# Effects of a time-limited push-to-web incentive in a mixed-mode longitudinal study of young adults

CLS working paper number 2022/2

By Lisa Calderwood, Darina Peycheva and Erica Wong

CENTRE FOR LONGITUDINAL STUDIES

UKRI Economic and Social Research Council

**Contact the author**

Darina Peycheva

UCL Centre for Longitudinal Studies

d.peycheva@ucl.ac.uk

This working paper was first published in February 2022 by the UCL Centre for Longitudinal Studies.

UCL Social Research Institute

University College London

20 Bedford Way

London WC1H 0AL

www.cls.ucl.ac.uk

The UCL Centre for Longitudinal Studies (CLS) is an Economic and Social Research Council (ESRC) Resource Centre based at the UCL Social Research Institute, University College London. It manages four internationally-renowned cohort studies: the 1958 National Child Development Study, the 1970 British Cohort Study, Next Steps, and the Millennium Cohort Study. For more information, visit www.cls.ucl.ac.uk.

## Disclaimer

This working paper has not been subject to peer review.

CLS working papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

Any opinions expressed here are those of the author(s) and not those of the UCL Centre for Longitudinal Studies (CLS), the UCL Social Research Institute, University College London, or the Economic and Social Research Council.

## How to cite this paper

Calderwood, L., Peycheva, D., Wong, E. (2022) *Effects of a time-limited push-to-web incentive in a mixed-mode longitudinal study of young adults.* CLS Working Paper 2022/2. London: UCL Centre for Longitudinal Studies.

## Abstract

This paper describes the impact of a time-limited push-to-web incentive on response rate and sample composition in a mixed-mode longitudinal study of young adults in the UK. An early bird push-to-web incentive experiment was conducted in the eighth follow-up of the Next Steps cohort study, which follows the lives of a nationally representative sample of around 16,000 people in England born in 1989-90. During the study 'soft launch' which tested procedures for the main stage of fieldwork, a randomly allocated group of study members was offered a time-limited £20 incentive to complete the survey online within three weeks of receiving the study invite; the incentive dropped to £10 after the three-week period and was no longer conditional on mode of completion. The control group was offered a standard £10 incentive conditional on completing the survey irrespective of mode and time. The time-limited £20 incentive was subsequently offered to all study members in the main stage of fieldwork. Here we investigate the impact of the early bird web-push incentive on response rates - after three weeks and by the end of fieldwork - and assess whether it had a differential impact on subgroups hence affecting the sample composition. Our analysis shows that the early bird incentive significantly increased web response rates during the time-limited period. By the end of fieldwork, however, it achieved similar response rates as the group offered the standard £10 incentive. The web response rates for the group offered the time-limited incentive remained higher throughout fieldwork. We found no evidence for an impact of the time-limited incentive on the sample composition in terms of key demographic and survey behaviour characteristics. The time-limited incentive performed in a similar way during the main stage of fieldwork in which all study members were initially offered the £20 incentive.

*Key words: early-bird, time-limited, incentive, web-push, mixed-mode, longitudinal*

# 1. Introduction

Longitudinal studies are increasingly implementing 'web-push' sequential mixed mode designs (Couper and McGonagle 2019, Lynn 2020). In web-push designs, respondents are offered the opportunity to respond via web before being followed up with a different interview mode option (e.g. face-to-face).

Since web surveys and mixed-mode designs typically have lower response rates (Messer and Dillman 2011, Couper 2000), incentives have been used in web-push requests to boost participation (Singer and Ye 2013). For example, an experiment on the Innovation Panel of Understanding Society (the UK Household Longitudinal Study) found that offering higher incentive amounts to sample members allocated to web-then-face-to-face designs increased response rates compared to those found in face-to-face only designs (Jackle et al 2015, Gaia 2017).

More recently, incentives have been used in web-push designs to encourage web response within a short, defined time period, often at the beginning of the data collection. Referred to as 'early bird' or 'time-limited' incentives, hypothesised benefits include the potential to increase response rates (particularly if the fieldwork period is relatively short), and the potential for cost-savings reaped from decreased fieldwork effort and follow-ups in other modes. Thus, a primary aim of many of these designs is to maximise web response in the early stages of fieldwork. The limited available evidence of effects on response rates and cost-savings for web-push or web-only designs for longitudinal studies is somewhat inconsistent.

Some studies have found that early bird incentives increased response during the time-limited period but did not increase response rates overall (Coopersmith et al 2016, Ward et al 2014). In the US National Immunization Survey, a panel survey of mainly teens and young adults (N=48,045), respondents offered early bird incentives in addition to the prepaid incentive logged in more quickly than those not receiving any incentive, but completion rates of those who were offered the early bird incentive did not differ from those not offered the incentive or those only offered a prepaid incentive. The 'withdrawal' of the early bird incentive, then, did not negatively affect the response behaviour for those sample members who missed the opportunity to receive the higher value incentive (Ward et al 2014). And some experimental evidence suggests the amount of early bird incentive offered may not explain the lack of impact on overall response rates either. In a US panel survey of school principals, four different incentive conditions were tested for a web survey conducted in the second of four waves: $50 standard conditional incentive, an additional $50 early bird incentive, an additional $25 unconditional incentive, or an additional $25 refusal conversion incentive. Response rates did not differ between the four incentive conditions, that is, the receipt of $50, $75, or $100 (Coopersmith et al 2016).

Other studies have found that time-limited incentives successfully increased overall response rates (DeSantis et al 2016, LeClere et al 2012), particularly by increasing response rates among those sample members who were hard-to-reach or had low response propensities (Goble et al 2014, Fomby et al 2016). In the US Panel Study of Income Dynamics experiment, time-limited incentives increased the response rates of those who were calculated to have the highest propensity of nonresponse, effectively increasing their response rates to be similar to those who had initial low probabilities of nonresponse (Fomby et al 2016). Early bird incentives also effectively improved response rates in a longitudinal study of ethnic minorities in the US, but did not differentially affect response rates among different subgroups or by household characteristics (LeClere et al 2012). These results are not entirely surprising as incentives in general tend to have a stronger effect on sociodemographic groups with typically lower response propensities, such as young people, those of lower socioeconomic status and ethnic minorities (e.g., Knibbs et al 2018, Laurie

2007, Felderer at al 2017, McGonagle and Freedman 2016, McGonagle et al 2013, Laurie 2007, Mack et al 1998, Martin et al 2001, Ryu et al 2006). However, whether early bird incentives ameliorate nonresponse bias in the responding sample composition is yet unclear.

Findings on the cost-effectiveness of early bird incentives seem to vary by mode. Surveys using early bird incentives to encourage early booking of face-to-face interview appointments found the results and cost savings to be modest. For example, in the NLSY79, which first introduced the 'early bird' approach, incentives were offered to those who set up an appointment within four weeks. Response rates were slightly higher and took less interviewer time to complete, but the early bird incentive was only offered to the most cooperative respondents (Kochanek et al 2010). In 2011, an early bird incentive was used for the first time in a major UK longitudinal survey (the Innovation Panel of the UK Household Longitudinal Survey) to encourage early booking of interview appointments. Take up rates were low, so the overall impact was minimal (Brown and Calderwood 2014). However, in 2016 a £10 incentive for completing a web survey within the first two weeks of fieldwork was implemented from the second month of Wave 8 of the UK Household Longitudinal Survey. Response rates doubled in this second month as compared to the first month, with a cost savings of £1.14 for every £1 spent to implement the incentive (Carpenter and Burton 2018). Additional savings came from subsequent use of reminder letters and extension of the deadline for receiving the early bird incentive. Similarly, other studies using web surveys found substantial fieldwork savings in follow-up calls and data collection efforts in piloting and thus adopted the early bird approach for all sample members (Coopersmith et al 2016, DeSantis et al 2016, Goble et al 2014). Though direct comparison is difficult because studies differ in cost calculations or do not disclose calculations, these early initial findings suggest that the cost-effectiveness of early-bird incentives may be higher for web-push designs than for single-mode face-to-face designs.

