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The use of incentives to recruit and retain hard-to- get populations in longitudinal studies

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Contents

Executive Summary	5
1 Introduction	6
2 Methods	6
3 A review of the literature and current practice	7
3.1 The effect of incentives on response	7
3.2 Type of incentive	8
3.2.1 Monetary versus non-monetary incentives	8
3.2.2 Prize draws	10
3.2.3 Charitable donations	11
3.2.4 Choice of incentive	11
3.3 Pre-paid versus promised incentives	11
3.4 Incentive value	12
3.5 Differential incentives	13
4 Conclusion	15
References	16
Appendix A. A workshop on differential incentives	21

Executive Summary

- Among all hard-to-get groups, incentives are most likely to increase the recruitment and retainment of those who are hard-to-persuade rather than those who are hard-to-sample, hard-to-identify, hard-to-find/contact and hard-to-interview.
- On the whole, the existing evidence on the effect of incentives on overall response rates will also apply to the recruitment and retainment of hard-to-persuade groups in longitudinal studies.
- However, the impact of using incentives in longitudinal studies is more complicated than in cross-sectional surveys.
 - The long-term consequences of using incentives on finances and participant expectations need to be considered.
 - There are a multitude of possible incentive strategies stretching over the lifetime of a longitudinal study with the potential effects being temporary, constant, delayed and/ or cumulative (Laurie & Lynn, 2009).
- Although the evidence suggests that incentives may not have to be repeated in subsequent waves to maintain their positive effect overall, it is unclear whether this also applies specifically to the hard-to-persuade groups – particularly if the incentive is the only motivation for taking part among these groups. Further research in this area is required.
- Differential incentives are the most promising cost-effective method for recruiting and retaining hard-to-persuade groups in longitudinal studies. However, it remains a controversial practice in the UK with widespread concern among research ethics committees, survey sponsors and survey practitioners that this strategy will violate expectations of equity.
- A workshop on the use of differential incentives drafted eight principles for guiding the decision to use differential incentives:
 1. Differential incentives are not inherently good or bad.
 2. Researchers must provide a clear justification for using differential incentives.
 3. The interests of the survey sponsor, the organisation collecting the survey data, the participant and society need to be balanced.
 4. The use of differential incentives should be based on evidence that these are likely to reduce non-response bias and/or improve inclusiveness, while controlling costs.
 5. Participants' rights, dignity and autonomy need to be considered.
 6. The value of differential incentives should be proportionate to the burden imposed on those who are eligible to receive the incentive.
 7. Receipt of the differential incentive should be based on the characteristics and/or behaviour of the participant and not dependent on others.
 8. The use of differential incentives should be as transparent as possible without undermining participants' rights (e.g. confidentiality) and dignity (e.g. stigmatisation).

1 Introduction

In May 2018, the ESRC published the independent Longitudinal Studies Strategic Review Report which assessed the continuing scientific needs for longitudinal research resources, how these needs could be met by the ESRC, and offered recommendations on strategic and innovative ways to enhance this portfolio in the future. In this report we address one area of interest following the review which is the use of innovative methods to recruit and retain hard-to-reach groups in longitudinal studies, focusing here on the use of respondent incentives.

For this review, we are focusing on cash incentives, cash-like incentives and gifts. A much broader definition of incentives which would include feedback of study results was not feasible within the timeframe. The focus is also on the effect of incentives on response rates, overall and for hard-to-get populations.

According to Tourangeau et al (2014), the hard-to-get populations are those that create problems for one or more key survey operations:

1. Hard to sample (e.g. no sampling frame for rare populations)
2. Hard to identify (e.g. hidden or stigmatised characteristics)
3. Hard to find or contact (e.g. mobile populations, rarely at home)
4. Hard to persuade (e.g. not interested, socially excluded)
5. Hard to interview (e.g. language barriers)

It is generally assumed that incentives can increase response rates by persuading those who are not otherwise motivated to take part; i.e. the *hard-to-persuade* populations. However, in the context of longitudinal surveys, incentives may also have a positive effect on tracing and making contact at subsequent waves; i.e. the *hard-to-find/contact*.

Examples of hard-to-persuade populations include young adults (particularly men), the less educated, those on low income, people living in big cities. An example of a hard to find/contact population that is pertinent to longitudinal studies are people who move in between data collection sweeps.

2 Methods

This report presents a brief overview of the evidence on using incentives to increase survey response rates and to what extent this evidence is applicable to ‘hard-to-get’ groups in longitudinal studies.

