Understanding Society Innovation Panel Wave 7

Technical Report

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1. Introduction

1.1 Background

This report provides an account of the methodology used in the seventh wave of the Innovation Panel (IP7) of *Understanding Society*.

Understanding Society is a major household panel study which has been commissioned by the Economic and Social Research Council (ESRC). It is the largest household panel study of its kind in the world, interviewing people in a total of 40,000 households across the UK. It is led by the Institute for Social and Economic Research (ISER) at the University of Essex. The survey is known as the UK Household Longitudinal Study (UKHLS) among the academic community.

Understanding Society provides valuable new evidence about people throughout the country, their lives, experiences, behaviours and beliefs, and will enable an unprecedented understanding of diversity within the population. The survey will assist with understanding the long-term effects of social and economic change, as well as policy interventions designed to impact upon the general well-being of the UK population. The data will be used by academic researchers and policy-makers within government departments, feeding into policy debates and influencing the outcome of those debates. The survey collects data from all household members aged 10 and above on an annual basis. Annual interviewing allows us to track relatively short-term or frequent changes in people's lives, and the factors that are associated with them. As the years of the survey build up we will be able to look at longer-term outcomes for people in the sample.

Main fieldwork is complemented by an **Innovation Panel** which tests significant innovations in types and methods of data collection and study delivery such as multi-mode interviewing, differential incentives, and layout and wording experiments. The results from these panels will feed into future waves of this study and the wider social research community.

The Innovation Panel is conceived as part of the larger study and contributes to the total sample of 40,000 households. It is important to note that the Innovation Panel is not a pilot panel and has not been established to replace the need for normal questionnaire pilots and dress rehearsals.

1.2 Aims of Innovation Panel 7 (IP7)

As with previous Innovation Panels (IPs) its experiments are at the heart of IP7; 13 separate experiments were included this time including both procedural and questionnaire experiments. These are described in full in Section 0.

1.2.1 **Mixed mode experiment (Face-to-Face (F2F) vs WEB)**

The mixed-mode experiment introduced at IP5 remains of key interest for the long-term development of the main *Understanding Society* study (see Section 3.1.1 for further details of this experiment).

Having successfully moved a relatively large proportion of the sample to CAWI (Computer Assisted Web Interviewing) at IP5 and IP6, the aim for IP7 is to provide further evidence as to whether acceptable response rates can be sustained in a longitudinal context for those who do not see an interviewer from year to year.

IP7 will also help address other crucial questions to add to the discussion on whether and how to roll out a mixed mode approach to the main study: identify those procedures most likely to optimise response; establish the level of cost savings by moving away from CAPI (Computer Assisted Personal Interviewing); and provide evidence on the impact on data quality resulting from carrying questions in a different mode.

2. Overview of the survey design

2.1 Who is interviewed?

- The Innovation Panel is a longitudinal household survey representing households in Britain.

- All members of households containing at least one Original or Permanent Sample Member (OSM/PSM) are enumerated, with those aged 16 and over interviewed in full, and those aged 10 to 15 asked to complete a shorter self-completion questionnaire booklet.

- The issued sample consisted of households in the established IP sample, including both productive and unproductive households from previous Innovation Panels. For the original panel members, the study is in the seventh wave of fieldwork (IP7). A refreshment sample was introduced at IP4 to increase the number of households following attrition in the earlier waves. In addition, a second refreshment sample was included here at IP7 following further attrition to help boost the sample.

- At IP7, 2,826 households were included in the issued sample: 1,266 longitudinal households (original and IP4 refreshment sample) and 1,560 new households forming the IP7 new refreshment sample[1].

- The sample was divided in two Tranches. Tranche 1 (TR1) consisted of 10 assignments (186 households) and acted as a 'soft' launch to allow detailed checking of the many complex systems in advance of Tranche 2 (TR2) which followed three weeks later and consisted of the remaining 132 assignments. TNS BMRB's Field Management team selected the assignments for Tranche 1, based around interviewer availability to work these addresses at the required time.

2.2 What data are collected?

There are a number of components/stages to the data collection process:

- **Household grid** – completed by whoever is the first adult contacted in the household, this collects the basic information about who lives in the household.
- **Household questionnaire** - completed by the household bill-payer or his/her spouse/partner (or an appropriate person at the interviewer's

[1] This includes an original refreshment sample of 1,080 households and a boost refreshment sample of 480 households. The boost sample was added midway through fieldwork due to the low response rate achieved on the original refreshment sample.

discretion), this covers a wide range of household-level information including energy consumption and expenditure.

- **Individual questionnaire** – completed by each individual in the household aged 16 and over, this questionnaire covers subjects including employment and education, health, finances and relationships. The individual questionnaire includes a **CASI** element (Computer Assisted Self Interviewing); at three places within the questionnaire the interviewer was required to pass the laptop to the respondent to complete these sections independently.
- **Two Time Diaries** – completed by each adult about how they spend their time, these diaries cover one week day and one weekend day, generated randomly by CAPI. These Time Diaries are included at IP7 for the first time.
- **Youth self-completion booklet –** completed by household members aged 10 to 15.
- **Proxy interviews** - where a household member is unable to participate during the fieldwork period a proxy interview can be undertaken by the interviewer with another household member.

2.3 Fieldwork design

As at IP5 and IP6, the fieldwork design is driven by a sequential mixed mode experiment where households are allocated to either F2F (face-to-face) or WEB groups. Households in the WEB group would be contacted and asked to complete their survey via CAWI; the purpose of this was to avoid the higher cost of sending an interviewer where possible. Of the 1,266 **longitudinal** households issued for IP7, 444 households were allocated directly to F2F and 822 to WEB. All 1,560 refreshment sample households were allocated to F2F.

2.3.1 Approach to the Web sample

- **Phase 1: CAWI only (3-5 weeks)**
  The WEB households were initially approached via email and letter and asked to carry out the survey via **CAWI**.

- **Phase 2: CAWI and/or CAPI interviewing (16-20 weeks)**
  Households or individuals that had not participated via CAWI within 3-5 weeks of the CAWI invitation became part of an interviewer's assignment. These households/individuals were then approached for a F2F interview via **CAPI** in the usual way. The option to complete a CAWI interview remained open for a further 4 weeks and then closed for the remaining 12-16 weeks of fieldwork. During this 12-16 week period interviews could only be carried out F2F.

- **Phase 3: CAWI reopens and CATI mop-up (2 weeks)**

If WEB individuals had still not participated by the end of the fieldwork period, they were assessed for inclusion in a final **CATI** "mop-up" phase (Computer Assisted Telephone Interviewing). The CAWI option re-opened and was available to all outstanding longitudinal sample members during this phase.

2.3.2 Approach to the F2F sample

Households falling into the F2F sample group were **not** initially invited to carry out the survey by CAWI; participants were approached, as usual, by field interviewers at the beginning of Phase 2. This method meant that a mix of both F2F and WEB sample types was included within each interviewer assignment, simultaneously conducted during the same fieldwork period.

CAWI completion was offered to the longitudinal F2F sample group during the two week mop-up period.

2.4 Data collection timetable

IP7 data collection ran from May to October; the timing and dates for the three phases is shown below. As explained, the sample was divided into two Tranches.

Table 2.1 Date collection timetable

Tranche	Phase	Mode	Sample group	Duration	Start date	End date
TR1	1	CAWI **only**	WEB	3 weeks	21 May	12 Jun
	2	CAWI or CAPI	WEB	4 weeks	13 Jun	9 Jul
		CAPI **only**	F2F	14 weeks	10 Jul	19 Oct
	3	CATI or CAWI mop-up	F2F & WEB	2 weeks	20 Oct	2 Nov
TR2	1	CAWI **only**	WEB	5 weeks	21 May	24 Jun
	2	CAWI or CAPI	WEB	4 weeks	25 Jun	24 Jul
		CAPI **only**	F2F	16 weeks	25 Jul	19 Oct
	3	CATI or CAWI mop-up	F2F & WEB	2 weeks	20 Oct	2 Nov

The refreshment sample was not included in the CAWI or CATI mop-up phase. Outstanding refreshment sample households and individuals continued to be attempted face-to-face during this period.

It had initially been planned to start IP7 fieldwork earlier and to complete fieldwork in a shorter period compared with the dates shown in Table 2.1. The reasons for the delayed start to fieldwork and extended fieldwork period are explained in Section 2.4.1

2.4.1 Issues with fieldwork

Delay to fieldwork start

Fieldwork had originally been scheduled to begin in March. However, due to the complexity of the scripting process for IP7, it took longer than expected to finalise the script for the survey. As a result, the fieldwork start date was put back to May. The CAWI survey went live for Tranche 1 on 20th May, with letters sent out the same day and emails following on 21st May. There was also a delay of a week to the launch of the CAPI program following delays testing the CAWI -> CAPI transfer process.

Extension to fieldwork period

In addition, a longer fieldwork period was required for IP7 compared with the original schedule. It had been planned to allow a period of around 12 weeks for CAPI fieldwork. However, due to lower than expected coverage levels during fieldwork, and a need to issue additional refreshment sample during fieldwork, the CAPI fieldwork period was extended by four weeks.