Given the few studies assessing the impact of early bird incentives in web-push designs in longitudinal studies, questions remain about the impact on response rates, sample composition and cost effectiveness. This paper provides new evidence on the effect of a time-limited push-to-web incentive in a mixed-mode longitudinal study of young adults in the UK. An early bird push-to-web incentive experiment was conducted in the mixed-mode Age 25 survey (8$^{th}$ wave) of the Next Steps cohort study (formerly known as the Longitudinal Study of Young People in England (LSYPE)), which follows the lives of a nationally representative sample of around 16,000 people in England born in 1989-90. A randomly allocated group of study members was offered a time-limited £20 incentive if they completed the survey online within the first three weeks of fieldwork, and £10 if they completed the survey via any mode after the cut-off date. The control group was offered a standard £10 incentive conditional on completing the survey regardless of the mode and time of completion. Here we sought to answer the following questions: What is the impact of early bird web-push incentives on response rates, both initially - after three weeks of fieldwork - and at the end of fieldwork? And does an early bird incentive have a differential impact on subgroups, thus affecting the sample composition?

In the following sections, we provide an overview of Next Steps and the implementation of the incentive experiment in the Age 25 survey, outline the research questions and methods used to address them (Section 2), present the results (Section 3), and discuss the conclusions and implications of the findings (Section 4).

# 2. Data and Methods

## 2.1 About Next Steps and the Age 25 survey

The Next Steps study follows the lives of around 16,000 people in England born in 1989-90. It began in 2004 when the study members, sampled from state and independent schools, were age 14. They were surveyed annually until 2010 (wave 7) and then in 2015-16 at age 25 (wave 8)[1].

Next Steps has collected information about study members' education and employment, economic circumstances, family life, physical and emotional health and wellbeing, social participation, and attitudes. Initially conducted face-to-face, from wave five onwards the study employed a sequential mixed mode approach, including web, followed by telephone, and then face-to-face interviews.

In waves 1-7, only those who participated in the previous wave were included in the subsequently issued sample, resulting in a reduction in the overall sample of over 50% by the end of wave 7. Extensive efforts to maximise the size and representativeness of the cohort were then made at the Age 25 survey (wave 8), attempting to trace and contact everyone who had ever taken part in the study (Centre for Longitudinal Studies, University College London 2017a). A total of 15,531 study members were issued to field, achieving a response rate of 51% with 7,707 completed interviews (4,797 via web, 690 via telephone, and 2,220 face-to-face).

This analysis is based on 15,191 cases, recruited in wave 1, and issued to fieldwork at the Age 25 survey (wave 8) in 2015-16[2].

## 2.2 Incentives at the Age 25 Survey

As the Next Steps study members have received incentives for their participation throughout the study, offering an incentive was considered an important tool to encourage participation in the Age 25 survey. The provision of incentive this time was particularly important considering the long gap since the previous wave, furthermore that some study members last participated between 5 and 10 years ago.

Aimed at maximising response over the web and minimising survey costs, as smaller number of cases would be issued to the more expensive telephone and face-to-face survey modes, an incentive strategy including a higher incentive for participation over the web in a short time interval at the start of fieldwork was designed. A randomised experiment was incorporated to evaluate the effectiveness of this push-to-web early bird incentive.

The study sample was split into four balanced batches, the first of which – a 'soft launch' - aimed at testing procedures and response rates, and therefore to inform decisions for the main stage of data collection (batches 2-4) (Centre for Longitudinal Studies, University College London 2017a). During the soft launch, the push-to-web incentive was tested

---

[1] Before its transfer to the Centre for Longitudinal Studies, University College London, in 2013, the study was funded and managed by the Department for Education. The Age 25 survey (wave 8) was funded by the Economic and Social Research Council (Centre for Longitudinal Studies, University College London 2017a).

[2] Most of the Next Steps data is publicly available via the UK Data Service (Centre for Longitudinal Studies, University College London 2021). The incentive experiment data, used in this study, has not been released for research use, but it can be provided upon request and with permission by the CLS Data Access Committee (CLS DAC) (https://cls.ucl.ac.uk/data-access-training/data-access/accessing-data-directly-from-cls/).

experimentally. A time-limited £20 incentive was offered to a random half of the sample (treatment group) upon completion of the 45-minute survey online, within a 3-week period of receiving the study invite. The amount of this incentive decreased to £10 if the survey was completed after this 3-week period, irrespective of mode. The other half of the sample (control group) was offered a standard £10 incentive, only conditional on participation by the end of the fieldwork period, regardless of mode. If response was not achieved online in the first 3 weeks of fieldwork, interviewers began telephone contact attempts. Incentives were Amazon or Love2shop gift vouchers, with respondents able to choose which they preferred.

For the main stage of fieldwork (batches 2-4), the early-bird web push incentive was offered to all cases.

## 2.3 Implementation of the Incentive

At the start of each fieldwork batch study members received a letter via the post (and via email - if available) inviting them to take part in the survey and describing the incentive and the requirements to receive it. The letter was timed to arrive with the study member on Day 1 of fieldwork (see fieldwork timetable in table A2 in Appendix). The treatment group, offered the early bird £20 incentive, was informed that to receive their higher voucher, they needed to complete the online survey within three weeks, and after that they will only be given a £10 voucher. The framing of this aimed at minimising the risk of 'negative spillover' effects from the withdrawal of the higher value incentive. Specifically, study members were told the higher incentive was offered "because it's cheaper for us if you do the survey online" (University College London 2017b, pp.41). The control group was informed that they will receive a £10 voucher upon completion of the survey. Otherwise, the letters were identical between groups. They encouraged completion of the survey online for both groups - 'as it's quicker and easier for you and cheaper for us' (University College London 2017b, pp.41) - and informed study members that they will be contacted by telephone or in person, if they do not take part on the web.

The web fieldwork period was three weeks in total following the survey invite. After this point, study members who had not yet completed the survey were approached by telephone[3], and if still unproductive - in person. The web survey, however, remained open throughout the rest of the fieldwork period for telephone and face-to-face[4] modes. The overall length of fieldwork was 51 weeks.

Over the three weeks following the advance mailing, study members were sent two postal (days 7 and 11), three email (days 4, 11 and 18) and two text reminders[5] (days 11 and 19), if they had not started the web survey. The text of the reminders was very similar between the groups, with the difference being the amount of the incentive. The reminders emphasised the time left to complete the survey online before it closed as well as that study members will be contacted by telephone or in person if they do not take part on the web (University College London 2017b). Break-off reminder emails and texts were sent (24 and 48 hours after the point of break-off) to study members, who had started or partially completed the web questionnaire.

---

[3] From Batch 2 onwards only study members who took part in the previous wave (wave 7) were approached by telephone.