Rather than conducting a Systematic Review or even a Rapid Evidence Assessment (REA), which would not have been possible within the short timescale of this project, we have taken the Singer and Ye (2013) review of survey incentives as a starting point. Although this review was quite thorough at the time, it includes primarily peer-reviewed articles and excludes studies that have been published more recently and unpublished evidence residing within research institutes. Consequently, there are gaps in time and focus which we have tried to fill by:

- conducting a small focused literature review including more recent publications,

- telephone interviews with the research institutes responsible for running the main UK longitudinal surveys,
- interviews with researchers working in UK research companies, and
- an inventory of incentives that have been used by UK research companies in the last couple of years.

A total of 11 telephone interviews were conducted, lasting 30-60 minutes. Information was collected on the views and experiences of using respondent incentives in general as well as for the recruitment and retention of hard-to-get populations in longitudinal surveys. In addition to taking part in the interviews, the Office for National Statistics, the National Centre for Social Research, Ipsos MORI and Kantar Public also provided an inventory of incentives that have been used on social surveys since 2017.

In parallel with this review, the ESRC also funded a workshop on the use of differential incentives which was held in London on the 7th of June, 2019. A report on the workshop can be found in Appendix A.

3 A review of the literature and current practice

3.1 The effect of incentives on response

Numerous experiments conducted over the last three decades have shown that incentives increase response rates across all survey modes. This has been confirmed by meta-analyses of incentive experiments carried out on postal surveys (Church, 1993; Edwards et al, 2009), interviewer-administered surveys (Singer et al, 1999; Holbrook et al, 2008; Cantor et al, 2008) and web surveys (Görizt, 2006; Görizt, 2010; Gajic et al, 2012). Incentives tend to have larger effects in studies with low response rates and larger effects in postal than interviewer administered surveys (Singer et al, 1999).

It is accepted that this positive effect of incentives on response rates applies to longitudinal surveys as well as cross-sectional surveys (Laurie and Lynn, 2008). However, most studies testing incentives on longitudinal studies have examined the effect on response at a single wave of the survey rather than over the lifetime of the panel. As mentioned by Laurie and Lynn (2009), incentives may become more or less effective over time depending on how successful they are in preventing the least cooperative from dropping out of the longitudinal survey.

In a longitudinal survey, we are also concerned about creating respondent expectations for similar or higher levels of payment at subsequent waves. A few experimental studies have found that incentives do not have to be repeated in subsequent waves to maintain their positive effect which could suggest that the value of the incentive could be reduced or dropped altogether without unduly damaging retention rates (Lengacher et al, 1995; Singer and Kulka, 2002; Singer et al, 2008; Jäckle and Lynn, 2008; Goldenberg et al, 2009; Pforr et al, 2015). However, some of the telephone interviewees felt that incentives at subsequent waves may still be important for some hard-to-persuade groups who would otherwise lack any intrinsic motivation to continue with the survey (young adults were mentioned in this context). Furthermore, it was

perceived that the use of incentives after the first round of data collection was easier to justify given the burden of repeated participation on respondents as well as the growing value of collecting complete data over time.

Incentives increase response rates mainly by reducing refusal rates rather than facilitating contact. However, there are a few studies showing that incentives can have a positive effect on contact and tracing rates in later waves of longitudinal surveys (Kerachsky and Mallar, 1981; Beydoun et al, 2006; Mann, Lynn and Peterson, 2008).

For the most part, incentive experiments have focused on increasing the response rate overall rather than increasing the response rate among hard-to-get groups. Yet there is evidence showing that incentives can be used to increase the participation of population sub-groups that are often under-represented in surveys, such as those with low incomes, those with low-education, single parents, and minority ethnic groups (Kulka, 1995; Mack et al, 1998; Singer et al, 1999; Singer et al, 2000; Martin et al, 2001; Nicolaas and Stratford, 200; Knibbs et al, 2018). Incentives also appear to have a greater effect on those who refused to take part in a previous wave of a longitudinal survey compared to those who previously cooperated (Zagorsky and Rhoton, 2008). However, a recent study conducted by the Office for National Statistics using data from an incentives trial on the Labour Force Survey found that the response rate was lower for £5 incentives (3.27 percentage points) and higher for £10 incentives (2.79 percentage points) in Census Output Areas¹ classified as the Ethnicity Central supergroup². It is unclear what the mechanism is for this seemingly contradictory result which requires further exploration (personal communication, ONS).