Fieldwork administration error – CAWI invitation emails

The intention was to send out invitations to only a small proportion of the overall sample (i.e. Tranche 1) two weeks ahead of the remaining sample, as was done for IP5 and IP6. This would allow any issues to be highlighted at an early stage and resolved before opening up to the larger sample. However, due to an error in fieldwork administration, invitation emails were sent to members of the WEB sample in **both** Tranches on 21st May. This error impacted in two ways:

1. There was no 'soft launch' of the CAWI element. This in turn meant that if any script issues were uncovered they would impact on a larger number of respondents than should have been the case. It is possible that some of the issues noted in Section **Error! Reference source not found.** would have been uncovered from the Tranche 1 launch - and resolved before Tranche 2, which might have resulted in fewer technical queries from respondents and potentially slightly more CAWI completions. On the whole though, there were no major issues (e.g. script errors) that would have had an adverse impact on the data.
2. Letters (including incentives, in most cases) were not sent to Tranche 2 CAWI cases until after email invitations were received (estimated to be between 3 and 6 days). This may have reduced the chances of Tranche 2

respondents completing the survey on/shortly after receipt of the email, and perhaps reduced the chances of them completing the survey at any point.

3. Methodological experiments and testing

The Innovation Panel aims to investigate the impact of a variety of questionnaire and procedural innovations through incorporating into its design experimental variation between participant groups. Analysing the data from the interviews with these different groups allows the assessment of the effect and relative merits of the different approaches.

For IP7, 12 different experiments were implemented; these were a mix of procedural experiments and those related to questionnaire content. Some were inherited from previous waves (e.g. mixed mode, incentive experiment, time/risk preference), to allow longitudinal assessment of effects, and some were new for this wave (e.g. using audio recordings to assess the effect of dependent interviewing on amount of change).

The allocation into most experimental groups is done at the household level, through the sample. All eligible adults in a household receive the same treatment for any given experiment. This also includes any new entrants or re-joiners to issued households. Similarly respondents in split households are allocated to the same treatment groups as those in the originating household. For one experiment ("Response options") the randomisation took place through the CAPI script and therefore different household members received different versions of the question.

3.1 Procedural experiments

Procedural experiments are aimed at assessing different survey processes and contact methods. The experiments in IP7 include those that seek to increase participation by offering respondents a choice of survey modes, and those that compare the impact of different amounts of financial incentives or the effectiveness of different levels of contact between waves.

3.1.1 Mixed modes experiment

This experiment, introduced at IP5, involved offering and encouraging a proportion of the households the possibility of completing the questionnaire online before F2F fieldwork commenced.

At IP5 a random subset of two-thirds of the sample was selected and allocated to the WEB group. Members of the WEB subset were contacted by letter and email and asked to participate via CAWI. No attempt was made to target

households or individuals that may be more likely to participate by CAWI, and no account was taken of whether individuals were internet users.

The remainder of the sample was approached F2F in the first instance. This approach allowed estimation of the take-up of the WEB instrument and the impact of this mode on response rates and costs of the survey.

This experiment remained a major driver of the design in IP6 and has been carried through again to IP7. Households allocated to WEB at IP5 remained in the WEB group for IP6 and IP7 regardless of whether they actually completed their interviews via CAWI.

3.1.2 Incentives experiment

The IP7 incentives experiment has been running since IP1. It assesses the impact of incentives on response rates, efficiency of fieldwork and costs. Incentives, in the form of a Love2Shop High Street gift voucher, were sent in the advance mailing and were given **per adult** rather than per household. For existing sample members that participated at IP6 an advance letter was sent to every adult in the household containing their individual incentive.

For IP7, F2F members all received £10 with the exception of the refreshment sample members. These were divided into three roughly equal groups receiving £10, £20 or £30. WEB members were also divided into three roughly equal groups. Two of these groups received £10 and £30 respectively. The third group received £10, plus an additional £20 per adult if everyone in the household participated online by a specified date. For some of the households this was the same level of incentive as in previous years, for others it was a different amount. See Section 8.1.3 for a description of response rates between the different incentive groups.

Non-responders at IP6

A second experiment relating to incentives was carried out for those panel members who **did not participate at IP6**. These panel members were randomly allocated to two groups: those in the first group received an unconditional incentive in the advance letter as usual; those in the second group who did not respond at IP6 received a **conditional incentive**, given by the interviewer once the survey was complete.

'Rising-16 year olds' (i.e. children in the household who participated as adults for the first time) received an **unconditional incentive**, regardless of their and other members of their household's previous response behaviour.

3.1.3 Keeping in contact: the effect of multiple contacts

Understanding Society recently moved from one between-wave mailing per year to 3-4 mailings. This experiment aimed to determine the effect this measure has had on response at IP7 by allocating households at random to two groups. The first group received one mailing between IP6 and IP7. The second group received three mailings.

3.2 Questionnaire experiments

Some of the IP7 questionnaire content was also experimental in design. Questionnaire experiments mainly focused on using different versions of question wording. All questionnaire experiments were programmed into the CAPI, CAWI and CATI instruments and were run during the interview.

3.2.1 Testing the order of response categories

This experiment included a number of questions originally used in the United States in 1981 and became part of IP7 in order to examine whether the experiments can be replicated decades later and across countries. Respondents were asked 20 questions, each of which had between 2-4 versions. "Don't know" and "Do not want to answer" procedures differed for this set of items as compared to elsewhere in the questionnaire. Moreover, three of these questions had a different non-response procedure to the other 17 items. For 17 items, the following interviewer instruction was shown:

> **IF RESPONDENT SPONTANEOUSLY ANSWERS "DON'T KNOW", WAIT 5 FULL SECONDS IN SILENCE TO ALLOW THE RESPONDENT TO ANSWER AGAIN BEFORE SAYING: "Thanks. If you want to skip answering this question, that's ok, but we would really appreciate it if you would be willing to answer it, because your response will help our study a lot. Please feel free to either answer or go to the next question. Thank you"**

The prescribed procedure was to count 5 seconds and then repeat the statement in the interviewer instruction. If the respondent still did not want to answer, then a "skip" was coded.

For the remaining three of the 20 questions, the procedure was to accept the respondent's "don't know" or "do not want to answer", **without encouraging them to pick an answer**.

3.2.2 Testing the direction of response scales

This experiment sought to find whether and how the direction of a response scale affects survey responses, that is whether it is ordered from positive to

negative or negative to positive. At the questions of interest respondents were split into two groups; those for whom the answer categories ran from positive to negative and those for whom the scale was reversed.

3.2.3 Including or excluding a 'motivational message'

The experiment described in Section 3.2.2 further examined whether the inclusion of a 'motivational message' would impact on respondents' survey answers. The message below was included for some respondents and left out for others.

> **"In order for your answers to be most helpful to us, it is important that you try to be as thoughtful as you can. Since we need complete and accurate information from this research, we hope you will think hard to provide the information we need."**

3.2.4 The effect of dependent interviewing on amount of change

Dependent interviewing is a technique whereby a respondent's answers from previous waves are 'fed-forward' and verified by the respondent, for example 'Last time we interviewed you, you told us that you would like to move house. Is this still the case?' IP7 investigated how best to word such questions to yield accurate answers regarding whether a situation has changed or remains the same. Respondents were randomly placed in four groups and asked different versions of the questions. Dependent interviewing items were audio recorded to allow more detailed analyses of their impact on interviewer-respondent interaction.

3.2.5 Improving the data quality of disability measures

This experiment repeated material carried out at IP6. The questionnaire included measurements of participants' self-reported long-lasting illnesses. Participants were randomly allocated to three groups:

- Group A were asked a set of follow-up questions on areas of everyday life where people may experience difficulties if they say they have a long lasting illness. They were then asked to explain the reason for every answer that differed to the previous wave;
- Group B were asked the follow-up questions regardless of whether they reported a long lasting illness;
- Group C were asked the follow-up questions if they indicated they have a long lasting illness, but were not asked to explain any differences from the last wave.

3.2.6 Testing different versions of Environmental Tax question wording

This experiment examined different wordings of questions on willingness to pay environmental taxes. Each respondent answered one question; in total there are 10 different versions.

3.2.7 Including or excluding tailored interesting questions

This experiment examined whether including extra questions that are of interest to the respondent improves their perception of the current survey, leading to participation at the following wave. Respondents were asked different questions on topics they had previously indicated as being of interest to them (e.g. sport, performing, attending events). Refreshment sample respondents were asked questions about TV watching.

3.2.8 Exploring systematic measurement error (MTMM)

This experiment looked at respondent opinions towards immigration. A set of 6 questions that differ slightly in wording were asked at two points in the questionnaire, one towards the beginning, the second towards the end. Importantly, for the second set of questions to appear at least five minutes must have passed since the first set were asked. In the vast majority of cases (> 99%) five minutes had passed between the two sections, and so the second set were asked.

3.2.9 Time and Risk preference: perceptions of risk and future benefits

This experiment was carried out at IP6 and aims to collect data on risk and time preferences. Risk preference refers to the tendency to accept a higher risk for higher rewards over safer alternatives offering lower rewards. Time preference refers to the degree to which today is valued more highly than tomorrow. For a subset of households at IP6, one person was randomly selected to take part in this experiment and at IP7 the same person was again asked these questions allowing the comparison of responses at each wave. They were given a set of questions which will assess their attitude to future risks and benefits, which is of interest in many areas of health and well-being, including diet and pension planning.

- The respondent had a random 1 in 10 chance of winning a sum of money of between £2 and £250.
- A total of 91 short questions were put to the respondent using CASI. These covered decisions about preferring a smaller amount now or a larger amount in some months' time, and choices between different

amounts of money with different risks of losing. It was important that respondents answer these questions relatively quickly based on their initial feelings.

