, the effect size is relatively small and further research is required to verify whether the same pattern of response would exist (and generate a greater effect) if an actual or perceptual relationship was held with the target population.
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Circle Research
The 828 experts


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