3.2 Type of incentive

3.2.1 Monetary versus non-monetary incentives

The literature clearly shows that monetary incentives have a greater effect on response rates than non-monetary incentives of the same value (Church, 1993; Singer et al, 1999). Despite this evidence, actual cash incentives are rarely used in the UK, with our interviewees citing reasons such as interviewer safety, the cost of lost incentives, and audit requirements. Similarly, cheques and bank transfers which are used in other countries are rarely if ever used in the UK. Instead, UK research companies tend to opt for cash-like incentives such as high street vouchers and gift cards. In addition to gift cards, NatCen uses Post Office Payout which involves giving respondents a letter or email with a unique barcode that they can take to any Post Office counter to be scanned and redeemed for cash. Post Office Payout is being used on longitudinal studies such as Growing Up in Scotland as well as various cross-sectional surveys.

¹ The Output Area classification (OAC) distils key results from the 2011 Census for the whole of the UK at a fine grain to indicate the character of local areas.

² The population of this group is predominately located in the denser central areas of London, with other inner urban areas across the UK having smaller concentrations. All non-white ethnic groups have a higher representation than the UK average especially people of mixed ethnicity or who are Black, with an above average number of residents born in other EU countries. Residents are more likely to be young adults with slightly higher rates of divorce or separation than the national average, with a lower proportion of households having no children or non-dependent children. Residents are more likely to live in flats and more likely to rent. A higher proportion of people use public transport to get to work, with lower car ownership, and higher unemployment. Those in employment are more likely to work in the accommodation, information and communication, financial, and administrative related industries.

For some UK surveys, a book of stamps is sent with the advance letter to sample members which could also be considered cash-like because it has an explicit monetary value. An experiment testing the effect of stamps sent with an advance letter showed that these can increase the response rate by three percentage points (McConaghy and Beerten, 2003), which is less than what is usually achieved with a pre-paid gift voucher. A more recent experiment on the National Travel Survey (NTS) showed no significant differences in response rate depending on whether stamps or a £10 Post Office Payout barcode had been sent with the advance letter (unpublished). However, it should be noted that the tested incentives were on top of the usual incentive of £5 per household member conditional on whole household cooperation with the NTS interview and diary completion. Another experiment on The Crime Survey for England and Wales (CSEW) tested a £5 promised incentive in addition to stamps and found that the £5 gift voucher made no difference to the response rate (Kantar Public, 2018). These results suggest that the effects of different incentive types are not necessarily additive when used in combination.

A recent experiment conducted by Ipsos MORI on behalf of the Office for National Statistics, tested the effect of a cash-like incentive and gift (both sent with the advance letter) on the response rate for a push-to-web survey design³ (Ipsos MORI, 2018). In line with the existing evidence, the results showed that the response rate was higher for a £5 gift voucher than a branded tote bag; 25.3% and 23.9% respectively compared to 19.4% response rate with no incentive. And the highest response rate was achieved when combining the pre-paid £5 gift voucher with an extra £10 gift voucher conditional on the whole household completing the survey (27%).

Although the tote bag produced a lower increase in response than the cash-like incentives, it was the most cost-effective strategy. Since then, further experiments with tote bags have been conducted on three face-to-face surveys: the National Survey for Wales (tote bag in addition to £10 conditional incentives), the Crime Survey for England and Wales (tote bag versus book of stamps sent with advance letter), and the British Social Attitudes Survey (tote bag in addition to a £5 or £10 unconditional incentive). Preliminary results suggest that the tote bag did not have a significant impact on response rates in all three face-to-face surveys.

In the past, monetary incentives have not routinely been used on the UK birth cohort studies which tend to achieve higher response rates than household panel surveys. Instead, small age appropriate gifts are commonly used on completion of the interview as a token of appreciation (e.g. branded reusable water bottles and USB sticks), with monetary incentives reserved for tasks that place unusual burden on cohort members (e.g. wearing and returning an accelerometer). Exceptions include the Avon Longitudinal Study of Parents and Children (ALSPAC) and Next Steps (previously known as the Longitudinal Study of Young People in England), which have routinely used monetary incentives of varying amounts to encourage participation.

One telephone interviewee suggested that monetary incentives are likely to become more commonplace for birth cohort studies as a result of (a) the increased difficulty of retaining cohort members as they transition into adulthood, and (b) the increased use of web data collection which tends to produce much lower response rates than interviewer-administered data collection. However, concerns remain about the

³ A push-to-web survey design uses offline contact (usually postal) to invite sample members to complete an online questionnaire.

costeffectiveness and the long-term consequences on lasting commitment to the cohort study and further research is being conducted before more wide-spread use of monetary incentives is implemented.