- After completing the questions, animations were displayed of a rolling 10-sided die. A roll of '1' indicated the respondent had been randomly selected to win a sum of money.
- The amount won then depends on a random selection of one of the 91 questions. An animation of 91 balls in an urn was played and the randomly selected number displayed.
- Where the question selected was one that described a lottery game, a further die roll animation was displayed and the randomly selected number displayed.
- The payout of this money was handled at the end of the interview. Some respondents were due their payments immediately and others between the time of the interview and 13 months in the future. Respondents who won money were given or sent gift cards, with the relevant amount loaded within 48 hours.

There was a concern with this module that it would be regarded as gambling by some respondents and thus considered inappropriate. For this reason there were two points in the module where the interviewer (or CAWI) checked whether the respondent was happy to continue. If they were not, the respondent was routed past the remainder of the module. At the first opportunity to refuse, 14% of respondents did so. A further 9% refused at the second opportunity. Overall, 78% of those eligible for this module answered all 91 questions. Only those who answered all 91 questions were eligible to win a prize. The completion rate was slightly higher for CAPI (81%) compared with CAWI interviews (75%).

A further issue for the implementation was convincing participants that there really was a chance of winning a relatively substantial sum of money. This was essential to ensure engagement with the questions. As part of the approach, animations of a rolling 10-sided die and an urn containing 91 balls (representing the 91 questions) were developed to convey the process of random selection.

Interviewers reported varied levels of apparent engagement with the module, with some individuals clearly engaged throughout and others complaining that the questions were very repetitive and hard to follow.

Refreshment sample members were **not** asked the questions on time and risk preference.

3.3 Audio recordings via CAPI

Some parts of the CAPI interview were audio recorded. This also happened at IP2-5, so some respondents were already familiar with this process. A consent question was included towards the beginning of both the household questionnaire and each individual questionnaire and, if the respondent agreed, the laptop worked as a sophisticated tape recorder, switching on and off automatically at the relevant questions.

The main questions that were audio recorded were a block of questions using dependent interviewing. Interviewers reported that they had experienced few problems in the field; respondents tended to be happy to be audio recorded. The only issue that arose related to the length of the microphone cord which was on occasion felt to be too short. An initial review of recordings showed the quality of audio data collected to be high. These files were organised into an Excel sheet from which the recordings could be accessed for listening directly. This sheet and accompanying audio files were delivered to ISER for more detailed analysis.

Among CAPI respondents, 80% agreed to be audio recorded and 20% refused. In a small number of cases (46 interviews) the permission to record questions was not asked, due to interviewers not correctly installing the recording software onto their CAPI machines. In these cases no questions were recorded.

3.4 Finger length measurement

This module aimed to test the feasibility of measuring prenatal testosterone exposure through finger length ratios. The ratio of the index and ring fingers is a stable marker for prenatal testosterone exposure which has been found to be associated with a wide range of character traits and health and other life outcomes.

Measuring finger length was included in IP6 for the first time and was repeated at IP7. Those participants who had their fingers measured at IP6 were not asked to do so again. Measurements were only taken from new participants (rising-16 year olds, new entrant adults, refreshment sample adults and non-responders at IP6 who took part this time). Young people (10-15) were asked to take measurements of their own fingers as part of their self-completion youth questionnaire.

Measures of the ring and index fingers of both hands were taken, including in the CAWI and CATI modes of the instrument. Where interviews were conducted face to face, interviewers took the measurements using a set of electronic callipers that provided measurements to within a hundredth of a millimetre. Many interviewers felt that they were the wrong tool for the job, partly because

they were not designed to measure fingers specifically and partly due to how sharp they are. However, they reported few objections to taking the measure. Indeed, many participants were intrigued by the reasons behind the study and were keen to find out more about its associations with life outcomes.

For the CAWI and CATI instruments, participants were prompted to find a ruler or tape measure with which to take the measurement. A description (CATI) and an image (CAWI) were then used to describe the process for taking the measurements.

- Among respondents to the CAPI, 6% refused to have their fingers measured.
- Among CAWI respondents, 40% agreed to carry out the measurements, 27% refused and 33% said they did not have a means of carrying out the measurement.
- Finger measurement information was missing from 16% of returned youth self-completion booklets.

3.5 Time Diary

A time diary was included in IP7 for the first time and collected data on exactly how respondents spend their time. Researchers are interested in the dynamics of the division of domestic labour, work/leisure balances and differences in parenting time. All adults were asked to complete two diaries: one covering a week day and the other a weekend day. All household members were asked to complete a diary for the same days of the week. Households were randomly allocated to a day of the week and a weekend day[2]. All adults received an unconditional £5 incentive; this was given at the time the interviewers' handed over both diaries.

Where a mobile number and/or email address was provided, respondents were sent text messages and/or emails, reminding them to fill in and return their time diaries. Initially respondents were sent a text message and/or email reminder both on the day before and the due completion date. However, following a small number of complaints from respondents, it was agreed to only send a single reminder on the day of completion. A telephone reminder stage was also included in an attempt to boost the diary completion rate. All respondents who had not returned their diary within two weeks of the completion date were included in the telephone reminder.

See Section 8.3 for information on the time diary completion rates.

[2] Where respondents were unable to complete on their allocated date, they were instructed to complete their diary on the same day in a subsequent week.

4. Sampling

4.1 The sample at IP7

The sample for the Innovation Panel (IP) is entirely separate from that of the main study. Originally selected from the Postcode Address File, the IP is representative of households in Britain (unlike the main study it does not cover Northern Ireland). Members of IP1 households are designated as Original Sample Members and are followed in subsequent waves whether or not they remain in the original household. Where they create new households, the other members of that household become eligible for the survey in that wave.

The longitudinal sample for IP7 totalled 1,266 households consisting of 2,519 individuals aged 16 and over. A refreshment sample of 1,560 households (1,080 issued at the start of fieldwork and a further 480 midway through fieldwork) was also included.

4.1.1 Core and refreshment samples

The IP7 sample consisted of the core sample, the IP4 refreshment sample and a new refreshment sample for IP7. The core sample was the longitudinal component of the IP7 sample and comprised the established panel households, originally interviewed at IP1. Due to attrition at previous waves, the sample for IP4 and again at IP7 was boosted to bring the panel back to a total of 1,500 productive households to enable analysis of the experimental elements. These additional 'refreshment samples' were PAF samples of new addresses drawn from the same points as the original IP1 sample.

4.1.2 Sample processing

The sample comprised all productive and some unproductive households from IP6. Adamant refusals and households which had not responded for the last two waves were removed from the sample.

4.2 Allocation to experimental groups

Both longitudinal (carried on previous IPs) and new experiments were included at IP7. Randomised allocation into experimental groups (with one exception) was done at the household level. In other words, all eligible adults in a household received the same treatment for any given experiment, as did split households enumerated during fieldwork. This also included any new entrants or re-joiners to issued households. For the "Response options" experiment random allocation took place through the CAPI script and therefore different household members received different versions of the question.

4.2.1 Mixed mode

Web sample

The size of the issued WEB sample at IP7 was 822 households. These households had **all** been previously selected as part of the WEB sample at IP5 and IP6; in other words, sample falling into F2F and WEB groups has not changed between IPs. All members of the WEB sample were invited to complete the survey online 3-5 weeks before the start of the F2F fieldwork. Any WEB cases where the interviewing had not been completed before the start of Phase 2 were allocated to F2F interviewers, although the CAWI remained open during the initial part of this phase.

Face to face sample

The size of the issued F2F sample was 2,004 households; this comprised 444 longitudinal households (also previously allocated to the F2F group) and 1,560 new households as part of the IP7 refreshment samples. Households in the F2F group were interviewed by CAPI interviewers as the only option and were not included in Phase 1 (the CAWI only phase).

4.3 Sample Tranches

As explained, given the intrinsically challenging nature of the Innovation Panel and the substantial changes between waves, a means of testing procedures and the data collection instrument are highly beneficial. However, with no pilot sample and a preference to avoid eating into the main sample for piloting purposes, a staggered start was taken for IP7 (as at IP6) with the first of two 'tranches' of sample being small. In this way, the impact of any changes would be minimised and learning from the initial tranche could be built in to briefings and procedures to improve the quality of the larger second tranche.

Tranche 1 consisted of 10 interviewer assignments. These clusters were selected to be geographically dispersed and to contain a mix of WEB and F2F households. Tranche 2 consisted of 132 interviewer assignments.

Due to an error (see Section **Error! Reference source not found.** for details) phase 1 (the CAWI only phase) launched on the same day for both Tranches (i.e. both sets of WEB sample were invited to participate in a CAWI interview). Phase 2 (the start of CAPI fieldwork) for Tranche 1 launched two weeks in advance of Tranche 2 to allow the CAWI to CAPI transfer process to be initially tested on a small sample.

