

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

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Introduction

Longitudinal studies are increasingly implementing 'web-push' sequential mixed mode designs (Dillman 2017). 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). As such, substantial savings may be gained in fieldwork costs by not requiring an interviewer visit for those who opt to respond via web. 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. For example, recent evidence from an Innovation Panel (UKHLS) experiment found that offering higher incentive amounts to members allocated to web-then-face-to-face designs increased response rates to those found in face-to-face designs (Jackle et al 2015, Gaia 2017).

More recently, incentives have been used in web-push designs to encourage web response within a certain time period at the beginning of the data collection period. Referred to as 'early bird' or 'time-limited' incentives, cited benefits have mainly included the potential to increase response rates (particularly if the fieldwork period is relatively short), and the potential for cost-savings reaped from decreased fieldwork and follow-ups. The few available studies on the impact of early bird incentives for web-push or web-only designs show inconsistent findings on both response rates and cost-effectiveness.

Some studies have found that early bird incentives increased response rates during the time-limited period but did not increase response rates overall (Coopersmith et al 2016, Ward et al 2014). Respondents logged in more quickly in the large US National Immunization Survey, a panel survey of mainly teens and young adults (N=48,045), but overall response rates of those who were offered the early bird incentive did not differ from those who were not offered the incentive. The lack of impact on overall response rates does not seem to be attributable to a cross-out effect of higher response rates among early birds and diminished response rates among remaining sample members (Ward et al 2014). Evidence suggests that the 'withdrawal' of the early bird incentive does not negatively affect the response behaviour for those sample members who missed the opportunity to receive the higher value incentive (Brown and Calderwood 2014, 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 the 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. No differences were found between all four incentive conditions, that is, the receipt of \$50, \$75, or \$100 (Coopersmith et al 2016).

Other studies have found that early bird 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 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). Incentives in general tend to have a stronger effect on sociodemographic groups with typically lower response propensities, namely young people, those of lower socioeconomic status and ethnic

minorities (e.g., Knibbs et al 2018, Laurie 2007, Felderer et al 2017, McGonagle and Freedman 2016, McGonagle et al 2013, Laurie 2007, Mack et al 1998, Martin et al 2001, Ryu et al 2006). Taken together, it is yet unclear whether early bird incentives improve response rates, or the extent of their potential to ameliorate nonresponse bias in the sample composition.

There are also inconsistent findings on the cost-effectiveness of early bird incentives. Some studies 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). Other studies found the results and cost savings to be more moderate. 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). An early bird incentive used for the first time in a major UK longitudinal survey (the Innovation Panel of the UK Household Longitudinal Survey) only had modest take up rates, so the overall impact was minimal (Brown and Calderwood 2014). Carpenter and Burton (2018) found a cost savings of £1.14 for every £1 spent to implement the bonus for completing the interview online. In the aforementioned studies, the calculation of costs and savings have differed or have been undisclosed entirely.

Given the few studies assessing the impact of early bird incentives in web-push designs, many questions thus remain about the impact on response rates, sample composition and costs. An early bird push-to-web incentive experiment was conducted in the Next Steps cohort study, formerly known as the Longitudinal Study of Young People in England (LSYPE), which follows the lives of around 16,000 people in England born in 1989-90. A random group of respondents 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 were 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 in the short-term and overall? And, does an early bird incentive have a differential impact on subgroups, thus affecting the sample composition?

Data and Methods

About Next Steps and the Age 25 Survey

The Next Steps study began in 2004, when the cohort members, sampled from state and independent schools, were age 14. They were surveyed annually until 2010 (sweep 1 to 7), and then in 2015-16 at age 25 (sweep 8).

The interviews for the first four sweeps were conducted face-to-face, and from sweep five onwards a sequential mixed mode approach was used, including web interviews, followed by telephone, and then face-to-face interviews.

Next Steps has collected information about cohort members' education and employment, economic circumstances, family life, physical and emotional health and wellbeing, social participation and attitudes.

A total of 15,531 cohort members were issued to field in the age 25 survey (sweep 8), 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 restricted to 15,191 cases, recruited in Sweep 1, and issued to fieldwork at the age 25 survey, and excludes cases from the boosted in Sweep 4 study sample.

Incentives at the Age 25 Survey

Next Steps cohort members have received incentives for their participation throughout the study, and the use of incentives in the age 25 survey was considered an important tool to encourage participation. Moreover, the offer of incentives in this most recent sweep was an important element in the CLS's strategy to re-start a study of young adults, with a long gap since their previous participation, likely to have resulted in a loss of the relationship with the study. To minimise survey costs, maximising response over the web was also considered essential, so that a smaller number of cases are issued to the more expensive telephone and face-to-face survey modes. An experimental approach was thus undertaken to investigate the effect of an incentive aiming to boost participation over the web and in a short time interval.