3.2.2 Prize draws

Entering respondents into a prize draw rather than giving incentives to everyone is appealing because it can reduce the total cost of the incentives. However, the evidence derived from experiments conducted on postal surveys shows inconsistent findings. A number of studies have found prize draws to have a positive effect on response rates (Balakrishnan et al., 1992; Harkness and Mohler, 1998; Hubbard and Little, 1988; Kim, Lee, and Whang, 1995; and McCool, 1991) whereas other studies found no effect at all (four studies reviewed by Hubbard and Little, 1988; Warriner et al., 1996). Despite these mixed results for postal surveys and the absence of evidence for interviewer-mediated surveys, it has generally not been recommended to use prize draws because the effect cannot be predicted, and they may have less impact than a guaranteed incentive given to everyone.

Nonetheless, it has become common practice to use prize draws to encourage participation in web surveys, particularly within the context of marketing research (Görizt, 2006). The popularity of prize draws for web surveys is most likely caused by the constrained possibilities for using other types of incentives in surveys where the respondent is anonymous (e.g. intercept-based surveys). There is evidence that prize draws can improve response and reduce drop-out on web surveys (Tuten and Bosnjak, 2004; Porter and Whitcomb, 2003; Deutskens et al, 2004; Görizt and Wolff, 2007; Heerwegh, 2006; Laguilles et al, 2011; Scherpenzeel et al, 2002) but there are also examples of experiments that did not find a positive effect (O'Neil and Penrod, 2001; Cobanoglu and Cobanoglu, 2003; Görizt, 2004). It should be noted that many of these experiments were carried out among student populations.

A few studies have examined the effect of prize draws on response and attrition in longitudinal studies. One study found that in a five-wave online study, an unconditional gift initially increased participation compared to cash prize draws by about five percentage points, and there was no difference between those offered loyalty points and those entered into the prize draw (Görizt, 2008). However, the difference between a pre-paid gift and prize draw faded throughout the waves of the study, whereas the loyalty points became more attractive relative to a prize draw.

A similar result was found in another experiment conducted on a four-wave online panel in which panelists were offered either repeated inclusion in a prize draw or no incentive at all (Görizt and Wolff, 2007). The prize draw significantly increased the response rate at the first wave by about thirteen percentage points but not for the next wave and it had no effect on dropout.

Statistics Netherlands tested the impact of a prize draw of iPads on the response rate of the Dutch Labour Force Survey which uses a sequential mixed mode design with web non-respondents being followed up by telephone or face-to-face interviewing (Luiten, 2018). The prize draw led to a higher web response rate at wave 1 (24.3% compared to 21.4% without a prize draw) but it did not have any effect on response in the second and third wave. However, the prize draw at wave 1 led to more households agreeing to be contacted at wave 2, and these households were as likely as the other

households to remain in the panel, resulting in a higher overall response rate (37% compared to 35.3% without prize draw).

These results suggest that further research may be warranted, focusing on the longerterm effect of prize draws on the willingness to continue to participate in longitudinal studies relative to other incentive types.

3.2.3 Charitable donations

Only a few studies have shown that the promise of a donation to charity can significantly increase the response rate (Robertson and Bellenger, 1978; Gendall and Healey, 2008), whereas several other studies have failed to find any evidence to support this (Furse and Stewart 1982; Hubbard and Little 1988; Olson, Schneiderman and Armstrong, 1993; Warriner, et al., 1996; Pedersen and Nielsen, 2016). Gendall and Healy (2010) suggest that the promise of a donation to charity may be effective in some circumstances but not in others. It is possible that the effectiveness of a promised donation to charity is related to the survey population or the survey topic, but this has not been established. It should be noted that most of the studies mentioned here involve postal surveys. The Pedersen and Nielsen (2016) study was tested on an online survey. However, there is no theoretical reason to expect the conclusions to be different for surveys using other data collection modes.

Charitable donations are rarely used for social surveys in the UK. To the best of our knowledge, charitable donations have not been used on UK longitudinal surveys.

3.2.4 Choice of incentive

On web surveys, it is relatively straightforward to offer respondents a choice of incentive when they have completed the questionnaire; e.g. choosing a specific gift card from a range of retailers, choosing from a range of charities to give a donation, or choosing among different types of incentives such as gift card versus donation versus entry into a prize draw. As far as we know, there is no empirical evidence that offering a choice will increase response rates compared to just offering a single cash-like option. However, if offering a choice, the experience of choosing an incentive should be straightforward, quick and rewarding to prevent any negative impact on response to subsequent waves of a longitudinal survey.