5. Phase 1: CAWI data collection

5.1 Overview of Phase 1: CAWI only

- This Phase applied to the WEB experimental group only and comprised a CAWI option only.
- The aim of Phase 1 was to encourage as many sample members as possible to complete the survey via CAWI. In particular, the aim was for whole households to complete the survey online in its entirety, as cost savings are highest where an interviewer is not required to go to the household at all during fieldwork.
- Phase 1 lasted 3 weeks for Tranche 1 and 5 weeks for Tranche 2. This imbalance was caused by an error in fieldwork administration which meant invitation emails were sent to both Tranches on 21st May (see Section 2.4.1 for details).
- A letter was sent initially to each individual, and followed up the next day with an email to those where email addresses were available.
- Two reminder emails and one reminder letter were sent during the Phase 1 period where a CAWI interview had not been completed. The reminder letter also acted as an advance letter for the CAPI stage.
- Letters included the URL for the study and a unique passcode. Emails contained a unique link that, when clicked on, took participants straight into their own CAWI survey.
- Before they entered the questionnaire, they were asked to confirm their identity (name and date of birth). This log in procedure was repeated every time the participant left the questionnaire to come back to it later.
- The advance correspondence also informed participants that they could not complete the survey using smart-phones. Where smartphones were used, access was blocked and a page presented explaining that the survey could only be completed via a PC or laptop (tablets were not blocked). This was due to many questions not being optimised for small screen sizes. Blocks were also placed to prevent completion with unsupported browsers and in cases where JavaScript had been disabled.
- A telephone / email support line was in operation throughout the period to provide technical support. Respondents could contact both ISER and TNS BMRB with queries.

5.2 Encouraging CAWI completion

5.2.1 Initial letters and emails

Contact with sample members in Phase 1 was via email and letter only – there was no attempt to systematically encourage participation by phone unless the

support line was contacted proactively. For this reason, emails and letters needed to be as effective as possible. The advance materials used at IP7 followed the same design as those used at IP6 prior to which a design agency, WDMP, was commissioned to assist with their redesign. The result was more succinct emails and letters that aimed to be a call to action and visually engaging. The design also needed to take account of the incentive experiments.

5.2.2 Other mailings

Letters and emails for new entrants
For the WEB group, once enumeration took place via CAWI, a letter was sent to all new household members identified in the grid. If the grid collected an email address for the new entrant, an advance email was also sent. The advance letter included the online questionnaire URL and unique access code for the participant. New entrants received a standard version of the advance letter that included the household experimental elements.

Reminders for Web participants
Non-responders in the WEB sample received two email reminders and one letter reminder. The table below shows the timings of reminders.

Table 5.1	Timetable of reminders for WEB participants			
	Tranche 1	Days after invitation	Tranche 2	Days after invitation
First reminder email	29 May	8	5 June	14
Second reminder email	5 June	14	12 June	21
Reminder letter	6 June	15	13 June	22

The timing of reminders differed for the two tranches to account for the longer CAWI only period for Tranche 2.

Respondents who started their questionnaire online but logged off without finishing it received an email or a letter encouraging them to log back in and complete the questionnaire.

5.2.3 Incentives for WEB participants

Respondents received different levels of incentives depending on: which incentive group they were randomly allocated to; and whether they participated at IP6. See Section 3.1.2 for more details on the levels of incentives given to different respondents.

Incentives were Love2Shop High Street gift vouchers, were included in the advance mailing and were given **per adult** rather than per household.

5.3 CAWI response

Paradata are available from a number of sources that can help describe the nature of response to the implementation of the CAWI. In this section we report on paradata from both the email despatch and from the survey login page.

5.3.1 Email invitations and bounce-backs

Email addresses were available for a total of 997 respondents in the WEB sample. Email invitations were sent to all of these respondents, providing them with a unique link to log-in to their survey. Of the 997 emails despatched, a total of 152 (15%) were blocked, or bounced back. In 142 of these cases (14% of all emails despatched) the email address provided was unrecognised. In the remaining 10 cases (1% of all emails despatched) the email was blocked either due to security polices or issues with the respondent's mailbox. Bounce-backs were individually reviewed by members of the research team to check for obvious errors in email addresses. This resulted in a total of 20 email addresses being updated and emails re-sent to respondents.

5.3.2 Source of entry to CAWI survey and devices used

There were a total of 2,438 attempts to access the CAWI survey across the data collection period. This covers both cases where sample members clicked on their unique link provided in an invitation or reminder email and cases where sample members visited the survey login page included in the advance letter (where they would need to enter a username and password to enter the survey). In total, 1,221 attempts to login were via unique links in emails (50.1% of all attempts), with a further 1,217 visits to the login page using the link in the advance letter (49.9%).

The 1,221 login attempts via email were across a total of 431 different unique links, showing that in many cases sample members attempted to access the survey multiple times, either due to some login attempts being unsuccessful (for example, due to using an unsupported device or outdated browser, or due to someone else in the household accessing the survey at the same time) or to complete the survey in multiple stages.

Table 5.2 shows the devices used to attempt to access the survey, broken down by the source of login.

Table 5.2: Survey login attempts by device type[3]

	Email (unique link)	Letter (login page)	Total
PC/Laptop	77%	81%	79%
Tablet	12%	12%	12%
Small tablet/large phone	3%	1%	2%
Phone	4%	1%	2%
Other/unknown	4%	6%	5%

5.3.3 Devices used to complete the survey

Table 5.3, below, shows the proportion of respondents using PCs/laptops, tablet devices and small tablets/large phones to complete the Household and Individual Sections of the CAWI survey. Devices with a screen size below 7 inches were automatically blocked from the survey.

Table 5.3: Survey completion by device type

	Household interview	Individual interview
PC/Laptop	79%	82%
Tablet	19%	17%
Small tablet/large phone	2%	1%

5.4 Scripting of mixed-mode instrument

The principle for the development of CAI instruments on Understanding Society is that there is common source code that runs the instrument in each mode.

There are 3 main components within the CAI instrument: the household grid, household questionnaire and the individual questionnaire (for each eligible adult aged 16+). In addition, in F2F interviewing an electronic contact sheet (ECS) is included before the start of the household grid. The ECS is an electronic version of the paper Address Record Form (ARF) that has been used for previous IPs. The ECS allows interviewers to enter and confirm details on households, including collecting observational data. It is also linked to TNS BMRB's sample management system, which allows for ongoing monitoring of fieldwork. Further information on the ECS is included in Sections 6.2 and 6.6.1

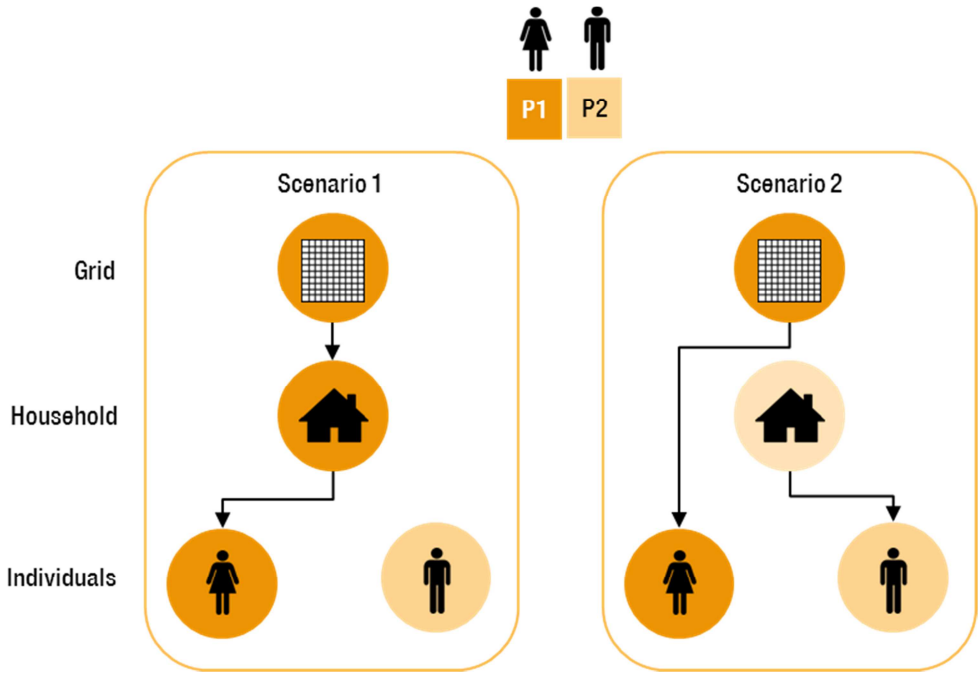
[3] The distinction between tablet devices and small tablet devices is based on screen resolution. Devices with a resolution >= 1,025 pixels are classed as a 'tablet'; those with a resolution less than 1,025 pixels are classed as 'small tablets'. Devices classed as large phones have a resolution >= 640 pixels.

In the CAPI programme the ECS, household grid and household questionnaire are programmed within one instrument and the individual questionnaire is programmed as a separate instrument. Once the household grid is completed, the interviewer is able to move to either the household questionnaire or the individual questionnaire, depending on eligibility.

The CAWI questionnaire was developed as three separate instruments: household grid, household questionnaire and individual questionnaire, although still keeping to the principle of having common source code to generate the different instruments.

There are two reasons why the CAI questionnaire could not exist as one overall instrument. Firstly the functionality to navigate between parallel blocks is not easy to replicate in CAWI, and would be a difficult task for participants. Secondly participants would have access to answers from other household members which would breach confidentiality and be unethical. Keeping the household and individual scripts as separate instruments ensures that participants do not have access to answers provided by other household members. The CAPI questionnaire was structured in this way in part to allow consistency with the CAWI instrument.