The study sample was split into four balanced batches to enable efficient management of fieldwork. The first of these was a 'soft launch', where procedures and response rates were tested. It was implemented to reduce uncertainty early in the fieldwork process and aid informed decisions for the main stage of data collection (Centre for Longitudinal Studies, University College London 2017). During the 'soft launch' of the study, incentives (in the form of shopping Amazon or Love2shop gift vouchers) were tested experimentally. A time-limited £20 incentive was offered to a half of the sample (experimental 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.

A preliminary evaluation of the experiment was conducted at the end of the telephone phase of the soft-launch in order to decide whether or not to offer a push-to-web incentive at the main stage. This showed that the higher incentive had been effective at boosting web response in the first 3 weeks of fieldwork, and the time-limited £20 incentive for web-completion was thus offered to all study members issued to fieldwork in the subsequent batches 2 to 4. (Centre for Longitudinal Studies, University College London 2017).

Implementation of the Incentive

At the start of each fieldwork batch study members received a letter inviting them to take part in the survey, and describing the incentive and the requirement to earn it. It was timed to arrive with the cohort member on Day 1 of fieldwork (see fieldwork timetable in table 1a in Appendix).

The group offered the early bird £20 incentive was informed that to claim their voucher, they needed to complete the online survey within three weeks, and after that they will only be given a £10 voucher. Study members were also informed that they will be contacted by telephone or in person, if they do not take part this time around.

The group offered the standard £10 incentive was informed that they will receive a £10 voucher upon completion of the survey. They were as well encouraged to complete the survey online and that they will be contacted by telephone or in person, if they do not take part this time.

The letters included a unique login, and if email address was available for the study member, they were also sent login details there.

The web fieldwork period was three weeks in total following the survey invite. After this point, study members not yet completed the survey were approached by telephone at first¹, and if still unproductive - in person. The web, however, remained open throughout the rest of the fieldwork period for telephone and face-to-face modes. The overall length of fieldwork was 51 weeks, for all batches.

Over the three weeks following the advance mailing, cohort members were sent two postal (days 7 and 11), three email (days 1, 11 and 18) and two text reminders² (days 11 and 19), if they had not started the web survey. Break-off reminder emails and texts were sent (24 and 48 hours after the point of break-off) to cohort members, who had started or partially completed the web questionnaire.

Survey respondents were provided with their vouchers alongside a thank you letter (or email) sent on a weekly basis. To earn the offered incentive, participants were required to complete all survey components. An exception was made with the final data linkage module and completions up to this module were eligible to receive the incentive³. To earn the £20 incentive, study members offered this incentive were required to complete the interview within 3 weeks of receiving the survey request

Methods

Chi-square tests and multivariable logistic regression, adjusted for the clustering induced by the survey design (using SVY commands in Stata), were used to examine the effectiveness of the time-limited incentive short- and long-term, and analyse characteristics of respondents before and after the incentive experiment. Kaplan-Meier curves were used to illustrate the effect of the time-limited incentive throughout the fieldwork period.

Results

We assess the effectiveness of the time-limited £20 incentive addressing the following questions:

- 1) Did it result in an increased short-term response rate?
- 2) What was its effect on the final participation rate?

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 batches of fieldwork (batch 2 to 4), we first describe the results from the incentive experiment, and then look at the performance of the incentive offered in the main stage of fieldwork - whether it impacted response in a similar way as it did during the soft launch.

- 3) Finally we look at whether it contributed to sample bias examining the sample composition at allocation and subsequent stages of fieldwork – end of the 3-week period (official end of web phase), end of telephone and face-to-face phases.

¹ From Batch 2 onwards only study members who took part in the sweep 7 were approached by telephone.

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

³ 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.

Short-term effectiveness of the time-limited £20 incentive (during the soft launch, batch 1)

The results observed after the experimental testing, indicated that at the end of the 3-week period, 28% of the study members in the experimental (conditional on time and mode £20 incentive) group had completed their interviews online, compared to 22% in the control (conditional on participation, but irrespective of time and mode £10 incentive) group. The odds ratio for completing the interview online during this 3-week period was 41% higher in the experimental group compared to the control group (OR=1.41, CI [1.14 - 1.73]) (column 1, table 1). In other words, within the first three weeks of fieldwork, the time-limited £20 incentive had a stronger, more positive effect on the response rate than the standard £10 incentive.