3.3 Pre-paid versus promised incentives

Numerous experiments have demonstrated that pre-paid incentives have a greater impact on response rates than promised incentives which are conditional on cooperation. Church (1993), Singer et al (1999) and Edwards et al (2009) carried out meta-analyses of experiments across all modes and their conclusions were consistent. Most of these experiments were conducted on cross-sectional surveys or looked at a single wave of a longitudinal study, but the same conclusion was also reached by Jäckle and Lynn (2008) who examined the *cumulative* effect of pre-paid versus promised incentives on attrition using data from the Youth Cohort Study of England and Wales. Despite the evidence, there is still some reluctance to use pre-paid incentives, particularly when the value of the incentive is relatively high, the baseline response rate is very low, or the likelihood of participation is relatively low for certain types of sample members.

Sending pre-paid incentives to *all* sample members will cost more than sending promised incentives of the same value to responding sample members only, particularly for those surveys with low baseline response rates. Yet some of the extra cost can be offset against other cost savings derived from making fewer visits in face-to-face surveys, fewer calls in telephone surveys and fewer reminder mailings for postal and web surveys using postal contact. Furthermore, after the first wave of a longitudinal survey, there is a substantial decrease in the cost difference between a pre-paid and a promised incentive because re-interview rates tend to be quite high among recruited panel members.

Some longitudinal surveys use both pre-paid and promised incentives. For example, at wave 8 of Understanding Society, pre-paid incentives were offered to most sample members but promised incentives were offered to those who may be less inclined to take part; e.g. adults living in households that were not contacted at the previous wave, adults who had not responded in the previous wave despite other household members taking part, and new entrant adults (Kantar Public, 2017). Adults allocated to the webfirst sample were also promised an additional £10 'bonus' if they completed the web survey in the first two weeks of web fieldwork (i.e. before being approached for a costlier face-to-face interview).

This demonstrates that various combinations of pre-paid and promised incentives are possible for any given longitudinal survey, but it is not clear what the optimum combination is (Laurie and Lynn, 2009).

As far as we know, there is no evidence of the effect of pre-paid versus promised incentives for different hard-to-survey groups.

3.4 Incentive value

The value of incentives tends to be quite modest in the UK. Incentives of £5 or £10 tend to be the norm for straightforward one-off interviews lasting no more than an hour and push-to-web surveys that take less than 30 minutes to complete. Higher value incentives are used for surveys with additional elements to complete such as a diary or bio-measures (varying from about £15 to £40), and to boost participation in difficult areas (e.g. London) and among hard-to-get groups (discussed in the next section).

The value of incentives tends to be much higher in the USA compared to the UK. For example, respondents to the latest wave of the Panel Study of Income Dynamics (PSID) were given an incentive of \$75 (about £60) conditional on participation which equates to about \$1 per minute. For the PSID immigrant refresher sample, the incentive was increased significantly to \$300 due to an exceptionally low response rate.

It has been widely demonstrated that response rates tend to increase with the value of the incentive (Church, 1993, Singer et al, 1999). However, this relationship is not necessarily linear, with the effect on the response rate appearing to decrease as the monetary value of the incentive increases (Gelman et al, 2002; Cantor et al, 2008; Mercer et al, 2015).

In a meta-analysis of incentive schemes in the United States, Mercer et al. (2015) attempted to determine the right value to offer. For pre-paid incentives on face-to face surveys, they found that a \$5 incentive was predicted to increase response by around 7 percentage points, \$10 by around 9 percentage points, \$15 by around 11 percentage points and \$20 by around 12. It should be noted that only eight studies offering prepaid

incentives with face-to-face interviews were included in this analysis, hence confidence intervals around these estimates are large, and there is no guarantee that these values would translate directly into the UK situation. A similar meta-analysis has not been conducted in the UK.

As mentioned before, incentives can reduce the total number of contacts needed to gain response and the resulting cost savings can offset some of the incentive cost. The extent to which this occurs will vary by the size of the incentive, the size of the sample, and the structure of other costs.

3.5 Differential incentives

In general, pre-paid incentives are given to all sample members and promised incentives to all who complete the survey. Yet we know that most respondents would have taken part without the incentive. It therefore follows that it would be more cost-effective to only offer an incentive to (a) those who initially refuse to take part (i.e. refusal conversion incentives) or (b) those groups who are less likely to take part in surveys (i.e. targeted incentives).

