

Incentive payments on social surveys: a literature review

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1. Introduction

In recent years, response rates to social surveys, where participation is voluntary, have fallen. Survey organisations have therefore increased their efforts to gain public co-operation by a variety of means, including providing respondent incentives.

Incentives may be given prior to the survey taking place, regardless of participation, or retained as a reward for those who complete the survey. They may take the form of a monetary or non-monetary gift.

Currently, several surveys conducted by the Office for National Statistics (ONS) offer incentives to encourage response and demonstrate to respondents that their time is appreciated. The Omnibus Survey, Family Resources Survey, Expenditure and Food Survey and General Household Survey send out books of six first-class postage stamps with the advance letter to all sampled addresses. The Expenditure and Food Survey also gives a pen for respondents to use when completing the diary and pays £10 to each adult, and £5 to 7-15 year olds, on completion of the diary.

This paper is a continuation of a previous ONS Survey Methodology paper (Dodd, 1998). It summarises the main findings from ongoing research on incentives and provides information for decision-makers considering whether the use of incentives would be appropriate.

Thinking on this subject has broadened in recent years, particularly in respect to the effect on response bias, data quality, cost, and interviewer confidence. The use of differential incentive payments, and the possibility that their use could create an environment where payment is expected for survey participation, are also considered.

2. Incentives and overall response rates

The general finding from the literature is that the use of incentives, however small in monetary terms, is effective in increasing response rates in postal, telephone and face-to-face surveys. This seems to be the case for all types of surveys, not just those where there is a high burden for the respondent, and it appears to be true for panel surveys.

2.1 Conditional V unconditional

The prevailing opinion is that an unconditional, pre-paid incentive is more effective than the conditional promise of a reward on completion (for example, Church 1993; Hopkins & Gullickson 1992; Goyder 1994). This is the case for surveys conducted by post or interviewer-administered surveys (face-to-face or telephone).

In a meta-analysis of the effects of unconditional and conditional incentives in postal surveys, Church (1993) found that, compared with the 'no incentive' group, response rates increased by an average of 19.1 percentage points when incentives were unconditional, while conditional incentives produced an average increase of 4.5 percentage points. A meta-analysis of the effects of incentives in face-to-face and telephone surveys conducted by Singer et al (1999) verifies this

finding for interviewer-administered surveys.

In 2000, the ONS conducted split-sample experiments with pre-paid unconditional incentives using the Family Resources Survey. A book of postage stamps was sent to half the sample along with the advance letter. Response to the survey was 67% among the group not receiving the stamps compared with 70.4% among the group that did (McConaghy and Beerten, 2003).

Qualitative research into the effect of incentives was conducted within a follow-up to the Expenditure and Food Survey (Betts et al, 1999, unpublished). As part of a series of in-depth interviews, respondents were asked for their reaction to the postage stamps. Their feedback was generally favourable, for example:

“...I think it made me read the letter, cos, you receive a lot of junk mail in the post and I thought ‘Oh I’m getting free stamps here, lets read the letter’.”

“...stamps are useful. I thought it was very nice to get the stamps in the letter. It was encouraging to start with. Did make me think there is more to this than meets the eye.”

The ONS uses the Postcode Address File as a sampling frame for most household surveys. This makes sending an incentive with an advance letter problematic, as approximately 10% of addresses on the file are ineligible¹. Assuming that the incentive is not retrieved, sending it to ineligible addresses may not be seen as a good use of the client’s or public money. Additionally, at multi-household addresses or for surveys where only one person in the household is interviewed, it is impossible to indicate in the advance letter who the incentive is intended for.

One way around this might be to ask the interviewer to give payment directly to the respondent on first contact, irrespective of participation. Mack et al (1998), reported on the effect of paying a \$20 incentive on wave one of the U.S. Survey of Income and Program Participation. Interviewers gave vouchers at the doorstep immediately after verifying the address. Vouchers were given to non-interviewed as well as interviewed households. When this incentive was given, non-response rates remained significantly lower compared with the ‘no incentive’ group (3 percentage points lower) by wave six, even though no further incentive payments were made between waves.