Table 1: Within 3-week and Final Completion by Incentive Group

Fieldwork batch	Incentive group	Completed within 3-weeks	Completed by end of Telephone phase	Completed by end of Face-to-face phase
Batch 1	£10 standard incentive (n=1,091)	233 (22%)	310 (29%) 241 (22%) via web	566 (53%) 278 (26%) via web
Batch 1	£20 time-limited incentive (n=1,082)	280 (28%)	338 (33%) 283 (28%) via web	551 (53%) 308 (30%) via web
Batch 2 to 4	£20 time-limited incentive (n=13,018)	3,541 (29%)	4,199 (34%) 3,669 (30%) via web	6,452 (51%) 3,961 (32%) via web
Batch 1	Odds ratio (95% CI) time-limited/standard incentive	1.41** (1.14 - 1.73)	1.20+ (0.98 - 1.47)	1.01 (0.85 - 1.20)
Batch 2 to 4	Odds ratio (95% CI) time-limited/standard incentive	1.48*** (1.26 - 1.73)	1.25** (1.07 - 1.46)	0.94 (0.80 - 1.10) ^a

Note: *p<0.1, *p<0.05, **p<0.01, ***p<0.001

Unweighted sample size. Proportions and crude odds ratios accounted for sample design using the svy command in Stata.

^aOR adjusted for 33-weeks of follow-up (i.e. the length of fieldwork period in batch 4 - the shortest fieldwork period across all batches).

See adjusted odds ratios in Table 3a in Appendix.

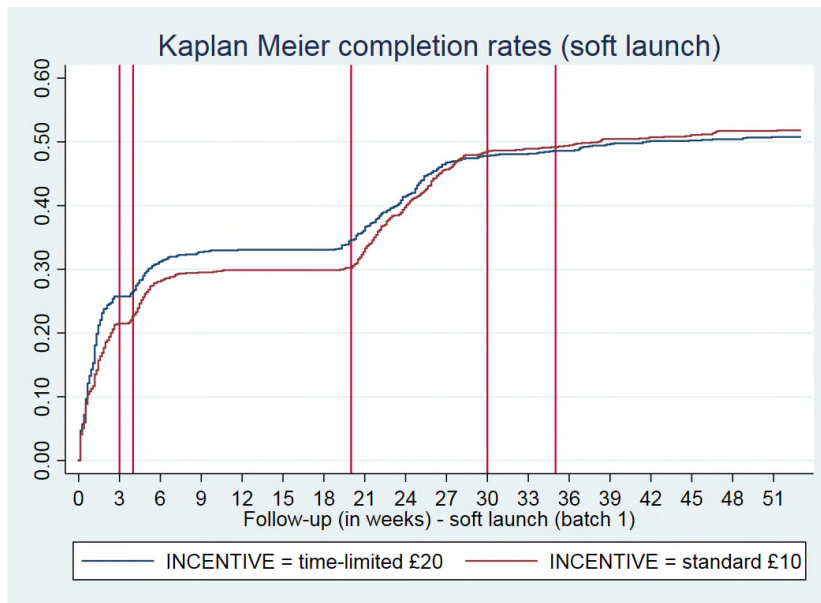
Long-term effectiveness of the time-limited £20 incentive (during the soft launch, batch 1)

The proportion of cases that completed the survey after the £20 incentive was withdrawn, but before the start of the face-to-face phase, was still higher in the experimental group - 33% compared to 29% in the control group, for which there was no change in the offered incentive (column 2, table 1). The odds ratio for completing the survey after the withdrawal of the £20 incentive and by the end of the telephone phase was about 20% higher in the experimental group compared to the control group (OR=1.20, CI [0.98 - 1.47]), acknowledging the decrease in the strength of the association). This group also had a higher rate of interviews completed online by the end of the telephone phase - 28% compared to 22% in the control group, though very few additional web interviews were completed during the telephone phase.

In terms of long-term effectiveness of the time-limited incentive, however, the experimental results suggested that by the end of face-to-face fieldwork there was no longer a difference in the overall response between the two groups. By the end of the fieldwork period, 53% in the experimental group offered the £20 push-to-web incentive, had completed their interviews (column 3, table 1). The control group offered the standard £10 incentive responded at a similar same rate - 53%. By the end of the fieldwork, there was no difference in the odds for completion in the time-limited £20 incentive group compared to the control group (OR=1.01, CI [0.85 - 1.20]). However, a difference was still observed in the overall rates of online interviews between the groups – 30% in the experimental compared to 26% in the control group.

In other words, the early bird push-to-web incentive increased response rates during the time-limited 3-week period, but not the overall response rates as by the end of fieldwork those who were offered the early bird incentive did not differ from those who were not offered this higher incentive. Figure 1a illustrates the effect of the early bird £20 incentive (blue line) on response throughout the soft launch. It shows that in the early weeks the effect of the early bird £20 incentive is more than the effect of the standard £10 incentive, but as the follow-up time increases the effect of the standard £10 incentive, increases. The effect of the early bird incentive is not constant over the entire fieldwork period.