Refusal conversion incentives can be offered to all sample members who initially refuse to take part in the survey or a sub-sample of them. NatCen has also been experimenting with the provision of a limited number of refusal conversion incentives for face-to-face interviewers to use at their discretion on the doorstep. The results have been somewhat mixed and further research is required.

Targeted incentives are offered to sub-groups that have been specified in advance of data collection with the objective of optimising the trade-off between survey costs and survey errors (Lynn, 2017). For cross-sectional surveys, the information needed to identify the relevant groups has to be available on the sampling frame. For longitudinal surveys, this information can also be derived from earlier waves of data collection.

The use of differential incentives is now common practice in the USA where they have been used and evaluated since the 1990s. Overall, these US studies show that differential incentives are effective at persuading reluctant respondents, decreasing non-response bias, and are cost effective because they are only given to a small subsample (Juster and Suzman, 1995; Abreu and Winters; 1999; Singer et al, 2000; Martin et al, 2001).

Differential incentives are also being used on US longitudinal studies. For example, the Panel Study of Income Dynamics (PSID) introduced a higher value incentive for newly recruited families and ethnic minority groups in 2015, and for previous wave nonrespondents in 2017. Their initial concerns that these groups would expect high value incentives at subsequent waves have proved to be unfounded; those who were offered a high value incentive in 2015 were still as likely to take part at subsequent waves with a lower value incentive (paper forthcoming).

Despite these positive findings in the USA, differential incentives have not been used as much in the UK. There is widespread concern among research ethics committees, survey sponsors and survey practitioners that giving incentives to some and not others will violate expectations of equity.

However, people have different reasons for taking part in surveys, such as:

- altruism (e.g. the importance of the survey for the greater good),

-
- self-interest (e.g. the importance of the survey to them or people close to them) and
 - survey-specific factors (e.g. a sense of obligation towards the sponsor, an interest in the survey topic).

Those who are hard-to-persuade either do not share these motivations or they perceive that their participation comes at a greater cost to them. On balance, their reasons for not taking part outweigh their reasons for taking part. From this perspective, it seems fair to compensate them by offering an incentive. In other words, equity does not necessarily mean treating everyone equally.

Another concern is that the widespread use of refusal conversion incentives will teach respondents to refuse to take part unless they receive an incentive. However, the limited evidence available suggests that this is not the case. Singer et al (1999) explored how survey respondents felt about the practice of paying differential incentives. Respondents were randomly assigned to different treatment groups in which they were either told about the refusal conversion incentives in the study or not. The study found that three out of four respondents perceived the payment of differential incentives as unfair, even when they were told that this would improve the accuracy and usefulness of the survey results. Nonetheless, knowledge of this practice had no significant effect on their stated willingness to participate in future surveys, nor were they significantly less likely to respond to another survey a year later.

Although widespread concerns persist, differential incentives are being used in the UK, either to boost response in difficult areas (e.g. London) or among sample members identified as being high priority. Some examples include:

- The Skills and Employment Survey; the standard incentive is £10 conditional on participation, but this incentive is £15 for sample members living in London.
- The Omnibus Survey of Pupils and their Parent/Carer; a £10 incentive for pupils eligible for free school meals plus a £10 incentive for their parent/carer conditional on both pupil and parent/carer taking part.
- Wave 9 of the Growing Up in Scotland (GUS); a pre-paid £15 incentive is sent to under-represented families which include teenage mothers, single parents, and those living in deprived areas.
- Wave 8 of Understanding Society; panel members were offered either £10 or £20 depending on whether the household was productive or not in the previous wave.

The role of differential incentives in UK longitudinal studies should be explored further. In addition to studying the impact that differential incentives can have on response rates, discussion is also needed on the ethics and practicalities of implementing differential incentives. A first step towards this was a workshop held on the 6th of June 2019 in London. The workshop participants discussed the rationale for using differential incentives as well as the ethics and practicalities. It concluded with some draft principles to guide those who are considering the use of differential incentives. A summary report of the workshop can be found in Appendix A.

4 Conclusion

Although the bulk of evidence on the effect of incentives on response rates comes from cross-sectional surveys, most of this also applies to longitudinal surveys; e.g. pre-paid incentives are better than promised, cash is better than gifts, response rates increase with the value of the incentive but with diminishing returns, and incentives can be used to increase response among groups that are usually under-represented in surveys.