The diagram below shows two potential scenarios for which instruments would be answered by people in a two person household.



In Scenario 1, person 1 answers the household grid, and is automatically directed to the household questionnaire and then onto their individual

questionnaire. When person 2 logs on, they are directed straight to their individual questionnaire.

In Scenario 2, person 1 answers the household grid, doesn't answer the household questionnaire, and answers their individual questionnaire. Person 2 would answer the household questionnaire and then their individual questionnaire.

Scenarios 1 and 2 differ because there were rules about who could answer the household questionnaire which were explicitly built into the IP7 questionnaire. The rules were that the household questionnaire could only be answered by either the person (or one of the people) responsible for the mortgage or rent, or by their spouse or partner. These rules were implicit in earlier waves of *Understanding Society*, but needed to be made explicit for CAWI interviewing.

In order to make the CAWI questionnaire appear seamless, participants were initially directed to a web login page. This in turn redirected them to the appropriate instrument that they needed to complete. Respondents were also redirected on completion of the household instrument, to allow immediate access to the individual questionnaire.

In CAPI, household level information used for routing and text substitution is transferred to the individual questionnaire using a local XML file which is written following completion of the household grid. In CAWI, this household level information is transferred to the individual questionnaire using an external SQL database.

5.5 Scripting and testing process

5.5.1 Overview

The bulk of the questionnaire for CAPI and CAWI was the same with routing for each mode type. Once questionnaire modules were programmed they were tested individually using online links. This stage involved testing every question and filter condition, including cases where this varied based on mode of interview. Once the individual modules were signed off, they were slotted into a separate "shell" script for each mode, which managed the interaction between the CAWI and CAPI databases. Where changes were required after the separate scripts had been created these were applied to both versions (where changes applied to both modes). The full CAPI and CAWI scripts were tested extensively and signed-off prior to the start of fieldwork.

5.5.2 Non-standard scripting conventions

The scripting process for IP7 involved a small number of non-standard developments in order to meet the data collection requirements and ensure all experiments could be conducted as specified. These developments are summarised below.

- Audio-recording function: As noted in Section 3.3, parts of the CAPI interview were audio-recorded. The development work required for this involved setting the CAPI script to trigger a bespoke recording program, which records questions in .wav format. The recording function was automatically switched on and off so that only the required questions were recorded.
- Time and Risk Preference videos: As noted in Section 3.2.9, animations were displayed to determine whether respondents had won money as part of the Time and Risk Preference experiment. The animations were the same as those used at IP6. Adobe Flash was used to play the videos for devices where Flash was supported, with an HTML solution made available for other devices.
- Cognitive ability: This section presented respondents with a number of cognitive tasks, including one where they were presented with a string of numbers and were then asked to recall and enter the numbers at the next screen. This involved displaying the string for a set number of seconds before automatically moving on to the next screen. A JavaScript function was used to automatically submit the page after a specified number of seconds.
- Time and Risk Control: In this section respondents were asked a series of subjective time perceptions questions and were asked to select a point on a slider scale to show how far in the future they perceived 1 month, 3 months and 12 months to be. This was developed from a bespoke Application Program Interface (API) used by TNS to render interactive question types. These questions were programmed to allow a respondent to move a "thumb" along a "bar" to select their response. The scale included 100 points (returning values of 0-99) but these were deliberately not displayed to respondents. The width of the bar was 800px on most devices.

5.6 The CAWI instrument

A landing page was developed for panel members who had accessed the survey by entering the URL on the advance letter. Each individual panel member was given a unique username and password and this was printed on their advance letter. When they reached the landing page they needed to enter their username and password to access their survey.

An FAQ page was developed on the landing page that mirrored the icons on the emails and letters and provided more information about incentives, logging in, how to complete the CAWI and background to the study. The support line number and email address was included on the landing page and on every page of the CAWI survey.

5.7 Summary of script updates during fieldwork

A number of script updates were made during fieldwork (covering all modes). These changes are noted in the table below, alongside the script version number and the dates each script version was active.

WUIP7 – CAWI household script

No changes made during fieldwork.

Table 5.4: CAWI individual script

Version	Dates active	Changes from predecessor
1 (1 – 1.5)	21st– 26th May	• n/a.
2 (1.6)	26th – 27th May	• Following a check of the topline data it was found that all cases had values recorded at JBSEMP_1 when this question should only have been asked of selected cases, based on a feed-forward sample variable. Upon checking it was found that data was being incorrectly set for cases where this question was not asked. A script update was applied to correct this issue. The correct cases were being asked this question both before and after this change; the issue only related to the way data was being written for cases correctly not asked it.
3 (1.7)	27th May – 10th June	• The survey completion flag was moved to ensure that all complete correct cases were being auto-recorded in the outcome report.
4 (2)	10th – 11th June	• A small update was made to the Individual script to tighten up the logic for accessing this once the Household section was complete. • At the same time the Time Diary allocation logic was updated, due to specific dates not being calculated correctly (meaning days did not correspond with dates in a small number

		of cases).
5 (2.1)	11th – 13th June	• It was found that the above change to tighten up the logic for accessing the Individual script was not made correctly. This meant that for a period of a few hours the Individual script could not be accessed. The script was quickly updated once this issue was identified to ensure the individual interview could be accessed. See Section 5.5.2 for further details.
6 (2.2)	13th – 16th June	• An update was made to the partial data flag at the end of each module to allow data to be passed between CAWI and CAPI. • The logic for playing videos in the Time and Risk Preference section was updated to ensure consistency between the CAWI and CAPI scripts (see below for further details).
7 (2.3)	16th June – 2nd November (end of fieldwork)	• The script was updated to revert back to previous logic for playing videos in Time and Risk Preference section. This was mistakenly updated on 13th June (see above) to reflect the F2F script logic and resulted in a small number of interviews freezing at this point. See Section 5.5.2 for further details.

Table 5.5: UIP7 – CAPI household script

Version	Dates active	Changes from predecessor
1	13th June – 7th July	• n/a.
2	7th July – 2nd November (end of fieldwork)	• Minor changes were made to the audio-recording function to correct a small number of cases where recordings were cut-off following an interim data check. The script update extended the maximum recording period for each item/ block of items.

Table 5.6: UIP7IV – CAPI individual script

Version	Dates active	Changes from predecessor
1 (1 – 2.1)	13th June – 22nd July	• n/a.
2 (2.2 – 2.4)	22nd July – 13th August	• A number of modules were removed from the script (Food Safety, Cognitive Ability, Fertility History, Partnership History), to reduce the interview back to

		the target length. See Section 5.5.2 for further details.
3 (3-3.2)	13th August – 2nd November (end of fieldwork)	• An interviewer contacted the office to report a text substitution error in the Time and Risk Payout module. This meant that for a very small number of cases the payout amount displayed here differed from the amount confirmed earlier in the interview. All cases were checked and it was confirmed that all had been paid the correct amount. Once this issue was identified the code for confirming the winning amount text in the Time and Risk Payout module was corrected.

5.7.1 **Further information on script updates**

As noted in Table 5.4, a change was made to the CAWI script on 10th June which tightened up the logic for accessing the individual interview once the household section was complete. Unfortunately this prevented respondents from being able to access the individual interview at all and for a short period people were blocked from the individual section. The issue was spotted initially due to respondent queries and the script was updated early on 11th June. In total 10 people were temporarily blocked from accessing their individual interview on completion of the household section. Six of these individuals later returned to complete their CAWI interviews.

Also noted in Table 5.5, a change was made to the videos in the Time and Risk Preference section to ensure consistency between the CAPI and CAWI scripts which in turn created an error whereby the videos did not play and could not be bypassed in the CAWI script. This issue was flagged on 13th June and resolved on 16th June through a further script update. A total of nine interviews were blocked at the point the Time and Risk Preference videos were due to be played and could not proceed further until the script was updated. These nine respondents were contacted once the issue was resolved, to ask them to go back and complete the survey (from the point of the videos). Of the nine cases, seven later completed their CAWI interviews.

As noted in Table 5.6, the CAPI script was updated midway through fieldwork to reduce the interview length. This change involved removing four modules (Food Safety, Cognitive Ability, Fertility History and Partnership History) from the individual CAPI script. Until this point the median interview length (63 minutes) was substantially over the level assumed at the start of fieldwork (51 minutes) and was impacting negatively on interviewer morale and fieldwork progress. The

median length was particularly long for refreshment sample respondents prior to these cuts being made, with a median length of 68 minutes for these interviews. The removal of these sections brought the median interview length back in line with original expectations.

5.7.2 CAWI database issue

In addition to the above script changes, a further issue was identified with the CAWI database during the early stages of fieldwork that affected survey completion. While the household and individual questionnaires are two separate instruments they act as one single CAWI survey from a respondent perspective. Information is fed-forward from the household to the individual script and the individual script does not operate fully if this process fails. Late on 27th May a database issue was identified which meant household data was not being passed to the individual questionnaire. A decision was taken to take the survey down (with a message displayed to respondents to this effect) until this issue was resolved. The survey was taken down on 19:09 on 27th May and was back up at 11:04 on 28th May. In total nine respondents had started to complete an individual interview and could not proceed further until this issue was resolved. The individual data entered in these cases was wiped and all were contacted to request that they attempt to complete the survey from the start again. Of the nine respondents affected, seven later completed their CAWI survey again from the beginning.