Figure 1: Kaplan Meier completion rates (soft launch)



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.

Performance of the time-limited £20 incentive during the main stage of fieldwork

The time-limited £20 incentive was offered to all study members issued to fieldwork in batches 2 to 4. We thus compared its performance in the remaining fieldwork period compared to the control group in the soft launch (batch 1), acknowledging limitations of such comparison such as difference in the start and duration of follow-up phases and change in the fieldwork procedures following the review of the soft launch. For example, after the soft launch, only productive at sweep 7 cases were issued to fieldwork (as those who last participated in wave 7 were considerably more likely to participate (Centre for Longitudinal Studies, University College London 2017)).

In line with the above observation, we observed a statistically significant difference in the rates of response between the two groups within the first three weeks of receiving the study invite. By the end of the 3-week period, 29% of the study members in the group offered the time-limited £20 incentive had completed their interviews online (compared to 22% in the control group). The odds ratio for completing the interview online within 3-weeks from the start of the survey was 48% higher in the group offered the time-limited incentive compared to the control group (OR=1.48, CI [1.26 – 1.73]).

The share that completed the survey 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 odds ratio for completion in this group compared to the control group, for which the incentive remained unchanged during the entire period of fieldwork, was 25% higher (OR=1.25; CI [1.07 – 1.46]). There was a difference in the interviews completed online between the groups - 30% in the group offered the time-limited incentive (compared to 22% in the control group).

In terms of performance long term, there was no evidence for a difference between the groups (OR=0.94⁴, CI [0.80 – 1.10]). By the end of the fieldwork, 51% in the group offered the £20 incentive at first, had completed their interviews, compared to 53% in the group offered a standard £10 incentive. This indicates that overall, during the study fieldwork, the group in which the incentive was withdrawn was as likely as the control group, in which the incentive remained unchanged during the entire period of fieldwork, to complete their interview. The rate of the completed online interviews in the group remained higher than the control group – 32% compared to 26%.

The observation that the conditional incentive performed in a similar way in the remaining batches of fieldwork as it performed in the experimental stage is illustrated in Figure 1a in the Appendix.

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

Table 2a in the Appendix shows the distribution of the Next Steps sample by key demographic (sex and ethnicity) and survey behaviour characteristics (sweep and mode of last participation), 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, and subsequently by the end of each of the survey phases.

As it would be expected, following the random allocation to an incentive group, the groups in the soft launch were of approximately equal size, fairly balanced with respect to the presented characteristics, and very similar to the characteristics of the overall eligible sample (see table 2a in Appendix). The distribution of these characteristics in the main stage sample was as well very similar to both the overall sample and the experimental groups.

Although minor differences are notable, the sizes of these differences are small⁵. In particular, slightly smaller proportion of study members last participated in sweep 4 and slightly bigger proportion of sweep 7 participants, were allocated to the control group. Also, a smaller proportion of previous face-to-face participants were assigned to the group offered the standard £10 incentive.

In the soft launch, the groups remained fairly similar after the first 3 weeks of fieldwork, noting that female, white, and those who last participated online, were on average more likely to take part online and within three weeks at age 25. Acknowledging the lack of pronounced differences, females responded at slightly higher rate in the time-limited £20 incentive group compared to the control group. Noting the observed imbalances at allocation, a smaller proportion of study members who last took part in sweep 4 and a bigger proportion of sweep 7 participants, including a smaller number of previous face-to-face participants, responded in the control group compared to the experimental group. Similarly, in the main stage, and in comparison to the control group in the soft launch, more female than male completed the survey in the 3-week period, including more participants from the initial sweeps and thus more likely to have last taken part face-to-face rather than online. While this might provide indicative evidence that the time-limited incentive has attracted more study members from the earlier study sweeps, it does not conclusively demonstrate this, noting the existing imbalances at allocation, the size of these differences and overlapping confidence intervals of the estimated proportions.

⁴ 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).

⁵ None of the performed Chi-Square tests has been statistically significant. Table 2a in Appendix provides 95% confidence intervals.

These differences remained until the end of the telephone follow-up, with the exception that in the soft launch the proportion of females was this time slightly lower in the experimental group, compared to the control. In the main stage, however, this proportion remained higher compared to the control group.