Conditional incentives tend to be used in surveys that are more burdensome for respondents e.g. involving diary keeping. These payments tend to be of a higher monetary value than unconditional payments made in advance of the interview.

In an experiment carried out by the National Centre for Social Research (NatCen)², £10 was offered as a reward for completing both components of a time use survey (an interview and diary). Completion rates for the diaries were significantly improved in households where the incentive was promised compared with households where no incentive was promised (Lynn and Sturgis, 1997). NatCen have also experimented with using promissory notes given by the interviewer directly to the respondent for completing the British Social Attitudes Survey. The promissory note is essentially a contract promising the recipient that the money will be sent to them. This method was found to improve response rates from 56% to 63.3% when a £5 promissory note was used (Lynn et al, 1998).

¹ Institutions, non-residential addresses and residential addresses not classified as main address (e.g. second homes).

² Formerly, Social and Community Planning Research (SCPR)

2.2. Monetary v Non-Monetary

As well as monetary incentives paid directly to respondents, survey organisations have also offered other types of incentive. These include donations to charities made on behalf of respondents, lottery draws, and gifts such as pens or fridge magnets.

Both monetary and non-monetary forms of incentive have been found to increase response rates. However, most research points to monetary incentives paid directly to respondents as being more effective, even controlling for the value of the incentive (Singer et al, 1999).

Charitable donations: The literature on the effectiveness of promising to make a charitable donation on behalf of the respondent is inconsistent. Some studies have found this type of incentive to have no beneficial effect on response (Warriner et al, 1996; Tzamourani, 2000). Conversely, Robertson and Bellenger (1978) found that a higher response rate was achieved with the promise of a charitable donation than with a monetary incentive paid directly to the respondent. In these experiments the amount offered was very low (one or two pounds). It would be interesting to experiment with higher amounts.

Lottery: Research into the use of lottery draws as an incentive has tended to be focused on postal surveys. Again, the literature on their effectiveness is inconsistent. Warriner et al (1996) concluded that entering respondents into a prize draw failed to increase response rates, whereas Harkness and Mohler (1998) found that this type of incentive improved response rates. However, the authors noted that the depressed German economic climate at the time of the experiment might have acted as a motivating influence.

Non-monetary gifts: Again, much of the work in this area has focussed on postal surveys and it is generally accepted that non-monetary gifts are effective in improving response rates. Willimack et al (1995) found that giving a pen as an unconditional incentive for an interviewer-administered survey increased response by 3.7 percentage points over the group not receiving a pen. In 2001, the Family Resources Survey carried out an experiment where half of the sample was sent a book of postage stamps, the other half a 'UK in Figures' booklet³. The group that received stamps showed significantly better co-operation rates than the group that received the booklet (71.9% compared with 66.7% respectively), (McConaghy and Beerten, 2003).

The effectiveness of different types of incentive is likely to depend on the target group and nature of the survey.

2.3 Value of incentive

Some studies have shown a positive linear relationship between the value of the incentive offered and the increase in response rates (Yu and Cooper, 1983; Hopkins and Gullickson, 1992).

Other research has concluded that the relationship between response rates and the value of the incentive fits a model of diminishing returns (Armstrong, 1975; Fox et al, 1988). A recent experiment, conducted by NatCen, was designed to test the effect of offering a monetary

³ This booklet contains information about the statistics ONS provides and the surveys it carries out.

incentive to every household member conditional on full co-operation from the whole household taking part in the National Travel Survey. A split-sample experiment tested a £10 and £5 incentive compared with the control group where no incentive was offered. In this experiment interviewers knew which group households belonged to. Although the use of incentives significantly improved survey response rates when compared with the control (59.3% and 50.7% respectively), no statistically significant difference could be found between the £10 and £5 group (60.6% and 57.9% respectively), (Stratford et al, 2003).