6. Phase 2: CAPI fieldwork

6.1 Overview of Phase 2

- Both the WEB and F2F samples were included from the start of Phase 2 in the CAPI fieldwork.
- WEB households and individuals that had not participated via CAWI during Phase 1 were transferred to interviewers' assignments alongside F2F sample members.
- This included cases that had been started via CAWI but not completed – household grid and questionnaire information was brought forward into the CAPI questionnaire so that the field interviewer could continue from the beginning of the section where the respondent had previously left the survey.
- F2F sample members were sent an advance letter a few days before fieldwork commenced, with no mention of the CAWI.
- The CAWI questionnaire remained open for WEB sample members only for the first 4 weeks of the Phase 2 fieldwork period.
- Because sample members could complete the CAWI after cases had been allocated to interviewers, it was important to set up systems to enable interviewers to track this.

6.2 Distinguishing sample types and sample updates

The Electronic Contact Sheet (ECS) was adapted to allow interviewers to access a new 'status summary' screen which showed the status of all individuals in both CAWI and CAPI households (e.g. whether not yet started, complete or partially complete). It was stressed to interviewers that it was absolutely vital that, before setting out to interview and WEB respondents, they must check the 'summary status' screen in Address 0 in ECS for any updates.

There were some problems with the status summary during the initial launch which impacted on interviewers' confidence in using it and in the information they gleaned from it. In a few instances interviewers arrived at households where the respondents had already completed in CAWI. The transfer of data between the CAWI and CAPI systems was reviewed at several points over the course of fieldwork to improve the system for interviewers.

In addition to the status summary screen, interviewers were also informed of updates to the status of WEB sample members throughout the fieldwork process. This was handled in the same way as passing on office refusals to interviewers, with members of the TNS Field management team informing interviewers of updates by phone, email and text message.

Interviewers Helpline
Interviewers could contact TNS BMRB with queries throughout the fieldwork period. Contact numbers were provided for both the TNS BMRB research team and the CAPI helpdesk. Interviewers were also in regular contact with their regional coordinators to provide updates on progress.

6.3 Managing mixed mode assignments

The mixed mode aspect of IP7 brought some additional considerations to interviewers' efforts of getting high response rates. The briefings included sessions where interviewers could flag and discuss with researchers the issues and challenges that the mixed-mode approach might pose on the door-step. Interviewers were encouraged to share tips of successes and best practices from previous experience.

Interviewers were briefed to prioritise the CAPI option and push for a Face-to-Face interview unless participants specifically expressed a preference to complete the questionnaire online. In cases where participants preferred to complete online, interviewers were briefed to make sure the participant had all the information they needed to hand to log on to their questionnaire. The interviewers called back to check whether participants were managing or whether they needed any support or assistance. Interviewers were briefed to continue to call back until they reached a final outcome.

The CAWI questionnaire remained open for the first four weeks of the CAPI fieldwork period, so respondents in the WEB group could participate in either mode. The earlier closure of the CAWI instrument was meant to help interviewers achieve a productive CAPI interview with respondents who expressed a preference for the web survey but who for one reason or another never actually completed it online.

6.4 Briefings

Eight half-day briefings were carried out by the TNS BMRB research team, with input from the ISER team who provided background to the experimental nature of the study and described previous findings. Each briefing covered the background to IP7, its main research objectives, the study timetable, sample design, survey design (including experimental elements), a discussion session on covering and managing WEB households, an overview of the survey instruments and procedures, and methods for minimising non-contact and maximising response rates.

All eight briefings were conducted in the standard format with a member of the research team leading a group of interviewers through the content of the session

and dealing with any questions that arose. The locations of the briefings gave a wide geographic spread: London (x 2), Warwick, Newcastle, Bristol, Manchester and Edinburgh.

The briefings took place between 23rd May and 19th June 2014, with a total of 101 interviewers attending the briefings. A debrief also took place in September with a selection of interviewers from different areas. All interviewers working on the survey were provided with feedback forms and were asked to fill and return them to the TNS BMRB research team at the end of fieldwork.

A full list of interviewers' materials can be found in Chapter 11.

6.5 Contact and co-operation

In previous waves each adult in the sample was sent a findings report and Change of Address card around six months after their interview. The between-interview mailing was re-designed for IP6 following a qualitative study carried out with Understanding Society participants. Instead of one findings report used for the whole sample, each adult received one of three tailored findings documents. Variations were based on factors such as employment, ethnic group and age. The mailing also included a letter and change of address card.

6.5.1 Between-wave mailing experiment

Between IP6 and IP7 a between-wave mailing experiment was conducted, whereby respondents were allocated to two random groups and either sent one mailing between IPs or three mailings.

6.6 Contacting sample members

For the F2F sample and WEB sample that was transferred to CAPI, the first contact with a household was always attempted via a personal visit from the interviewer at the issued address. Interviewers were briefed not to telephone households to make contact in the first instance. The reason for this is that telephone contact is likely to increase the risk of refusals and therefore would not be appropriate at this stage. Interviewers were required to be flexible and make appointments where necessary, in order to achieve full interviews with all eligible sample members in a household.

6.6.1 Electronic Contact Sheet (ECS)

The management of interviewers' assignments at TNS BMRB takes place via the Electronic Contact Sheet (ECS). The ECS sits at the beginning of the household interviewing script (accessed through Screen 0). This is where interviewers enter all information about their contact with the address. It is important that **every**

contact made with an address is recorded on the ECS and returned electronically to the office **at the end of each working day**.

6.6.2 Sample Information Sheet (SIS)

A Sample Information Sheet was provided to interviewers for each household in their issued sample. This contained extra information from the households last interview and was designed to help interviewers when contacting the household and planning the interview. The SIS also showed information on: the incentive amount for each member of the household and whether it was conditional or unconditional; whether the household was originally allocated to WEB or F2F; login information for WEB households; and whether household members were eligible for digit length measurement.

6.6.3 Doorstep documents

Interviewers were given a number of documents for use on the doorstep. They were provided with a laminated generic advance letter to show to participants to aid recall of the mailing. They were also given copies of an information leaflet ('*Understanding Society*: Facts for Participants'), to be used as required and in particular with new entrants to the study. Interviewers were also provided with study branded appointment cards, (for use to leave messages when there was no answer or when a participant had missed their appointment), and a two-sided A5 doorstep flyer including basic information about the study.
Interviewers were not initially provided with spare copies of the refreshment sample letters. However, early in the fieldwork period a number of interviewers reported that spare letters would help them introduce the survey, in cases where household members did not recall receiving the original letter. As a result, a supply of spare refreshment sample letters was sent out to all interviewers working on the survey.

6.6.4 Movers and tracing sample members

Those individuals who had moved since their last interview were traced by interviewers in the field. There are three possible types of moves: a whole household move, where the household has moved together to a new residential address; a split household, where one or more members of the original household have moved to one or more different addresses; and situations where a sample member had moved to an institution (i.e. nursing/ care home/ hospital) and were eligible for interview.

Interviewers were required to complete a number of tracing activities in order to find a potential follow up address, and were provided with tracing and stable contact letters that they could use to help them obtain a new address from the people they spoke to (e.g. sample members' previous neighbours, new occupiers

of their old address, a 'stable contact' person nominated by the participant as someone who would know where they are if they moved).

6.7 Incentives for F2F participants

F2F members all received £10 with the exception of the refreshment sample members. These were divided into three roughly equal groups receiving £10, £20 or £30. See Section 3.1.2 for more details on the different levels of incentives given to different respondents.

For refreshment sample members (who were all part of the F2F sample) an advance letter was sent to the household, containing one incentive; interviewers were then required to issue incentives to remaining household members. This is because the sampling frame for the refreshment sample contained only the address and no information on residents.

Interviewers also issued incentives to any adults who reported not having received their incentive; new entrants in longitudinal sample households; adults in the conditional incentive group; and young people who completed a self-completion booklet (£5 unconditional incentive). Interviewers were provided with a stock of additional incentives which they monitored and requested further supply where required. The impact of these incentives on CAWI completion and overall response is explored in Section **Error! Reference source not found.**.

6.8 Return of work

Interviewers were asked to return work electronically at the end of each working day. This involved completing a 'DAYREC' (with information on calls made each day) and sending back any interviews completed.

7. Phase 3: CAWI mop-up and CATI interviewing

Phase 3 of the data collection started following the close of Phase 2 fieldwork. This included a CAWI mop-up and CATI interviewing. Phase 3 lasted for a total of two weeks.

A small number of cases were selected to be attempted by CATI. These were households/individuals who had previously reported not wanting to or being able to complete the survey online, and those who had completed by CATI at IP6. CATI interviews were conducted by a small team of interviewers in the TNS telephone centre, working from the same CAPI machines used by face-to-face interviewers.

All other outstanding longitudinal sample members were included in the CAWI mop-up. This included members of the original WEB and F2F samples. Letters and emails (where available) were sent to these individuals at the point the CAWI reopened, to encourage completion. In addition, members of the original F2F sample were sent a reminder email shortly before the end of the CAWI mop-up period.

Eligibility for phase 3 included:

- Households where no contact was made during Phase 1 and 2;
- Households where there was an initial contact but either not with a responsible adult or there were no subsequent contacts;
- Soft refusals;
- Broken appointments;
- Households where the interview was not possible during Phase 1 or 2 due to personal circumstances that may have changed;
- Untraced addresses.