The noted imbalances between the incentive groups became less noticeable by the end of the face-to-face follow-up. By the end of fieldwork, respondents in both groups in the soft launch were more similar to each other, although those in the control group were still more likely to have last taken part in the most recent study sweep (sweep 7), and less likely to have participated face-to-face the last time they took the survey. Respondents in the main stage were still more likely to be female, compared to the control group, but also less likely, as respondents in the control group to have completed the survey face-to-face the last time they took part.

Discussion

This paper adds to the existing research on the effect of early bird push-to-web incentives, short- and long- term, in a longitudinal mixed mode setting. Unlike in other studies, early bird incentives in Next Steps were used effectively to increase online participation in a cohort of young adults, whose last participation in the study was between 5 and 10 years, likely to have resulted in a lost relationship with the study and outdated contact information.

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 its official fieldwork period.

The early findings of the experiment indicated that the early bird incentive were effective in boosting response, and it was subsequently offered to all study members in the main stage of data collection. In line with previous research, an assessment of the effectiveness of the early bird incentive during the experimental stage showed that it increased significantly response 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.

One concern was 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 did not negatively affect response for those who missed the chance to receive it at its higher value. 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.

Finally, we found no sufficient evidence for an impact of the time-limited incentive on the sample composition. By the end of fieldwork, there were no pronounced differences between the groups in the soft launch, except that respondents in the control group were slightly more likely to have participated in the most recent study sweep, and slightly less likely to have completed the survey face-to-face when they last took part. In the main stage sample, compared to the control group in the soft launch, females took part at a slightly higher rate.

The observed differences in the sample composition throughout the survey stages were small and became less noticeable by the end of the fieldwork.

In conclusion, our findings are consistent with previous research demonstrating the positive effect of an early bird incentive within the time-limited period, but similar effects on overall response rates to that of the standard (lower value) incentive (e.g., Coopersmith et al 2016, Ward et al 2014). 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 several sweeps. Additional research is thus needed on the motivational factors on response from such sample sub-groups and the impact of incentives.

We intend to extend this research to evaluate the cost-effectiveness of the time-limited push-to-web incentive. A preliminary estimate of cost-savings made during the soft-launch was that the use of higher-value incentives for web completion would lead to cost savings of around 25,000-30,000 GBP due to fewer cases being issued to face-to-face interviewers (Calderwood 2016). We aim to update this using information on actual cost-savings achieved during the main stage.

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Appendix

Table 1a: Start date of fieldwork by mode and batch

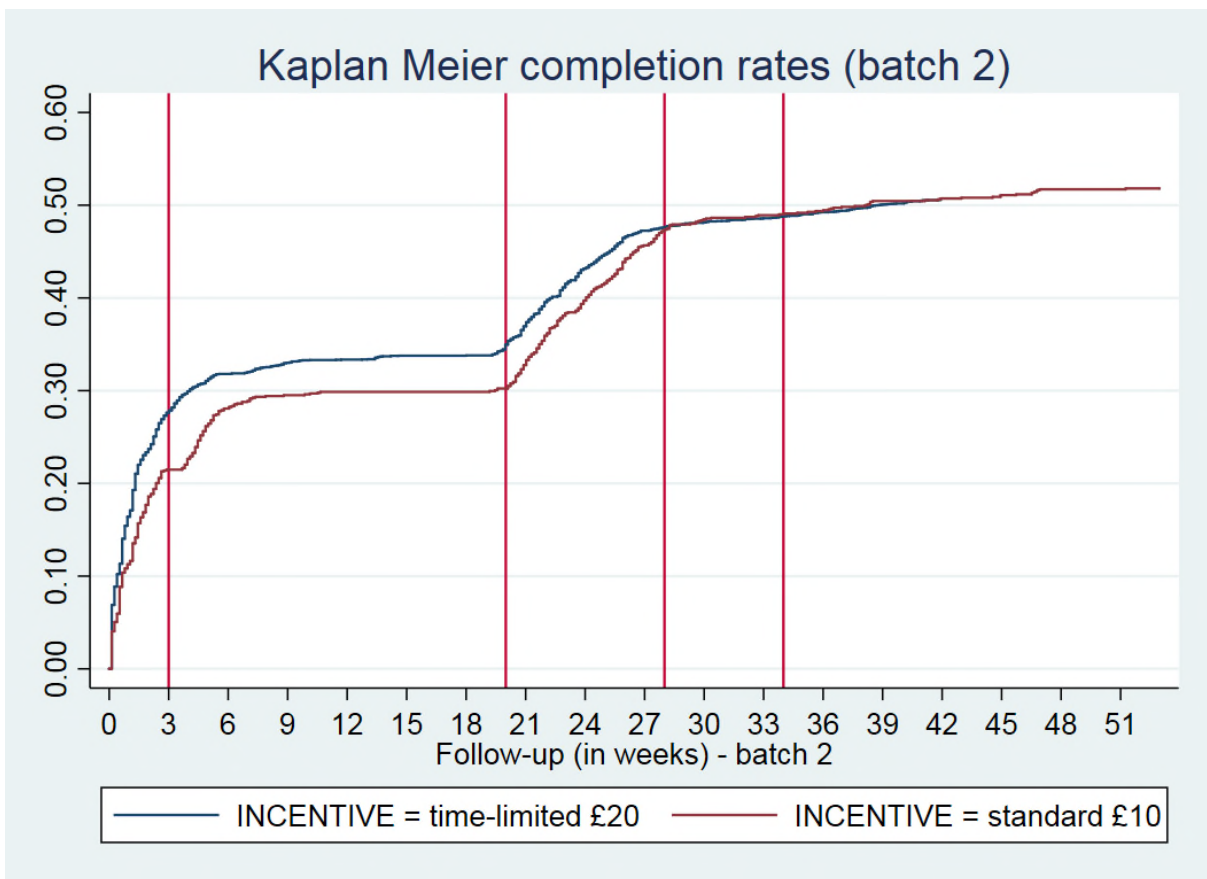
Fieldwork phase	Soft launch (Batch 1)	Batch 2	Batch 3	Batch 4
Web	20-Aug-15	12-Nov-15	07-Jan-15	22-Jan-16
Tel	17-Sept-15	03-Dec-15	28-Jan-16	11-Feb-16