[4] There were three sub-phases within the face-to-face phase fieldwork – '1st issue', 'mop-up' and 'reissue'. '1st issue' refers to the initial issue of a case to interviewers within the first fieldwork period for that batch. The 'mop-up' phase followed this first period and aimed at completing existing appointments and tracing activities. The 'reissue' phase involved re-approaching unproductive cases (University College London 2017a).

[5] The second text reminder was included from Batch 2 onwards (if a valid mobile telephone number was available).

Survey respondents were provided with their vouchers alongside a thank you letter (or email) sent on a weekly basis. To receive the offered incentive, participants were required to complete all of the questionnaire. An exception was made with the final data linkage module and completions up this module were eligible to receive the incentive[6].

## 2.4 Research questions and statistical analysis

We assess the effectiveness of the time-limited £20 incentive, compared to the standard £10 incentive, addressing the following questions:

1) Did it result in an increased web response rate in the first 3 weeks, at the end of the telephone phase and at the end of fieldwork?
2) What was its effect on the overall response rate at the end of the telephone phase and at the end of fieldwork?
3) Did it affect the sample composition at any of the stages of fieldwork – in the first 3 weeks, at end of the telephone and face-to-face phases.

We expected that the early bird push-to-web incentive would increase response in the treatment group (offered the time-limited £20 incentive), compared to the control group (offered the standard £10 incentive), during the time-limited 3-week period. We also envisaged that the final web response rate for the treatment group will not differ notably from that achieved within the 3-week period, though the online survey remained open during the telephone and face-to-face phases.

About the overall performance of the time-limited incentive by the end of the telephone phase and at the end of fieldwork, we presumed that withdrawing the incentive in the treatment group after the 3-week period may have a negative 'spillover' effect resulting in a lower response rate to the telephone and face-to-face follow-up in this group, which may offset the increase in the web response rate achieved by the early bird incentive.

Regarding the potential impact of the time-limited £20 incentive on the sample composition, we envisaged that the higher incentive offered for web completion may attract study members who would not otherwise take part and thereby reduce sample bias in the treatment group.

To address the first two research questions, we report percentages of respondents in the treatment and control groups, overall and via the web, at each stage of fieldwork (3-week, end of telephone, end of face-to-face). We used Chi-squared tests to assess whether the observed rates of response differed between groups. Further, we fit logistic regression models, adjusted for the clustering induced by the survey design (using SVY commands in Stata) and key demographic (sex and ethnicity) and survey behaviour (wave and mode of last participation) characteristics, to examine the effect of the time-limited incentive within 3 weeks and by the end of telephone and face-to-face fieldwork, reporting odds ratios (OR) and 95% confidence intervals (CI). Kaplan-Meier curves were used to illustrate the effect of the time-limited incentive throughout the fieldwork period, compared to the standard incentive.

To address the third research question, we show percentage of respondents, alongside 95% CIs, by key demographic (sex and ethnicity) and survey behaviour (wave and mode of last participation) characteristics. We used Chi-squared test to evaluate the difference in the

[6] Completions of the survey up to the final Data linkage component were considered partial interviews and were eligible for the provision of the offered incentive.

rates between the treatment and control groups in the soft launch and subsequently in the main stage of fieldwork.

As the evaluation of the experiment undertaken in the study's soft launch (batch 1) informed the decision for the incentive offered in the subsequent mainstage of fieldwork (batches 2 to 4), we first describe the results from the incentive experiment during the soft launch. We present response rates and odds ratios for the completion of the interview in the treatment group (offered the time-limited £20 incentive) compared to the control group (offered the standard £10 incentive) at each stage of fieldwork (within 3 weeks, at the end of the telephone follow-up, and overall - at the end of the face-to-face fieldwork).

We then look at the performance of the incentive in the main stage of fieldwork, where the time-limited £20 incentive was offered to everyone issued to fieldwork. We assess whether response followed a similar pattern as it did in the soft launch comparing its effectiveness against the control group in the soft launch. Acknowledging some limitations in this comparison (e.g. differences in the duration of follow-up phases or changes in the fieldwork procedures[7]), we expected that the incentive offered in the main stage of fieldwork will impact response in the way it did during the experimental soft launch period.

Finally, we examine the sample composition in terms of key demographic and survey behaviour characteristics – in particular, we compare the rates for the soft launch and the main stage sample with the soft launch control group.

# 3. Results

## 3.1 Effectiveness of the time-limited £20 incentive within 3 weeks and by the end of fieldwork (soft launch, batch 1)

The results from the randomised experiment showed that at the end of the 3-week period, 28% of the study members in the treatment group had completed their interviews online, compared to 22% in the control group (table 1). The adjusted odds ratio for completing the interview online during this 3-week period was 58% higher in the treatment group compared to the control group (OR=1.58, CI [1.26 - 1.99]), suggesting a positive effect of the early-bird push-to-web incentive on increasing the web response rate at the beginning of fieldwork (table 2).

[7] Follow-up periods were shorter for each subsequent batch of fieldwork – e.g., the batch 1 had an overall duration of 51 weeks, while fieldwork in batch 4 was 33 weeks (see table A2 in Appendix). Small changes in the fieldwork procedures were introduced in the main stage of fieldwork. After the soft launch, only productive at the previous wave (wave 7) cases were issued to telephone fieldwork, as those who last participated in wave 7 were considerably more likely to participate. Also, a second text reminder was included from Batch 2 onwards - if a valid mobile telephone number was available (Centre for Longitudinal Studies, University College London 2017a).

**Table 1: Response rates by fieldwork period and incentive group (n, %)**

| Fieldwork batch | Incentive offered | Within 3 weeks | End of Telephone phase | End of Face-to-face phase |
|---|---|---|---|---|
| Batch 1 (soft launch), control group | £10 incentive (n=1,091) | 233 (22%) | 310 (29%)<br>241 (22%) via web | 566 (53%)<br>278 (26%) via web |
| Batch 1 (soft launch), treatment group | £20 time-limited incentive (n=1,082) | 280 (28%) | 338 (33%)<br>283 (28%) via web | 551 (53%)<br>308 (30%) via web |
| Batch 2 to 4 (main stage) | £20 time-limited incentive (n=13,018) | 3,541 (29%) | 4,199 (34%)<br>3,669 (30%) via web | 6,452 (51%)<br>3,961 (32%) via web |

Even though the difference between the groups was reduced from 6% (28% vs. 22%) to 4% (33% vs. 29%) (table 1), the response rate at the end of the telephone phase was still higher in the treatment group after the £20 incentive was withdrawn compared to the control group for which there was no change in the offered incentive. The adjusted odds ratio for completing the survey after the withdrawal of the £20 incentive and by the end of the telephone phase was still 32% higher in the treatment group compared to the control group (OR=1.32, CI [1.05 - 1.66]). I.e., at the end of the telephone phase there was an indication of a negative effect of withdrawing the higher value incentive in the treatment group as illustrated by the lower response rate to the telephone phase; however, the difference between the groups was not fully offset. The treatment group also had a higher rate of interviews completed online by the end of the telephone phase (28% compared to 22%) than in the control group, though for both groups, very few additional web interviews were completed during the telephone phase.

In terms of effectiveness of the time-limited incentive by the end of fieldwork (after the face-to-face phase), the results from the experiment showed that there was no longer a difference in the overall response rate between the two groups. By the end of the fieldwork period, 53% in the treatment group, offered the £20 push-to-web incentive, had completed their interviews. The control group offered the standard £10 incentive throughout had the same final response rate - 53%. By the end of the fieldwork, there was no difference in the adjusted odds for the survey completion in treatment group compared to the control group (OR=1.04, CI [0.85 - 1.20]). This indicates that overall, the group in which the higher-value incentive was withdrawn after the web phase was as likely as the control group, in which the incentive remained unchanged during the entire period of fieldwork, to take part in the survey. However, a difference was still observed in the overall web response rate between the groups at the end of fieldwork – 30% in the treatment compared to 26% in the control group.