However, as discussed by Laurie and Lynn (2009), the effect of incentives on longitudinal survey response rates is far more complex than for cross-sectional surveys with a multitude of possible incentive strategies stretching over the lifetime of the study and the effects of incentives potentially being temporary, constant, delayed or cumulative. In the last ten years, we appear to have only scratched the surface of what the optimum strategies are for longitudinal surveys.

When considering the use of incentives on longitudinal surveys, we need to consider the long-term consequences of using incentives on finances and on respondent expectations for similar or higher levels of payment at subsequent waves. Evidence to date has been quite promising and suggests that incentives may not have to be repeated in subsequent waves to maintain their positive effect. However, it is unclear to what extent this is also true for hard-to-persuade groups who may have only taken part for the incentive and would lack any other motivation if this was withdrawn at a subsequent wave.

The increasing use of web data collection in longitudinal surveys has renewed interest in a previously discouraged incentive type, the prize draw. There is some evidence to suggest that prize draws may have a positive effect on web response rates. However, the evidence is limited, and further research is needed to explore their long-term effect on the willingness to continue to participate in longitudinal studies relative to other incentive types.

The most recent and possibly most promising development around incentives in the UK is the use of differential incentives for recruiting and retaining hard-to-get populations in longitudinal surveys. Differential incentives are more economical than universal incentives, and they may potentially be more effective in reducing non-response bias when targeted at under-represented groups. Longitudinal surveys collect a wealth of information that can be used for targeting incentives. Whether targeting certain categories of hard-to-get populations will reduce nonresponse bias, needs to be explored further.

The use of differential incentives is still controversial in the UK, with widespread concern among research ethics committees, survey sponsors and survey practitioners that giving incentives to some and not others will violate expectations of equity. One of the main conclusions of the workshop on differential incentives is that these are not inherently good or bad. Whether the use of differential incentives is acceptable will depend on a number of factors such as the importance of including hard-to-persuade groups, the reasons why these groups are less likely to take part, and evidence that differential incentives will achieve the desired objective of reducing non-response bias and/or improving inclusiveness. The workshop concluded with some draft principles to help guide researchers in their decision on whether or not to use differential incentives in a survey. We recommend that these are developed further into a set of guidelines that could be shared with researchers and research ethics committees.

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Appendix A. A workshop on differential incentives

On the 7th of June 2019, a workshop was held at the St Luke's Community Centre (London) to discuss the use of differential incentives. The workshop was attended by 11 participants, including researchers from government, academia, the non-profit and private sectors.

Table 2. The agenda for the workshop

10:30 – 10:40	Welcome and introductions
10:40 – 11:00	Context and purpose
11:00 – 11:30	What are differential incentives?
11:30 – 12:30	The justification for using differential incentives
12:30 – 13:30	Lunch
13:30 – 14:30	The ethics of differential incentives
14:30 – 15:00	Other considerations when using differential incentives
15:00 – 15:15	Coffee/tea break
15:15 – 16:15	Guiding principles on the use of differential incentives
16:15 – 16:30	Closing

What are differential incentives?

- Participants are paid differently based on (a) characteristics that are either available on the sampling frame or collected during fieldwork, or (b) behaviour (e.g. reluctance to take part, previous non-response, early bird incentive).
- Reimbursement for expenses incurred when taking part in the survey (e.g. travel, childcare, online data) could also be seen as an incentive to encourage some groups to take part in surveys. However, these are not considered to be problematic or controversial from an ethics perspective and were therefore not discussed in detail.

The justification for using differential incentives

- To increase the overall response rate
- To improve representativeness/inclusiveness
- To reduce attrition
- To improve efficiency, value for money

- To not waste taxpayers' money
- To encourage positive behaviours (e.g. speed of response)
- To acknowledge the extra burden survey participation can have on some groups given their backgrounds and circumstances (e.g. economic, cultural)
- The workshop participants grouped the above points under (a) scientific (e.g. representativeness), (b) economic (e.g. budget) and (c) participant rights (e.g. inclusiveness).

The ethics of differential incentives

The discussion about the ethics of differential incentives was structured around the six key principles for ethical research mentioned in the ESRC Framework for Research Ethics (<https://esrc.ukri.org/funding/guidance-for-applicants/research-ethics/>).