Households in the refreshment sample were not attempted by CAWI or CATI. Instead, any outstanding refreshment sample households continued to be attempted by CAPI interviewers during the two week mop-up period.

8. Response

8.1 Household level response

A total of 1,266 continuing households were issued at Wave 7 of the Innovation Panel, having also taken part in a previous wave. Eleven of these were found to be now ineligible for the study (for example, through death or leaving the UK), while 18 new households were created through one or more household members moving to a new address. This resulted in a total of 1,273 longitudinal households being eligible for interview at IP7.

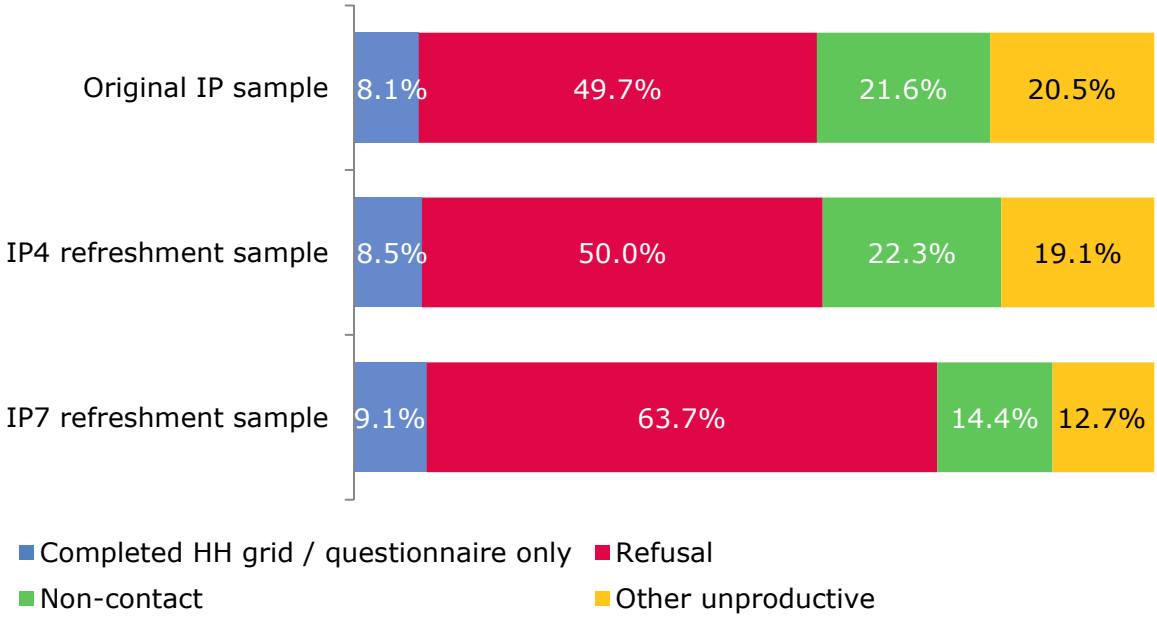
In addition, 1,560 households were issued for the refreshment sample at Wave 7 of the Innovation Panel. 112 were found to be ineligible and 3 further households were created, resulting in a total of 1,451 eligible households making up the refreshment sample.

Of the 1,273 eligible longitudinal households, 78.1% were productive at IP7 (Table 8.1) and 56.4% were fully productive (that is, interviews were completed with all eligible adults in the household). There was very little difference in response for original IP households and those households introduced at the IP4 refreshment sample, indicating that the households introduced at IP4 are now fully integrated into the panel.

The response rate for the IP7 refreshment sample was considerably lower, with 29.2% of households productive. The low productivity was primarily due to the high levels of refusals. 45.1% of eligible households refused to take part, accounting for just under two thirds of unproductive households in the IP7 refreshment sample (Figure 8.1).

Table 8.1 Household response by sample type			
Base: All eligible households	**Original IP sample**	**IP4 refreshment sample**	**IP7 refreshment sample**
Any productive	78.5% 677	77.1% 317	29.2% 423
Fully productive	56.7% 489	55.7% 229	20.3% 294
Partially productive	21.8% 188	21.4% 88	8.9% 129
Any unproductive	21.5% 185	22.9% 94	70.8% 1,028
HH Grid or HH Qnr only	1.7% 15	1.9% 8	6.5% 94
Refusal	10.7% 92	11.4% 47	45.1% 655
Non-contact	4.6% 40	5.1% 21	10.2% 148
Other unproductive	4.4% 38	4.4% 18	9.0% 131
Bases	*862*	*411*	*1,451*

Figure 8.1 Outcomes of unproductive households by sample type



Base (Unproductive households): Original IP sample (185); IP4 refreshment sample (94); IP7 refreshment sample (1,028)

8.1.1 Productivity at IP6

Overall, 82.0% of households that were productive at IP6 were also productive at IP7, with 59.6% fully productive (Table 8.2). In total, a third of eligible households which did not take part in the previous wave were productive at IP7.

Among households that were productive last wave, there was no difference in response for households from the original IP sample and those from the IP4 refreshment sample.

Table 8.2 Household response by sample type and outcome last wave

Base: Eligible households from longitudinal sample	**Original IP Sample**		**IP4 Refreshment Sample**		
	Productive last wave	Unproductive last wave	Productive last wave	Unproductive last wave	**Total**
Any productive	82.1% 650	37.0% 20	81.9% 307	24.0% 6	78.9% 983
Fully productive	59.6% 472	22.2% 12	59.7% 224	8.0% 2	57.0% 710
Partially productive	22.5% 178	14.8% 8	22.1% 83	16.0% 4	21.9% 273
Any unproductive	17.9% 142	63.0% 34	18.1% 68	76.0% 19	21.1% 263
HH Grid or HH Qnr only	1.8% 14	0.0% 0	1.9% 7	0.0% 0	1.7% 21
Refusal	8.6% 68	35.2% 19	8.8% 33	40.0% 10	10.4% 130
Non-contact	3.9% 31	14.8% 8	3.2% 12	28.0% 7	4.7% 58
Other unproductive	3.7% 29	13.0% 7	4.3% 16	8.0% 2	4.3% 54
Bases	*792*	*54*	*375*	*25*	*1,246*

8.1.2 Face-to-face and web allocations

Of the eligible longitudinal households, 442 were allocated to the face-to-face sample and 831 were allocated to the web sample. All households in the IP7 refreshment sample were allocated to the face-to-face sample.

Some households in the web sample were given higher incentives (see Section 3.1.2). However, once the difference in incentive level is accounted for, there is negligible difference in response rates between longitudinal households allocated to the face-to-face sample and those allocated to the web sample (Table 8.3).

Table 8.3 Household response by mode allocation			
Base: Eligible households from longitudinal sample offered £10 up-front incentive	**Face-to-face Sample**	**Web Sample**	**Total**
Any productive	74.0% 327	71.5% 193	73.0% 520
Fully productive	50.7% 224	49.6% 134	50.3% 358
Partially productive	23.3% 103	21.9% 59	22.8% 162
Any unproductive	26.0% 115	28.5% 77	27.0% 192
HH Grid or HH Qnr only	2.3% 10	1.5% 4	2.0% 14
Refusal	12.7% 56	15.6% 42	13.8% 98
Non-contact	5.7% 25	6.7% 18	6.0% 43
Other unproductive	5.4% 24	4.8% 13	5.2% 37
Bases	*442*	*270*	*712*

8.1.3 Incentive groups

Different levels of incentive were given to respondents in households allocated to the Web sample (see Section 3.1.2). The higher levels of incentive made a substantial difference to response rates, with significantly higher response rates seen for households offered a £30 incentive or £10 with a further £20 given on full household completion (Table 8.4).

However, there was little difference in the response for the two £30 incentive groups. Indeed, the households offered £10 with a further £20 on full household completion were no more likely to be fully productive than those given a £30 incentive.

Table 8.4 Household response by incentive group				
Base: Eligible households allocated to web first	**£10 incentive**	**£10 incentive + £20 on full household completion**	**£30 incentive**	**Total**
Any productive	71.5% 193	83.3% 230	85.6% 244	80.3% 667
Fully productive	49.6% 134	63.4% 175	64.9% 185	59.4% 494
Partially productive	21.9% 59	19.9% 55	20.7% 59	20.8% 173
Any unproductive	28.8% 77	16.7% 46	14.4% 41	19.7% 164
HH Grid or HH Qnr only	1.5% 4	1.4% 4	1.8% 5	1.6% 13
Refusal	15.6% 42	8.7% 24	6.0% 17	10.0% 83
Non-contact	6.7% 18	3.3% 9	3.2% 9	4.3% 36
Other unproductive	4.8% 13	3.3% 9	3.5% 10	3.9% 32
Bases	*270*	*276*	*285*	*831*

Households in the IP7 refreshment sample were given unconditional incentives of £10, £20 or £30. Again, a higher response rate was seen for households in the higher incentive groups (Table 8.5), although the £30 incentive was no more successful in improving response rates than £20.

The difference in response rates between the different levels of incentive was much smaller than observed for the longitudinal web sample (see Table 8.4), suggesting that the level of incentive only has a small role in countering the high refusal rates in recruiting new households to the panel. Even among the higher incentive groups, more than two thirds of eligible households in the IP7 refreshment sample were unproductive.