In other words, the early bird push-to-web incentive was associated with increased web response rates during the time-limited 3-week period, as well as higher response rate for some time after the withdrawal of the higher-value incentive (i.e. by the end of the telephone phase), but its effect was then attenuated and overall it was no different from the effect of the £10 incentive. The pattern of response in the treatment and control groups throughout the soft launch (and main stage) is illustrated in Figure A1 in the Appendix.

**Table 2: Crude and adjusted odds ratios (ORs) and 95% confidence intervals (CIs) for the association between incentive group and survey response**

| Fieldwork batch | Completed within 3-weeks | | Completed by end of Telephone phase | | Completed by end of Face-to-face phase | |
|---|---|---|---|---|---|---|
| | Crude | Adjusted | Crude | Adjusted | Crude | Adjusted |
| **Soft launch (Batch 1)** | | | | | | |
| Incentive group: **£20 time-limited incentive** (reference: £10 incentive) | 1.41** (1.14 - 1.73) | 1.58*** (1.26-1.99) | 1.20+ (0.98 - 1.47) | 1.32** (1.05-1.66) | 1.01 (0.85 - 1.20) | 1.04 (0.86-1.25) |
| Sex **Female** (reference: male) | | 1.50** (1.19-1.90) | | 1.34** (1.08-1.66) | | 1.30** (1.08-1.57) |
| Ethnicity **White** (reference: non-white) | | 1.54** (1.13-2.10) | | 1.43** (1.05-1.94) | | 1.22* (0.98-1.51) |
| Mode of last participation **Telephone** | | 0.28*** (0.20-0.38) | | 0.35*** (0.26-0.45) 0.08*** (0.06-0.11) | | 0.51*** (0.38-0.68) |

| Fieldwork batch | Completed within 3-weeks | | Completed by end of Telephone phase | | Completed by end of Face-to-face phase | |
|---|---|---|---|---|---|---|
| **Face-to-face** (reference: web) | | 0.10*** (0.07-0.14) | | | | 0.19*** (0.14-0.25) |
| **Batch 2-4** | | | | | | |
| Incentive group: **£20 time-limited incentive** (reference: £10 incentive) | 1.48*** (1.26-1.73) | 1.62*** (1.37-1.91) | 1.25** (1.07 - 1.46) | 1.35*** (1.14-1.60) | 0.94 (0.80 - 1.10) [a] | 0.94 (0.80-1.12) [a] |
| Sex | | | | | | |
| **Female** (reference: male) | | 1.77*** (1.62-1.94) | | 1.59*** (1.46-1.74) | | 1.60*** (1.47-1.75) |
| Ethnicity | | | | | | |
| **White** (reference: non-white) | | 1.26*** (1.13-1.40) | | 1.18** (1.06-1.30) | | 1.12** (1.01-1.24) |
| Mode of last participation | | | | | | |
| **Telephone** | | 0.31*** (0.28-0.34) | | 0.36*** (0.33-0.40) | | 0.49*** (0.43-0.55) |
| **Face-to-face** | | 0.12*** (0.11-0.13) | | 0.09*** | | 0.17*** (0.15-0.19) |

| Fieldwork batch | Completed within 3-weeks | Completed by end of Telephone phase | Completed by end of Face-to-face phase |
|---|---|---|---|
| (reference: web) | | (0.08-0.10) | |

Note: An asterisk indicates: $^{+}$p<0.1, *p<0.05, **p<0.01, ***p<0.001
Odds ratios accounted for sample design using the svy command in Stata.
N=15,191
[a]OR adjusted for 33-weeks of follow-up (i.e. the length of fieldwork period in batch 4 - the shortest fieldwork period across all batches).

## 3.2 Performance of the time-limited £20 incentive during the main stage of fieldwork (batch 2-4)

As in the soft launch treatment group, in the subsequent batches of fieldwork, where all study members were offered the time-limited £20 incentive, we observed higher rates of completion within the first three weeks compared to the control group in the soft launch. By the end of the 3-week period, 29% of the study members had completed their interviews online (compared to 22% in the control group, table 1). The adjusted odds ratio for completing the interview online within 3-weeks from the start of the survey was 62% higher for the main stage respondents compared to the control group in the soft launch (OR=1.62, CI [1.37 – 1.91]).

The overall response rate after the £20 incentive was withdrawn, but by the end of the telephone phase, remained higher compared to the control group – 34% (compared to 29%). The adjusted odds ratio for completion compared to the control group was 35% higher (OR=1.35, CI [1.14 – 1.60]). There was also a difference in the web response rate between the main stage and soft launch control group - 30% in main stage compared to 22% in the control group.

In terms of the final response rate, however, there was no evidence for a difference (OR=0.94[8], CI [0.80 – 1.12). By the end of the fieldwork, 51% of study members issued to fieldwork during the mainstage and offered the time-limited £20 incentive, had completed their interviews, compared to 53% in the soft launch control group offered a standard £10 incentive throughout. The web response rate in the main stage remained higher than the soft launch control group – 32% compared to 26%.

## 3.3 Characteristics of the sample throughout the Age 25 Survey (soft launch and main stage of fieldwork)

Table A1 in the Appendix shows the distribution of the Next Steps sample by key demographic (sex and ethnicity) and survey behaviour (wave and mode of last participation) characteristics, by incentive group (time-limited £20 and standard £10 incentive, in the soft launch and main stage of fieldwork), prior to the start of the Age 25 survey (allocation stage). As it would be expected, following the random allocation, the groups in the soft launch were of approximately equal size and balanced with respect to the presented characteristics and the characteristics of the overall sample. The distribution of these characteristics in the main stage sample was also similar to the overall sample and the soft launch experimental groups. Although minor differences are notable, the sizes of these differences are small and not statistically significant.

The early bird incentive did not result in statistically significant differences in the sample composition at neither the first 3 weeks nor at a subsequent fieldwork stage (end of telephone or end of face-to-face phases). Table A2 in the Appendix shows the distribution of the sample characteristics by the end of each survey phase (web, telephone, face-to-face).

In both the soft launch and the main stage, the £20 incentive appeared to have attracted slightly more women within the first 3 weeks of fieldwork. While in the soft launch this difference was attenuated by the end of fieldwork, it remained noticeable in the main stage of fieldwork.

[8] This model accounts for follow-up time restricted to the fieldwork period in batch 4 (i.e. the shortest fieldwork period across all batches – 33 weeks).

In both the soft launch and the main stage, the higher incentive appeared to have attracted slightly more study members with a larger gap in participation (i.e., who last participated in earlier waves of the study) within the first 3 weeks of fieldwork. Similar pattern was observed in terms of mode of last participation - somewhat more study members who last took part face-to-face this time responded online. Even though attenuated, this difference remained noticeable by the end of the telephone phase, but less so by the end of face-to-face fieldwork. None of the observed differences, however, were statistically significant.