2.4 Incentives and respondent burden

Although intuitively one might assume that incentives are especially useful in improving response rates when there is a high respondent burden e.g. long interviews or diary-keeping, researchers have not generally been able to find a significant interaction between burden and incentive (Singer et al, 1999). However, Lynn et al (1997) experimented with offering an unconditional £5 incentive on later rounds of the British Election Panel Study. At wave 8 this small monetary incentive had the effect of halving the non-response rate from 7.9% to 3.7%. This indicates that there is a potential for further investigation into the use of incentives on panel surveys.

2.5 Differential incentives

One way of using incentives to their best effect while still keeping a check on cost is to only pay those who refuse to take part, in order to convert them. Alternatively, incentives can be offered only in areas where response rates are traditionally low.

Few studies appear to have embraced this approach, possibly because of the underlying ethical issues. However, a U.S. longitudinal study on welfare reform found that the use of targeted incentives to reluctant respondents was helpful in levelling off the longitudinal sample loss (Ward et al, 2001).

In thinking about this approach, concerns have been raised that respondents not paid will perceive the use of incentives in this way as inequitable. It may have a negative effect on their attitude towards surveys and their future participation. Singer et al (1999) investigated these issues as part of an experiment on the U.S. Detroit Area Study. Respondents who agreed to be interviewed were split into 4 groups. Those who: i) did not receive an incentive; ii) received \$5 with an advance letter; iii) received no incentive with an advance letter but were persuaded by a subsequent offer of \$25; iv) received \$5 with an advance letter but were only persuaded by a follow-up offer of \$25. Three quarters of all respondents considered the practice of paying differential incentives as unfair. However, disclosure of differential payments, even among respondents who felt this practice to be unfair, had no significant effect on reported willingness to participate or actual participation in future surveys.

2.6 Effect of incentives on interviewers

It has been argued that the positive effects of incentives on response may be attributed to their impact on interviewers rather than potential respondents. Interviewers may expect those who have received an incentive to be more co-operative and may therefore be more confident in their approach. However, this factor does not appear to have a direct impact on response rates.

The sample for the U.S. Survey of Consumer Attitudes was randomly divided into three groups. The first group was sent an advance letter and \$5, which interviewers were unaware of. The

second group was sent an advance letter and \$5, which interviewers were aware of. The third group was sent only the letter. A significant increase in response was shown in groups one and two but no interviewer effect could be demonstrated (Singer, Van Hoewyk and Maher, 1998.) This accords with other experiments where interviewers were unaware of whether incentives had been paid and response rates nevertheless showed improvement.

Stratford et al (2003) reported that National Travel Survey interviewers felt that the £10, rather than the £5 incentive, was essential for improving response in London, where response is notoriously difficult to obtain. However, this was not apparent in the results; no significant difference in response rate increases between the £10 and £5 incentive was found, even in London.

Lynn (2001) combined both qualitative feedback from interviewers and quantitative data analysis to examine whether the perceptions of interviewers concurred with the survey results in relation to response. This study reported that respondent incentives had a significant effect on response rates without this being apparent to the interviewer. In fact the interviewers reported that the incentive had had effects that were either neutral or negative. Lynn concludes that the positive effect of the incentive on response rates was achieved via a direct impact on the respondents, and not via the interviewers as an intermediary.

Although there does not seem to be any direct interviewer effect, there is some anecdotal evidence to suggest that respondents are likely to remember receiving the advance letter if accompanied by an incentive. This may help interviewers during their initial approach. Some examples of comments from respondents to the 2001 Omnibus Survey were (unpublished):

“was that the letter that had the stamps with it?”

“oh yes the letter with the 1st class stamps.”

3. Incentives and data quality

Concern has been expressed that respondents who complete a survey solely to reap the benefit of the incentive may reduce the quality of the data collected by providing substandard responses. It is also feared that respondents may view the sponsor in a more favourable light, resulting in response bias towards the sponsor's perceived desires.

There is little evidence to substantiate these fears. In fact, many studies point to incentives improving data quality in terms of greater response completeness, greater accuracy, reduced item non-response and more comments to open-ended questions (James and Bolstein, 1990; Brennan, 1992; Willimack et al, 1995). Shettle and Mooney (1999) confirm these findings. Furthermore, they found that individuals receiving an incentive were more co-operative in providing information needed to track their whereabouts for successive waves of the survey – an important consideration in longitudinal studies.