F2F	12-Jan-16	05-Apr-16	19-Apr-16	03-May-16
1st issue				
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

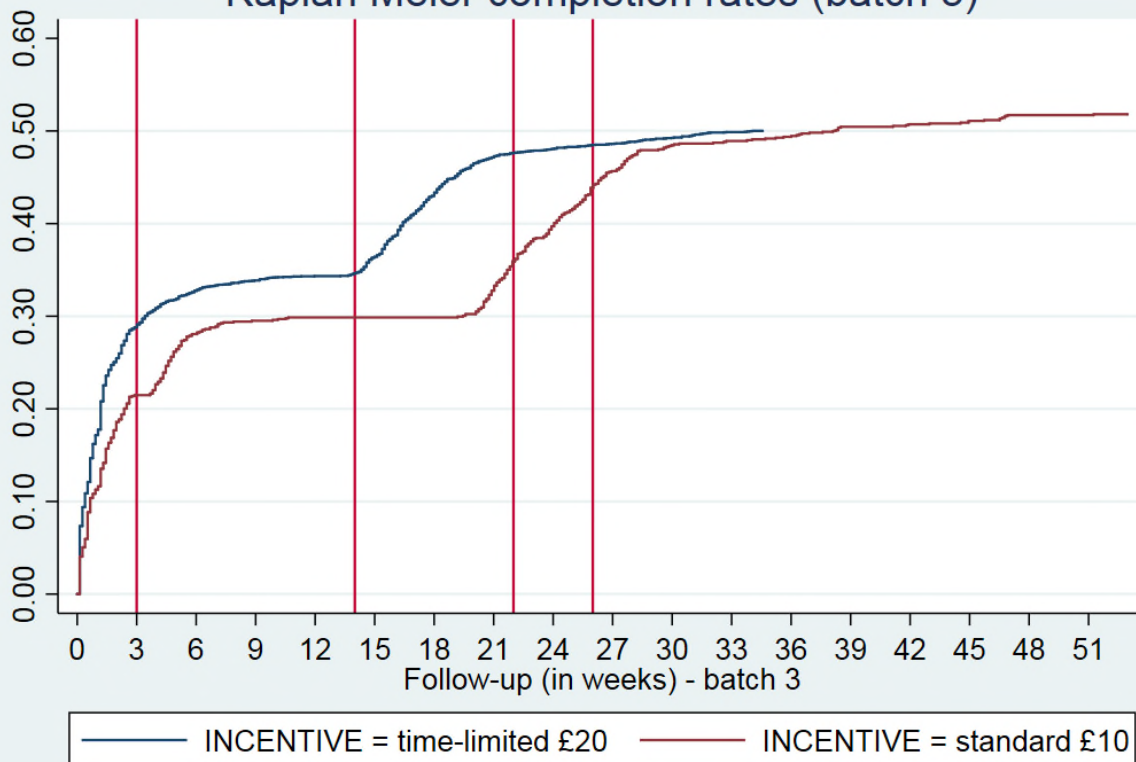
Note: Official end of fieldwork 26-Sept-16

Figure 1a: Kaplan Meier completion rates: batches 2 to 4

Note: The effect of the time-limited £20 incentive on response throughout the study fieldwork is illustrated with the blue line. The first vertical line indicates the end of the 3-week period, when the incentive was withdrawn, and start of the telephone phase. The second vertical line indicates the start of the face-to-face interviewing, and the third and fourth lines – the start of mop-up and re-issue phases.