## 4. Discussion

This paper adds to the existing research on the effect of early bird push-to-web incentives in a longitudinal mixed mode setting. Using an experimental approach, during the study 'soft launch', which aimed at testing procedures for the main stage of fieldwork, we randomly allocated half of the sample to receive an incentive conditional on both time and mode. Participants received £20 if the survey was completed via web within three weeks of receiving the survey invite; the incentive dropped to £10 after the three-week window. The other half was offered a standard £10 conditional incentive, irrespective of time and mode, as long as they completed the survey by the end of the fieldwork period. The early bird incentive was subsequently offered to all study members in the main stage of data collection.

In line with previous research, our experimental findings on the effectiveness of the early bird incentive showed that it increased significantly web response rates during the time-limited period. By the end of fieldwork, however, it achieved similar response rates as the group offered the standard £10 incentive. The time-limited incentive was no more effective than the standard incentive on overall response rates. The web response rates for the group offered the time-limited incentive remained higher throughout fieldwork.

The time-limited incentive performed in a similar way (i.e. increased response within first 3 weeks but reached similar overall response to the control group in the soft launch) during the main stage of fieldwork in which all study members were initially offered the £20 incentive.

One of the reasons for testing this approach in the soft launch was a concern that those who had been offered the early bird incentive would be discouraged from responding once the window had passed, thus decreasing response among those who had missed the opportunity for a higher amount. Our findings suggest that the withdrawal of the early bird incentive slowed but did not completely discourage response in the telephone and face-to-face phases for those who missed the chance to receive it at its higher value. However, as the experiment did not include a treatment in which the higher value incentive was retained throughout the fieldwork period, we do not observe the counterfactual response rate, but it is reasonable to expect that this may have increased response rate in telephone and face-to-face as well.

Although the early bird incentive did not lead to an increase in the final response rate, the response rate boost at the web phase was significant. This meant that in the treatment group a higher proportion of interviews were achieved via the "cheaper" web mode, and fewer cases were issued to the more expensive telephone and face-to-face modes. Although similar overall response rates were achieved in the different groups, the fieldwork was considered more cost effective in the treatment group due to the higher web response rate. This was an important factor in the decision to roll-out the early bird incentive for the main stage fieldwork (Calderwood 2016).

Finally, we found no evidence for an impact of the time-limited incentive on the sample composition. Observed differences in the sample composition throughout the survey stages

in both the soft launch and main stage were small and insignificant, further became less noticeable by the end of the fieldwork.

In conclusion, our findings are consistent with previous research demonstrating a positive effect of an early bird incentive within a time-limited period, but similar effects on overall response rates to that of a standard (lower value) incentive (e.g., Coopersmith et al 2016, Ward et al 2014). It is possible that the difference in incentive amounts between the time-limited incentive and standard incentive may contribute to lower response rates after the time-limited period, as evidenced in a recent push-to-web incentive experiment: response rates for those assigned to receive £10 more for early response (£15 v. £5) were lower than both those who were assigned to receive £5 more for early response (£15 v. £10) and those who received the standard £10 incentive (Smith et al 2021). Though previous research has suggested that incentives are especially effective on converting refusals (e.g., Fomby et al 2016, Creighton et al 2011), we did not find sufficient evidence that the time-limited incentive differentially attracted those study members with lower response propensities, such as those who had not participated in the most recent waves. Additional research is thus needed on the motivational factors on response from such sample sub-groups and the impact of incentives.

## References


Brown, M. & Calderwood, L. (2014). Can Encouraging Respondents to Contact Interviewers to Make Appointments Reduce Fieldwork Effort? Evidence from a Randomized Experiment in the UK. *Journal of Survey Statistics and Methodology,* 2, 483-497.

Calderwood, L. (2016). Effects of Mode on Response Rates. Paper presented at the CLOSER Workshop: Mixing Modes and Measurement Methods in Longitudinal Studies, London.

Carpenter, H., & Burton, J. (2018). Adaptive push-to-web: Experiments in a household panel study. *Understanding Society Working Paper* 2018-05, Colchester: University of Essex.

Castiglioni, L., Pforr, K., & Krieger, U. (2008). The Effect of Incentives on Response Rates and Panel Attrition: Results of a Controlled Experiment. *Survey Research Methods,* 2(3), 151-158.

Centre for Longitudinal Studies, University College London (2017a). Next Steps Age 25 Survey: Technical Report (ukdataservice.ac.uk) (accessed 01 June 2019)

Centre for Longitudinal Studies, University College London (2017b). Next Steps. Age 25 Survey: Appendix A (ukdataservice.ac.uk) (accessed 01 June 2019)

University College London, UCL Institute of Education, Centre for Longitudinal Studies. (2021). Next Steps: Sweeps 1-8, 2004-2016. [data collection]. 16th Edition. UK Data Service. SN: 5545, DOI: 10.5255/UKDA-SN-5545-8 (accessed 01 June 2019)

Collins, R.L., Ellickson, P.L., Hays, R.D., & McCaffrey, D.F. (2000). Effects of Incentive Size and Timing on Response Rates to a Follow-up Wave of a Longitudinal Mailed Survey. *Evaluation Review,* 24(4), 347-363.

Coopersmith, J., Vogel, L.K., Bruursema, T., & Feeney, K. (2016). Effects of Incentive Amount and Type of Web Survey Response Rates. *Survey Practice,* 9(1).

Couper, M. P. (2000). Web surveys: A review of issues and approaches. *Public Opinion Quarterly*, 64, 464-494.

Couper, M.P.and McGonagle, K.A. (2019). Recent Developments in Web-Based Data Collection for Longitudinal Studies. *Panel Study of Income Dynamics Technical Series Paper* #19-03, Ann Arbor: Institute of Social Research, University of Michigan.

Creighton, K.P., King, Karen E., & Martin, Elizabeth A. (2007). The Use of Monetary Incentives in Census Bureau Longitudinal Surveys. *Research Report Series (Survey Methodology #2007-2).*

DeSantis, J., Callahan, R., Marsh, S., & Perez-Johnson, I. (2016). Early bird Incentives: Results from an Experiment to Determine Response Rate and Cost Effects. Paper presented at the 71st annual conference of the American Association for Public Opinion Research; Austin, TX.

Dillman, Don A. 2017. The promise and challenge of pushing respondents to the Web in mixed-mode surveys. *Survey Methodology,* 43 (1): 3-30.

Felderer, B., Muller, G., Kreuter, F., & Winter, J. (2017). The effect of differential incentive on attrition bias: Evidence from the PASS Wave 3 incentive experiment. *Field Methods*, 30 (1), 56-59

Fomby, P., Sastry, N., & McGonagle, K.A. (2016). Effectiveness of a time-limited incentive on participation by hard-to-reach respondents in a panel survey. *Field Methods*, 29(3), 238-251.

Fumagalli, L., Laurie, H., & Lynn, P. (2010). Experiments with Methods to Reduce Attrition in Longitudinal Surveys. In *Institute for Social and Economic Research Working Paper 2010-04, University of Essex.*

Gaia, A. (2017). The effect of respondent incentives on panel attrition in a sequential mixed-mode design. *Understanding Society Working Paper 2017-03*, Colchester: University of Essex.

Goble, L., Stein, J., & Schwartz, L. K. (2014). Approaches to Increase Survey Participation and Data Quality in an At-risk, Youth Population. Presentation at the FedCASIC Conference, Washington DC. 19 March 2014.

Jackle, A., Lynn, P., & Burton, J. (2015). Going Online with a Face-to-Face Household Panel: Effects of a Mixed Mode Design on Time and Unit Non-Response. *Survey Research Methods,* 9(1), 57-70.