1. Research should aim to maximise benefit for individuals and society and minimise risk and harm.
 - To maximise the benefit of the research to society, people have to sometimes be treated differently.
 - The risk to avoid is the consistent under-representation of specific groups in the population (e.g. the socially excluded, vulnerable groups).
 - Differential incentives should not be linked to high risk (proportionately).
2. The rights and dignity of individuals and groups should be respected.
 - Rights – distributive justice, positive and negative discrimination, equity versus equality, voices of the under-represented should be heard, choice to participate is not easy or possible for some (e.g. offliners cannot take advantage of incentive for online completion), the right to refuse.
 - Dignity – risk of stigmatisation (e.g. targeted incentives based on characteristics such as low income), value of the data versus value of the person.
3. Wherever possible, participation should be voluntary and appropriately informed.
 - Differential incentives (including refusal conversion incentives) do not, by definition, undermine voluntary consent.
 - However, it is important to consider whether the type and value of the incentive or the circumstances under which the incentive is provided could interfere with autonomy and fully informed consent.
 - For example, making an incentive conditional on gaining cooperation from others could be considered undue influence.
4. Research should be conducted with integrity and transparency.
 - Integrity of the data – there is no evidence to support the assumption that respondents who are motivated by the incentive to take part will provide poorer quality data.
 - Transparency – complete transparency about the use of differential incentives among survey respondents carries the risk of stigmatising those who are eligible for the incentive and could undermine their right to confidentiality.
5. Lines of responsibility and accountability should be clearly defined.
 - Customer accountability – a strong justification for using differential incentives is needed; based on evidence (e.g. trials)

- Process accountability – including the perspective of the participant (e.g. how do participants know that the prize draw and charitable donations have been honoured; how do we know that interviewers are implementing incentives consistently and correctly)
6. Independence of research should be maintained and where conflicts of interest cannot be avoided they should be made explicit.
- The survey customer and survey organisation should not profit from the incentive being used; e.g. a customer product, an incentive that promotes a specific market/product/business.

Other considerations

- How should we deal with the small risk that some respondents will find out that other respondents have received an incentive?
 - The concern is that we may lose respondents willingness to take part (e.g. subsequent waves of a longitudinal survey).
 - Another concern is that this could produce bad publicity for the survey, the survey customer, the survey organisation.
 - It is essential that there is a clear justification for using differential incentives that could be shared with members of the public, the press, etc if necessary.
 - It is easier to provide a clear justification for the use of differential incentives based on pre-defined characteristics than for discretionary incentives.
- There is a risk of overcomplicating the implementation of surveys when using differential incentives, particularly for longitudinal surveys.
 - There are over 100 different versions of the advance letter for Understanding Society to cater for different types of panel members and different incentives.
 - The risk of interviewer error is minimised through clear instructions and computerisation.
- There is a high level of risk aversion among survey sponsors and survey organisations to use non-standard incentives such as differential incentives and lotteries.
 - Handling perceptions is more important when introducing something more innovative. To even get the idea through the door, you have to change perceptions.
 - It's more about people's uneasy feelings than well thought through arguments.
- For longitudinal surveys, there are concerns related to changing differential incentives over time, particularly a reduction in the value of the incentive.
 - For example, giving a higher value incentive to a previous wave nonrespondent but not at subsequent waves.
- Should the value of the incentive be proportionate to the mode and interview length?
 - For example, if one wave is a short telephone interview and then the next wave is an hour-long face to face interview, should we offer 3 times as much in incentives for the face-to-face interview?
 - Or should we pass on some of the cost savings to the respondent when they choose to complete the questionnaire online rather than wait for a more expensive face-to-face interview?

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- Should we be offering a choice of incentive?
 - Very little experimental evidence about the impact of choice on participation.
 - Need to be aware of “choice overload”, i.e. a cognitive process in which people have a difficult time making a decision when faced with many options.

Draft principles to guide decisions on whether or not to use differential incentives:

1. The use of differential incentives in surveys is not inherently good or bad but depends on the context and how they are implemented.
2. Researchers must provide a clear justification for using differential incentives.
3. The justification should balance the interests of the survey sponsor, the organisation collecting the survey data, the participant and society.
4. The reasons for using differential incentives should be based on evidence that these are likely to reduce non-response bias and/or improve inclusiveness, while controlling costs.
5. The impact of differential incentives on participants’ rights, dignity and autonomy need to be considered.
6. The value of differential incentives should be proportionate to the perceived burden imposed on those who are eligible to receive the incentive and limited to what is necessary to achieve the desired effect.
7. Receipt of the differential incentive should be based on the characteristics and/or behaviour of the participant and not dependent on others (e.g. conditional on whole household cooperation).
8. The use of differential incentives should be transparent unless this will undermine participants’ rights (e.g. confidentiality) and dignity (e.g. stigmatisation).