Kaplan Meier completion rates (batch 3)



Kaplan Meier completion rates (batch 4)

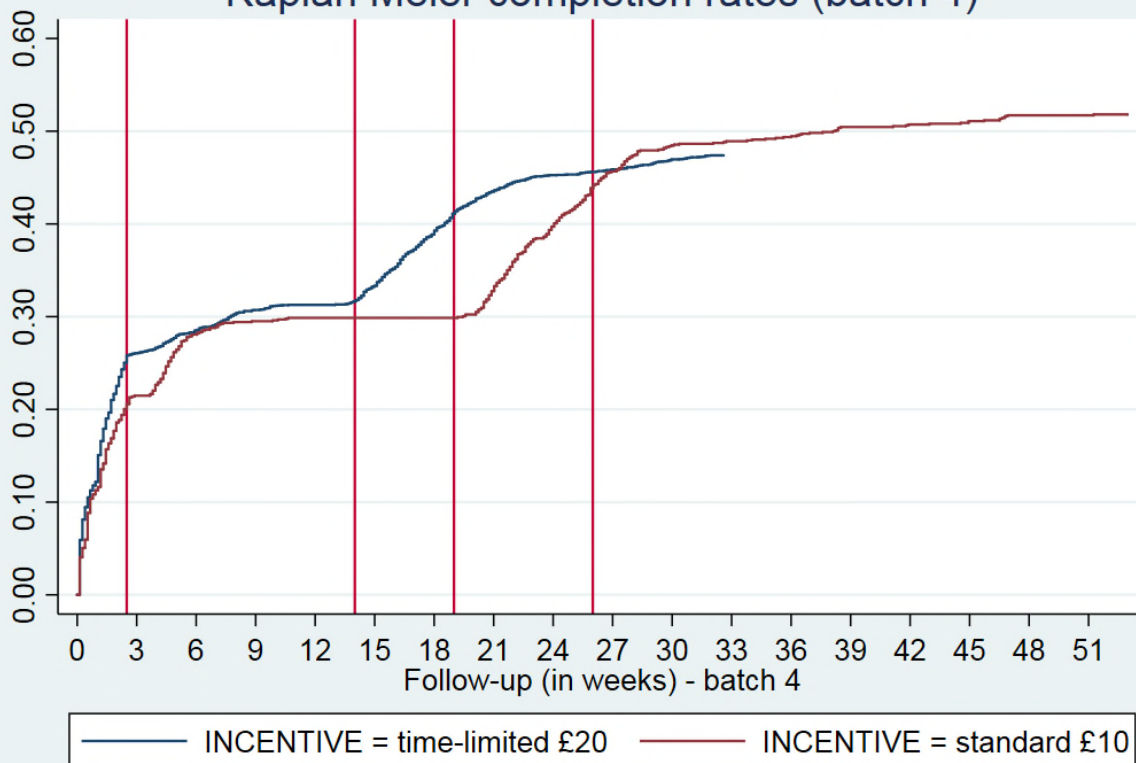


Table 2a: Demographic and survey behaviour characteristics of the Next Steps sample and respondents at the age 25 survey (% , 95%CI)

	Allocati on stage	Productive within 3 weeks			Productive by end of telephone			Productive by end of face- to-face						
		Batch 1	Batch 2-4	Batch 1	Batch 2-4	Batch 1	Batch 2-4	Batch 1	Batch 2-4	All batches				
	Total eligible (n=15,191)	Standard £10 incentive (n=1,091)	Time-limited £20 incentive (n=1,082)	Time-limited £20 incentive (n=13,018)	Standard £10 incentive (n=233)	Time-limited £20 incentive (n=280)	Time-limited £20 incentive (n=3,541)	Standard £10 incentive (n=310)	Time-limited £20 incentive (n=338)	Time-limited £20 incentive (n=4,199)	Standard £10 incentive (n=566)	Time-limited £20 incentive (n=551)	Time-limited £20 incentive (n=6,452)	All respondents (n=7,569)
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	45.1
	(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)	(43.4 - 46.7)
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	54.9
	(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)	(53.2 - 56.6)
Ethnicity	(n=15,177)	(n=1,090)	(n=1,082)	(n=13,005)										