Kochanek, K., Krishnamurty, P., & Michael, R. (2010). The 'Early Bird' Field Innovation on a 30-year-old Longitudinal Survey. Presentation at the 2nd International Panel Survey Methods Workshop, July, Mannheim, Germany.

Knibbs, S., Lindley, L., Swordy, D., Stevens, J., & Clemens, S. (2018). Omnibus survey of pupils and their parents/carers (Department for Education): Research report wave 4. Ipsos MORI.

Laurie, H. (2007). The effect of increasing financial incentives in a panel survey: An experiment on the British Household Panel Survey. In *Institute for Social and Economic Research Working Paper 2007-05,* Colchester: University of Essex.

Laurie, H. & Lynn, P. (2009). The Use of Respondent Incentives on Longitudinal Surveys. In Lynn, P. (ed). *Methodology of Longitudinal Surveys*, Chichester: Wiley.

LeClere, F., Plummer, S., Vanicek, J., Amaya, A., & Carris, K. (2012). Household Early Bird Incentives: Leveraging Family Influence to Improve Household Response Rates. Presented at the Join Statistical Meetings, San Diego, CA 2012.

Lynn, P. (2020). Evaluating push-to-web methodology for mixed-mode surveys using address-based samples. Survey Research Methods, 14(1), pp. 19-30.

Mack, S., Huggins, V., Keathley, D., & Sundukchi, M. (1998). Do Monetary Incentives Improve Response Rates in the Survey of Income and Program Participation? In *The American Statistical Association, Survey Research Methods Section,* 529-34. Washington, DC: American Statistical Association.

Martin, E., Abreu, D., & Winters, F. (2001). Money and Motive: Effects of Incentives on Panel Attrition in the Survey of Income and Program Participation, *Journal of Official Statistics*, 17 (2), 267-284.

McGonagle, K, Couper, M., & Schoeni, R. (2009). An experimental text of a strategy to maintain contact with families between waves of a panel study. *Survey Practice*, June 2009.

McGonagle K.A., & Freedman V.A. (2016). The effect of a delayed Incentive on response rates, response mode, data quality and sample bias in a national representative mixed mode study*. Field Methods*, 29(3), 221-237.

McGonagle, K., Schoeni, R., & Couper, M. (2013) The effects of a between-wave incentive experiment on contact update and production outcomes in a panel study. *Journal of Official Statistics*, 29(2), 261-276.

Messer, B.L., & Dillman, D.A. (2011). Surveying the General Public over the Internet Using Address-Based Sampling and Mail Contact Procedures, *Public Opinion Quarterly*, 75 (3), 429–457, https://doi.org/10.1093/poq/nfr021

Ryu, E., Couper, M.P., & Marans, R.W. (2006). Survey Incentives: Cash vs. In-kind; Face-to-Face vs. Mail; Response Rate vs. Nonresponse Error*. International Journal of Public Opinion Research,* 18(1), 89-106.

Singer, E., Hoewyk, J. V., Gebler, N., Raghunathan, T. & McGonagle, K. (1999). The effects of incentives on response rates in interviewer-mediated surveys. *Journal of Official Statistics*, 15(2), 217-230. DOI: 10.4135/9781446262269

Singer, E., & Ye, C. (2013). The Use and Effects of Incentives in Surveys. *The ANNALS of the American Academy of Political and Social Science*, 645(1), 112–141. https://doi.org/10.1177/0002716212458082

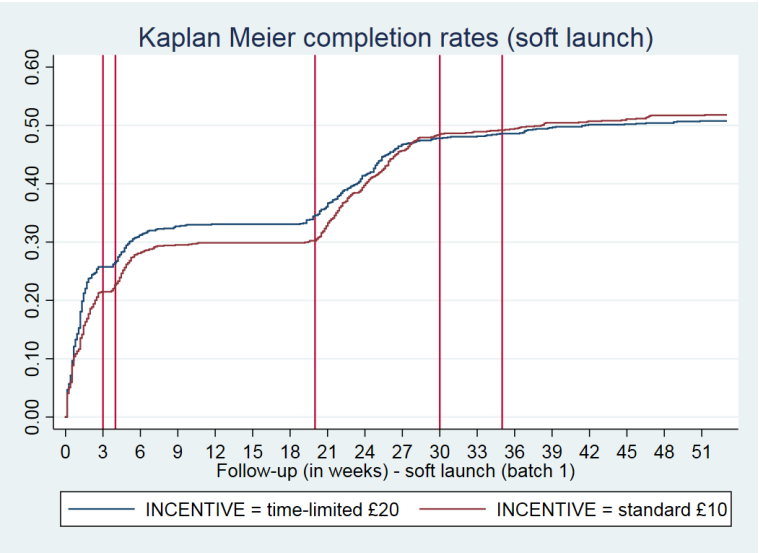
Smith, P., King, L., Candy, D., Bridge, R., and Armstrong, B. (2021). Incentivising early responses in a push-to-web survey: an experiment. *Social Research Practice,* 11 (Summer 2021), 4-12. https://the-

sra.org.uk/common/Uploaded%20files/Social%20Research%20Practice%20Journal/social-research-practice-journal-issue-11-summer-2021.pdf (accessed on 1 December 2021)

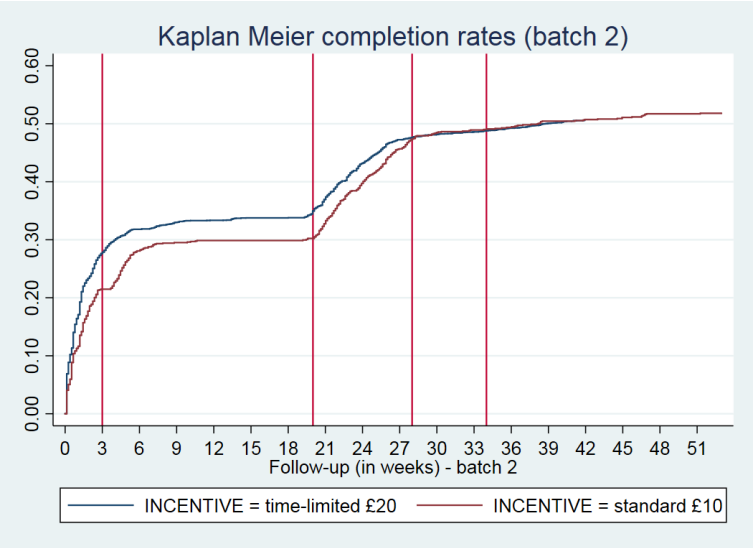
Ward, C., Stern, M., Vanicek, J., Black, C., Knighton, C., & Wilkinson, L. (2014). Evaluating the Effectiveness of Early Bird Incentives in a Web Survey. Presentation at the FedCASIC Conference, Washington, D.C. 19 March 2014. (accessed on 1 June 2019)

# Appendix

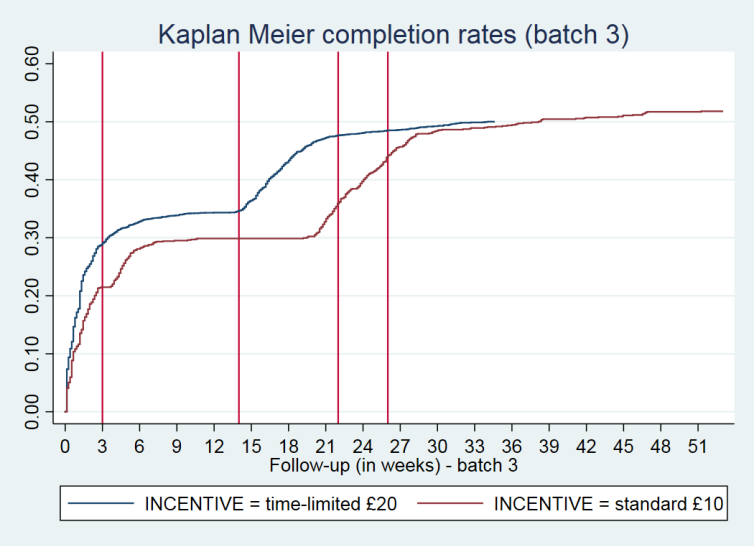
## Figure A1: Kaplan Meier completion rates in soft launch (batch 1) and main stage (batches 2 to 4)




*Note:* The first vertical line indicates the end of the 3-week period (when the £20 incentive was withdrawn), the second and third vertical lines indicate the start of the telephone and face-to-face phases, and the fourth and fifth lines – the start of mop-up and re-issue phases within the face-to-face phase.