However, there is some indication that providing incentives may attract people with a fear of disclosing information on some sensitive issues, who perhaps would not have participated without the incentive. Tzamourani and Lynn (2000) reported greater item non-response among the incentive groups for sensitive questions on income and political affiliation and lower item non-response for less sensitive questions. These respondents may have felt more obliged to answer the less sensitive questions, having refused the more sensitive ones.

3.1 Effect of incentives on sample composition

Incentives have repeatedly been found to increase co-operation rates among certain groups: low-income and low-education groups, larger households and households with dependent children, minority ethnic groups and younger respondents.

James (1996) found that respondents defined as being in poverty who received an incentive, were 1.6 times more likely to co-operate than similar respondents who did not receive an incentive. For respondents classified as not in poverty, the incentive barely increased the odds of co-operating. Mack et al (1998) found that a \$20 incentive was more effective in recruiting and retaining black households and households in poverty than non-black and non-poverty households in the U.S. Survey of Income and Program Participation. Analyses by Singer, Van Hoewyk and Maher (2000) found that a \$5 incentive attracted a disproportionate number of low-education respondents. Stratford et al (2003) found that Black and Indian minority ethnic groups, people living in larger households, people living in households with dependent children (lone-parent households with dependent children in particular), people aged 0-20, and single people, were more influenced by incentives on the National Travel Survey. There is also some evidence that incentives might appeal more to men than women (Tzamourani and Lynn, 2000).

Incentives have also been found to have a greater motivational impact on those who thought the survey was of little salience or interest to them. An experiment carried out as a follow-up to the 1996 U.S. Detroit Area Study, which included questions on political and community involvement, demonstrated that the effect of incentives was smaller for those with high community involvement. A \$5 incentive increased response by 15.9 percentage points among respondents with high community involvement but the effect was far greater (a 41.9 percentage point increase) among respondents considered to have low community involvement (Groves et al, 2000). Further research has shown that in a U.S. survey undertaken with electrical utility customers, a \$4 payment improved response by 2 percentage points among respondents who had volunteered for a special electric rate programme and 15 percentage points among the group who had not volunteered for the programme, compared with the 'no incentive' group (Baumgartner and Rathbun, 1996). Berlin et al (1992) found that respondents with higher scores on an assessment of adult literacy, who would be expected to have a greater interest in the National Adult Literacy Survey, were more likely to agree to participate without an incentive than those respondents with lower scores.

There is concern that incentives could increase response bias, as their motivational effect is greater in some groups of the population than others. However, it can be argued that as the groups who are more motivated by incentives tend to be those who are usually under-represented in surveys, incentives can actually reduce response bias. For example, when incentives were used in the National Travel Survey 2002, it was found that they improved the sample composition compared with population figures derived from the 2001 Census. The only exception was the over-representation of lone-parent households with dependent children (Stratford et al, 2003).

3.3 Changing respondent behaviour

Dodd (1998) suggested that pre-paid monetary incentives could cause people to change their behaviour. In particular, in diary surveys of consumption, respondents' spending power would be increased with a pre-paid incentive. The extent of this problem will vary according to the size and nature of the incentive.

4. Cost of incentives

Opinion is currently divided on whether the cost of paying incentives is justified and many sponsors of research are yet to be convinced.

Incentives have been found to reduce the cost of administering a survey. In the case of face-to-face surveys, this is due to the reduced number of visits to an address required to gain an interview, which thus impacts on the time, travel and expenses incurred by interviewers. For postal surveys, fewer follow-up mailings are required, as are fewer calls in a telephone survey.

During an experiment carried out on the British Social Attitudes Survey, Lynn et al (1998) showed that the mean number of visits per eligible address was lower in the incentive groups than in the control group. It was also lower with a £5 incentive than with a £3 incentive.