	Allocation stage	Productive within 3 weeks				Productive by end of telephone				Productive by end of face-to-face				
		Batch 1		Batch 2-4		Batch 1		Batch 2-4		Batch 1		Batch 2-4		All batches
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	88.8
	(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)	(87.8 - 89.8)
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	11.2
	(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)	(10.2 - 12.2)
Sweep of last participation														
Sweep 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	6.3
	(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)	(5.7 - 7.0)
Sweep 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	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)	(2.8 - 3.7)
Sweep 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	2.9

Allocation stage	Productive within 3 weeks				Productive by end of telephone				Productive by end of face-to-face					
	Batch 1		Batch 2-4		Batch 1		Batch 2-4		Batch 1		Batch 2-4		Batch 1	Batch 2-4
	(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)	(2.5 - 3.4)
Sweep 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	2.7
	(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)	(2.4 - 3.2)
Sweep 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	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)	(3.8 - 4.8)
Sweep 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	6.4
	(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)	(5.8 - 7.0)
Sweep 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	74.1
	(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)	(73.9 - 75.3)

Allocation stage	Productive within 3 weeks				Productive by end of telephone				Productive by end of face-to-face					
	Batch 1	Batch 2-4	Batch 1	Batch 2-4	Batch 1	Batch 2-4	Batch 1	Batch 2-4	Batch 1	Batch 2-4	All batches			
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	43.8
	(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)	(42.4 - 45.3)
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	30.6
	(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)	(29.4 - 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	25.6
	(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)	(24.4 - 26.8)

Table 3a: Adjusted odds ratios (ORs) and 95% CI for the association between incentive group and response

Fieldwork batch													
	Completed within 3-weeks				Completed by end of Telephone phase				Completed by end of Face-to-face phase				
Soft launch (Batch 1)													
Incentive group: £20 time-limited incentive (reference: standard £10 incentive)	1.41** (1.14 - 1.73)	1.41** (1.14- 1.74)	1.41** (1.15- 1.74)	1.58*** (1.26- 1.99)	1.20+ (0.98 - 1.47)	1.19+ (0.97- 1.47)	1.20+ (0.97- 1.47)	1.32** (1.05- 1.66)	1.01 (0.85 - 1.20)	1.00 (0.83- 1.19)	1.00 (0.83- 1.19)	1.04 (0.86- 1.25)	
Sex Female (reference: male)		1.75*** (1.42- 2.16)	1.76*** (1.43- 2.17)	1.50** (1.19- 1.90)		1.54*** (1.28- 1.86)	1.55*** (1.29- 1.87)	1.34** (1.08- 1.66)		1.42*** (1.19- 1.71)	1.43*** (1.19- 1.71)	1.30** (1.08- 1.57)	
Ethnicity White (reference: non-white)			1.57** (1.17- 2.09)	1.54** (1.13- 2.10)			1.45** (1.12- 1.86)	1.43** (1.05- 1.94)			1.25* (1.02- 1.54)	1.22* (0.98- 1.51)	
Mode of last participation Telephone Face-to-face (reference: web)				0.28*** (0.20- 0.38)				0.35*** (0.26- 0.45)				0.51*** (0.38- 0.68)	
				0.10*** (0.07- 0.14)				0.08*** (0.06- 0.11)				0.19*** (0.14- 0.25)	
Batch 2-4													

Fieldwork batch												
	Completed within 3-weeks				Completed by end of Telephone phase				Completed by end of Face-to-face phase			
Incentive group: £20 time-limited incentive (reference: standard £10 incentive)	1.48*** (1.26-1.73)	1.48*** (1.26-1.74)	1.48*** (1.26-1.74)	1.62*** (1.37-1.91)	1.25** (1.07-1.46)	1.25** (1.06-1.47)	1.25*** (1.06-1.47)	1.35*** (1.14-1.60)	0.94 (0.80-1.10)	0.93 (0.79--1.09)	0.93 (0.79-1.10)	0.94 (0.80-1.12)
Sex Female (reference: male)		2.02*** (1.85-2.19)	2.02*** (1.86-2.20)	1.77*** (1.62-1.94)		1.80*** (1.66-1.95)	1.80*** (1.66-1.95)	1.59*** (1.46-1.74)		1.77*** (1.63-1.92)	1.77*** (1.64-1.93)	1.60*** (1.47-1.75)
Ethnicity White (reference: non-white)			1.45*** (1.31-1.61)	1.26*** (1.13-1.40)			1.36*** (1.24-1.50)	1.18** (1.06-1.30)			1.26*** (1.14-1.40)	1.12** (1.01-1.24)
Mode of last participation Telephone Face-to-face (reference: web)				0.31*** (0.28-0.34)				0.36*** (0.33-0.40)				0.49*** (0.43-0.55)
				0.12*** (0.11-0.13)				0.09*** (0.08-0.10)				0.17*** (0.15-0.19)

Note: +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