*Note:* The first vertical line indicates the end of the 3-week period (when the £20 incentive was withdrawn) and start of the telephone phase, the second vertical line indicates the start of the face-to-face phase, and the third and fourth lines – the start of mop-up and re-issue phases within the face-to-face phase. The standard incentive (horizontal red) line in each of the batch 2 to 4 plots relates to the soft launch.


Kaplan Meier completion rates (batch 3)
0.00
0.10
0.20
0.30
0.40
0.50
0.60
0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51
Follow-up (in weeks) - batch 3
INCENTIVE = time-limited £20
INCENTIVE = standard £10

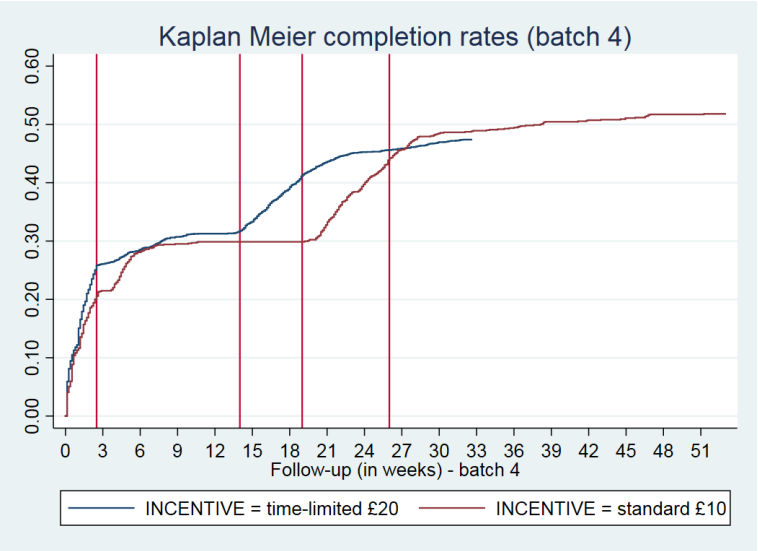

Kaplan Meier completion rates (batch 4)
0.00
0.10
0.20
0.30
0.40
0.50
0.60
0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51
Follow-up (in weeks) - batch 4
INCENTIVE = time-limited £20
INCENTIVE = standard £10

**Table A1: Demographic and survey behaviour characteristics of the Next Steps sample and respondents in the age 25 survey (%, 95%CI)**

| | | Allocation stage | | | Productive within 3 weeks | | | Productive by end of telephone | | | Productive by end of fieldwork | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Batch 1 | | Batch 2-4 | Batch 1 | | Batch 2-4 | Batch 1 | | Batch 2-4 | Batch 1 | | Batch 2-4 |
| | Total eligible (n=15,191) | £10 incentive (n=1,091) | Time-limited £20 incentive (n=1,082) | Time-limited £20 incentive (n=13,018) | £10 incentive (n=233) | Time-limited £20 incentive (n=280) | Time-limited £20 incentive (n=3,541) | £10 incentive (n=310) | Time-limited £20 incentive (n=338) | Time-limited £20 incentive (n=4,199) | £10 incentive (n=566) | Time-limited £20 incentive (n=551) | Time-limited £20 incentive (n=6,452) |
| **Sex** | (n=15,027) | (n=1,078) | (n=1,078) | (n=12,873) | | | | | | | | | |
| Male | 51.3 | 51.8 | 53.4 | 51.0 | 43.3 | 41.0 | 38.6 | 44.0 | 46.7 | 41.4 | 48.2 | 48.8 | 44.5 |
| | (49.9 - 52.6) | (48.1 - 55.6) | (49.5 - 57.3) | (49.7 - 52.4) | (36.6 - 50.3) | (34.4 - 48.0) | (36.6 - 40.7) | (37.9 - 50.2) | (40.1 - 53.4) | (39.5 - 43.4) | (43.8 - 53.8) | (43.8 - 53.8) | (42.7 - 46.2) |
| Female | 48.7 | 48.2 | 46.6 | 49.0 | 56.7 | 59.0 | 61.4 | 56.0 | 53.3 | 58.6 | 51.8 | 51.2 | 55.6 |
| | (47.4 - 50.1) | (44.4 - 51.9) | (42.7- 50.5) | (47.6 - 50.3) | (49.7 - 63.4) | (52.0 - 65.6) | (59.3 - 63.4) | (49.8 - 62.1) | (46.6 - 59.9) | (56.6 - 60.5) | (46.8 - 56.7) | (46.2 - 56.2) | (53.8 - 57.2) |
| **Ethnicity** | (n=15,177) | (n=1,090) | (n=1,082) | (n=13,005) | | | | | | | | | |
| White | 87.8 | 88.0 | 88.0 | 87.6 | 90.9 | 91.5 | 90.2 | 91.3 | 89.8 | 89.6 | 89.6 | 88.7 | 88.7 |
| | (86.8 - 88.6) | (85.8 - 90.3) | (85.6 - 90.1) | (86.7 - 88.6) | (86.8 - 93.8) | (88.3 - 93.8) | (89.1 - 91.3) | (88.1 - 93.8) | (86.2 - 92.5) | (88.5 - 90.7) | (86.8 - 91.9) | (86.00 - 91.0) | (87.6 - 89.7) |