An experiment conducted on the 2001 U.S. National Household Survey on Drug Abuse compared the impact of a \$20 and \$40 incentive on the total cost per interview with a \$0 control group. For the \$20 group the cost per interview was \$9 less, and for the \$40 group, \$7 less than the \$0 control group. This was attributed to the reduced number of interviewer visits required to complete an interview. An experiment conducted on the U.S. National Adult Literacy Survey showed that while a \$20 incentive reduced the cost per interview by \$11.45 compared with the 'no incentive' group, for an incentive of \$35 the reduction in cost was only \$1.18 (Berlin et al, 1992).

It could be argued that the use of incentives might reduce the cost of data collection on a wider scale, as with improved response comes improved interviewer morale and staff retention. As a result, recruiting and training costs may fall. This is an area for further investigation.

5. Incentives and long-term expectation effect

There is concern that the increasing frequency of paying incentives may lead to an expectation among the general public that payment should be made for completing all and any surveys. As a result, the feeling of civic duty people feel towards participating in a survey, particularly a government-sponsored survey, could well be diminished. Not only is it feared that response to surveys not offering incentives will fall, but that the quality of response will decline by those who have received payment in the past.

As part of an experiment using the U.S Survey of Consumer Attitudes, it was found that respondents who had received an incentive in the past were more likely to agree with the statement 'People should get paid for doing surveys like this'. However, despite this, these respondents were also more likely to complete a subsequent wave of the survey without payment. In terms of declining data quality, such respondents were no more likely to answer 'don't know' to a series of 18 key questions on the survey than those who did not receive an incentive (Singer et al, 1998).

While this is certainly a positive indication that the fears surrounding expectation effects may not be realised, this experiment only addressed one survey where the gap between the two waves was 6 months. It would be interesting to see how these respondents would react to a request to complete an entirely unrelated survey. Furthermore, if in the future more surveys were to offer incentives, the expectation of payment may become more apparent.

6. Conclusion

The literature provides some guidance on how incentives can be used most effectively to improve response and data quality, but there remain aspects where further investigation is required.

On the whole, unconditional, pre-paid incentives are more effective in improving response rates than those promised as a reward for participation. While both monetary and non-monetary incentives improve response, cash incentives, paid directly to the respondent, have a greater effect. When considering the amount of incentive offered, one should bear in mind the model of diminishing returns. A higher monetary payment does not guarantee a higher response rate than a more conservative one. Indeed, a lower amount paid in advance may elicit a similar improvement in response compared with a higher amount conditional on completion. More research is required into the effect of incentives offered on more burdensome surveys although there is some evidence to suggest that survey attrition may be countered through the use of incentives in longitudinal studies. Incentive payments to respondents can enhance interviewer confidence but this has not been demonstrated to have a direct effect on response.

The use of incentive payments might improve data quality in terms of completeness and accuracy and might be particularly important in maintaining contact with respondents in panel surveys. Certain groups of the population are more attracted by incentives than others and this should be considered with respect to the sample composition and population under consideration.

The effect that incentives might have in changing respondent behaviour should be taken into account when designing a survey.

Although considerably more investigation is required in Great Britain into the effect of incentives on the overall cost of the survey, the indications are that their use can help to reduce the amount of time spent by the interviewer to elicit a response and is therefore cost effective.

There is concern that, should the use of incentives become more commonplace, it will erode the feeling of civic duty, particularly with respect to participation in government surveys, and will become expected by potential survey respondents. The research to date suggests that this may not be borne out. Again this is probably an area requiring further investigation particularly as public reaction to the use of incentives may differ in Britain compared with the United States.

From the literature it is clear that a multitude of factors, including: the population under investigation, the sample size and design, along with the subject matter and its relevance to the respondent, should be considered when deciding whether or not to offer an incentive.

A final issue that has not been discussed in this paper is an ethical one. Bodies involved in providing ethical approval for surveys, where the subject matter is considered particularly intrusive, or where invasive procedures are carried out, do not always look favourably on incentive payments, which can be viewed as coercive. This being the case, perhaps we can only ever really offer a *'token of our appreciation'* for participation?

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