| | | Allocation stage | | | Productive within 3 weeks | | | Productive by end of telephone | | | Productive by end of fieldwork | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Batch 1 | | Batch 2-4 | Batch 1 | | Batch 2-4 | Batch 1 | | Batch 2-4 | Batch 1 | | Batch 2-4 |
| Non-white | 12.3 | 11.7 | 12.0 | 12.3 | 9.1 | 8.5 | 9.8 | 8.7 | 10.2 | 10.4 | 10.4 | 11.3 | 11.3 |
| | (11.4 - 13.2) | (9.67 - 14.2) | (9.87 - 14.4) | (11.4 - 13.3) | (6.2 - 13.2) | (6.2 - 11.7) | (8.7 - 10.9) | (6.3 - 11.9) | (7.5 - 13.8) | (9.3 - 11.5) | (8.1 - 13.2) | (9.0 - 14.03) | (10.3 - 12.4) |
| **Wave of last participation** | | | | | | | | | | | | | |
| Wave 1 | 12.8 | 12.4 | 11.4 | 12.9 | 2.5 | 2.3 | 4.2 | 2.2 | 1.9 | 3.5 | 6.0 | 5.3 | 6.5 |
| | (12.0 - 13.5) | (10.3 - 14.8) | (9.3 - 13.9) | (12.1 - 13.8) | (1.0 - 5.9) | (1.0 - 5.1) | (3.5 - 5.0) | (1.0 - 5.0) | (0.8 - 4.3) | (2.9 - 4.2) | (4.2 - 8.5) | (3.5 - 8.0) | (4.2 - 8.5) |
| Wave 2 | 6.5 | 6.0 | 6.6 | 6.5 | 1.0 | 0.8 | 2.1 | 0.4 | 0.2 | 1.7 | 3.4 | 3.9 | 3.2 |
| | (6.01 - 7.00) | (4.4 - 8.0) | (4.9 - 8.7) | (6.0 - 7.1) | (0.3 - 4.1) | (0.2 - 2.6) | (0.2 - 2.7) | (0.1 - 3.0) | (0.1 - 0.7) | (1.4 - 2.2) | (2.0 - 5.6) | (2.4 - 6.1) | (2.7 - 3.7) |
| Wave 3 | 5.6 | 5.8 | 5.0 | 5.7 | 2.1 | 3.0 | 2.0 | 1.6 | 2.2 | 1.7 | 3.0 | 3.7 | 2.9 |
| | (5.22 - 6.02) | (4.5 - 7.4) | (3.7 - 6.6) | (5.2 - 6.1) | (0.8 - 5.5) | (1.5 - 5.9) | (1.6 - 2.6) | (0.6 - 4.0) | (1.2 - 4.5) | (1.3 - 2.2) | (1.8 - 4.9) | (2.3 - 6.0) | (2.5 - 3.3) |
| Wave 4 | 5.6 | 3.4 | 5.9 | 5.8 | 0.6 | 3.1 | 1.8 | 0.5 | 3.0 | 1.5 | 1.3 | 3.0 | 2.9 |
| | (5.2 - 6.09) | (2.5 - 4.7) | (4.5 - 7.5) | (5.3 - 6.3) | (0.1 - 3.7) | (1.5 - 6.0) | (1.4 - 2.4) | (0.1 - 2.7) | (1.5 - 5.6) | (1.1 - 1.9) | (0.6 - 2.6) | (1.8 - 4.9) | (2.4 - 3.3) |

| | | Allocation stage | | | Productive within 3 weeks | | | Productive by end of telephone | | | Productive by end of fieldwork | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Batch 1 | | Batch 2-4 | Batch 1 | | Batch 2-4 | Batch 1 | | Batch 2-4 | Batch 1 | | Batch 2-4 |
| Wave 5 | 6.3 | 6.6 | 6.2 | 6.3 | 3.0 | 2.6 | 3.7 | 3.5 | 2.2 | 3.2 | 4.8 | 2.9 | 4.3 |
| | (5.8 - 6.8) | (5.2 - 8.4) | (4.8 - 7.9) | (5.8 - 6.8) | (1.4 - 6.4) | (1.2 - 5.6) | (3.1 - 4.5) | (1.8 - 6.5) | (1.0 - 4.8) | (2.6 - 3.8) | (3.1 - 7.3) | (1.7 - 4.9) | (3.8 - 4.9) |
| Wave 6 | 7.8 | 8.1 | 9.2 | 7.7 | 3.4 | 5.9 | 4.9 | 4.0 | 6.3 | 4.3 | 5.2 | 8.4 | 6.3 |
| | (7.3 - 8.3) | (6.4 - 10.2) | (7.4 - 11.4) | (7.2 - 8.2) | (1.7 - 6.9) | (3.4 - 10.1) | (4.2 - 5.7) | (2.3 - 6.9) | (3.8 - 10.2) | (3.7 - 5.0) | (3.5 - 7.6) | (6.0 - 11.6) | (5.7 - 7.0) |
| Wave 7 | 55.4 | 57.7 | 55.9 | 55.1 | 87.3 | 82.3 | 81.2 | 87.8 | 84.3 | 84.1 | 76.4 | 72.8 | 74.0 |
| | (54.2 - 56.5) | (54.2 - 61.1) | (52.2 - 59.5) | (53.8 - 56.4) | (82.1 - 91.2) | (76.5 - 86.9) | (79.7 - 82.6) | (83.6 - 91.1) | (79.0 - 88.4) | (82.9 - 85.49) | (72.1 - 80.2) | (68.3 - 76.9) | (72.6 - 75.3) |
| **Mode of last participation** | | | | | | | | | | | | | |
| WEB | 30.0 | 30.5 | 29.2 | 30.0 | 63.3 | 58.7 | 57.5 | 59.3 | 54.2 | 54.9 | 42.4 | 41.7 | 44.1 |
| | (28.9 - 31.0) | (27.4 - 33.8) | (26.2 - 32.4) | (28.9 - 31.2) | (56.4 - 69.7) | (52.2 - 65.0) | (55.6 - 59.4) | (54.7 - 64.8) | (48.1 - 60.1) | (53.1 - 56.6) | (37.7 - 47.2) | (37.0 - 46.5) | (42.6 - 45.7) |
| TEL | 27.4 | 28.7 | 27.7 | 27.2 | 23.9 | 24.1 | 24.7 | 28.6 | 29.7 | 29.1 | 32.2 | 30.1 | 30.5 |
| | (26.5 - 28.2) | (25.7 - 31.8) | (24.8 - 30.7) | (26.3 - 28.1) | (18.2 - 30.7) | (19.2 - 29.8) | (23.2 - 26.2) | (23.7 - 34.2) | (24.7 - 35.3) | (27.6 - 30.6) | (28.1 - 36.7) | (26.2 - 34.4) | (29.3 - 31.8) |
| F2F | 42.7 | 40.8 | 43.2 | 42.8 | 12.8 | 17.2 | 17.8 | 12.0 | 16.1 | 16.0 | 25.4 | 28.2 | 25.4 |

| | Allocation stage | | | Productive within 3 weeks | | | Productive by end of telephone | | | Productive by end of fieldwork | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Batch 1 | Batch 2-4 | | Batch 1 | Batch 2-4 | | Batch 1 | Batch 2-4 | | Batch 1 | Batch 2-4 |
| | (41.5 - 43.8) | (37.3 - 44.5) | (39.7 - 46.8) | (41.5 - 44.0) | (9.0 - 18.0) | (12.9 - 22.6) | (16.4 - 19.3) | (8.7 - 16.4) | (12.4 - 20.7) | (14.8 - 17.3) | (21.4 - 29.8) | (24.3 - 32.4) | (24.0 - 26.7) |

**Table A2: Start dates of fieldwork by mode and batch**

| Fieldwork phase | Soft launch (Batch 1) | Batch 2 | Batch 3 | Batch 4 |
|---|---|---|---|---|
| Web | 20-Aug-15 | 12-Nov-15 | 07-Jan-15 | 22-Jan-16 |
| Tel | 17-Sept-15 | 03-Dec-15 | 28-Jan-16 | 11-Feb-16 |
| F2F 1st issue | 12-Jan-16 | 05-Apr-16 | 19-Apr-16 | 03-May-16 |
| Mop-up | 21-Mar-16 | 30-May-16 | 13-June-16 | 27-June-16 |
| Reissue | 25-Apr-16 | 11-Jul-16 | 11-Jul-16 | 25-Jul-16 |

Note: Official end of fieldwork 26-Sept-16