Table 8.5 Household response by incentive group				
Base: IP7 Refreshment Sample	**£10 incentive**	**£20 incentive**	**£30 incentive**	**Total**
Any productive	25.5% 125	31.8% 150	30.3% 148	29.2% 423
Fully productive	18.4% 90	22.0% 104	20.4% 100	20.3% 294
Partially productive	7.1% 35	9.7% 46	9.8% 48	8.9% 129
Any unproductive	74.5% 365	68.2% 322	69.7% 341	70.8% 1,028
HH Grid or HH Qnr only	6.9% 34	5.7% 27	6.7% 33	6.5% 94
Refusal	50.0% 245	41.3% 195	44.0% 215	45.1% 655
Non-contact	9.6% 47	12.5% 59	8.6% 42	10.2% 148
Other unproductive	8.0% 39	8.7% 41	10.4% 51	9.0% 131
Bases	*490*	*472*	*489*	*1,451*

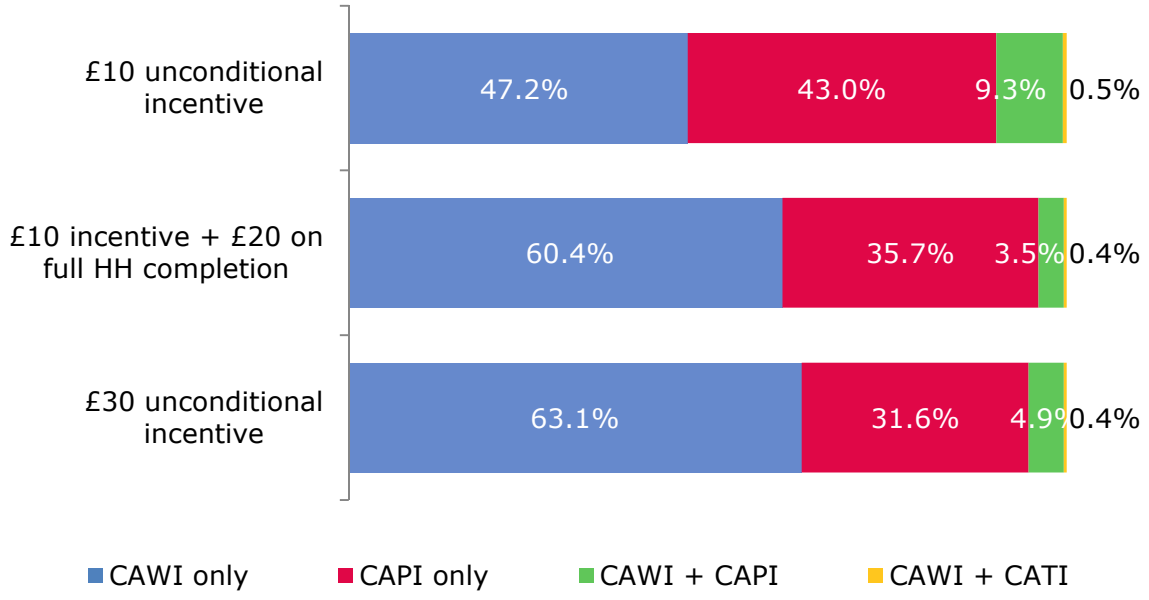
8.1.4 Response rates in different modes

A little less than half of households allocated to the web sample were productive on CAWI only (Table 8.6). A third were fully productive on CAWI only, meaning that it was not necessary for an interviewer to be sent to these households.

The response rate via CAWI was significantly higher for households given higher incentive levels. For households in either of the £30 incentive groups, more than half were productive through CAWI alone while only a third of households given the £10 incentive were productive through CAWI alone. This suggests that the use of higher levels of incentives could be effective in reducing operational costs through reducing the need for interviewers to visit households.

Table 8.6 Mode of completion by incentive group				
Base: Eligible households allocated to web first	**£10 unconditional incentive**	**£10 unconditional incentive + £20 on full household completion**	**£30 unconditional incentive**	**Total**
CAWI only	33.7% 91	50.4% 139	54.0% 154	46.2% 384
CAWI only (fully productive)	22.6% 61	38.0% 105	40.7% 116	33.9% 282
CAPI only	30.7% 83	29.7% 82	27.0% 77	29.1% 242
CAWI + CAPI	6.7% 18	2.9% 8	4.2% 12	4.6% 38
CAWI + CATI	0.4% 1	0.4% 1	0.4% 1	0.4% 3
Unproductive	28.5% 77	16.7% 46	14.4% 41	19.7% 164
Bases	*270*	*276*	*285*	*831*

Figure 8.2 Modes of completion among productive households



Base (Productive households): £10 unconditional incentive (193); £10 unconditional incentive + £20 on full household completion (230); £30 unconditional incentive (244)

8.2 Individual response

A total of 2,301 full adult interviews were conducted for IP7. There were also a further 76 proxy interviews and 25 partial adult interviews conducted in productive households.

This gives an individual response rate for complete interviews within productive households of 81.7% (Table 8.7). Including proxy and partial interviews, the overall individual response rate was 85.3% within productive households.

Although the number of adults in unproductive households is uncertain, an estimate of the total individual response rate for all eligible households can be made using the average number of adults in productive households.

On average, there were 1.99 adults in productive households. Once this is applied to unproductive households, the estimated total individual response rate is 42.5% (including the IP7 refreshment sample), or 68.3% including only longitudinal households.

Table 8.7 Individual response

Base: All adults	**Adults in productive households**	*Adults in eligible longitudinal households**	*Adults in all eligible households**
Fully productive	81.7% 2,301	*68.3%* *2,301*	*42.5%* *2,301*
Proxy productive	2.7% 76	*2.3%* *76*	*1.4%* *76*
Partially productive	0.9% 25	*0.7%* *25*	*0.5%* *25*
Unproductive	14.7% 415	*28.8%* *970*	*55.6%* *3,013*
Bases	*2,817*	*3,371*	*5,415*

**Estimated based on average number of adults in productive households*

Despite the lower household response rate for the IP7 refreshment sample, the individual response rate within productive households was similar across the original IP sample, the IP4 refreshment sample and the IP7 refreshment sample (Table 8.8).

Table 8.8 Individual response by sample type			
Base: Adults in productive households	**Original IP Sample**	**IP4 Refreshment Sample**	**IP7 refreshment Sample**
Fully productive	82.3% 1,121	81.5% 532	80.8% 648
Proxy productive	2.3% 31	2.1% 14	3.9% 31
Partially productive	0.8% 11	1.5% 10	0.5% 4
Unproductive	14.6% 198	14.9% 97	14.8% 119
Bases	*1,362*	*653*	*802*

8.2.1 **Productivity at IP6**

More than nine out of ten adults who took part at IP6 completed full adult interviews at IP7 (Table 8.9). In productive longitudinal households at IP7, more than half of adults who did not take part at IP6 completed a full interview this wave.

Table 8.9 individual response by outcome last wave				
Adults in productive longitudinal households sample	**Productive last wave**	**Proxy last wave**	**Unproductive last wave**	**Total**
Fully productive	90.7% 1,489	28.3% 26	52.0% 89	84.2% 1,604
Proxy productive	0.6% 10	28.3% 26	2.3% 4	2.1% 40
Partially productive	1.2% 19	0.0% 0	0.6% 1	1.0% 20
Unproductive	7.6% 124	43.5% 40	45.0% 77	12.7% 241
Bases	*1,642*	*92*	*171*	*1,905*

8.2.2 Face-to-Face and WEB allocations

Once the differences in incentive levels are taken into account, there was no difference in individual response rates for the face-to-face and web sample (Table 8.10).

Table 8.10 Individual response by mode allocation

Adults in productive longitudinal households given £10 incentive	**Face-to-face Sample**	**Web Sample**	**Total**
Fully productive	80.6% 541	80.5% 313	80.6% 854
Proxy productive	2.7% 18	2.1% 8	2.5% 26
Partially productive	1.3% 9	1.0% 4	1.2% 13
Unproductive	15.4% 103	16.5% 64	15.8% 167
Bases	*671*	*389*	*1,060*

8.2.3 Incentive groups

Despite the larger differences seen in household response rates, individual response rates were similar for the different incentive levels (Table 8.11).

Table 8.11 Individual response by incentive group

Base: Adults in productive households allocated to WEB first	**£10 incentive**	**£10 incentive + £20 on full household completion**	**£30 incentive**	**Total**
Fully productive	80.5% 313	84.0% 389	83.3% 410	82.7% 1,112
Proxy productive	2.1% 8	2.4% 11	1.6% 8	2.0% 27
Partially productive	1.0% 4	0.2% 1	1.4% 7	0.9% 12
Unproductive	16.5% 64	13.4% 62	13.6% 67	14.4% 193
Bases	*389*	*463*	*492*	*1,344*

Similarly, there was little difference in the individual response rates for the IP7 refreshment sample between the incentive groups (Table 8.12).

Table 8.12 Individual response by incentive group				
Base: Adults in productive households from IP7 refreshment sample	**£10 incentive**	**£20 incentive**	**£30 incentive**	**Total**
Fully productive	81.6% 191	81.7% 232	79.2% 225	80.8% 648
Proxy productive	3.8% 9	2.5% 7	5.3% 15	3.9% 31
Partially productive	0.4% 1	0.4% 1	0.7% 2	0.5% 4
Unproductive	14.1% 33	15.5% 44	14.8% 42	14.8% 119
Bases	*234*	*284*	*284*	*802*

8.2.4 **Response rates in different modes**

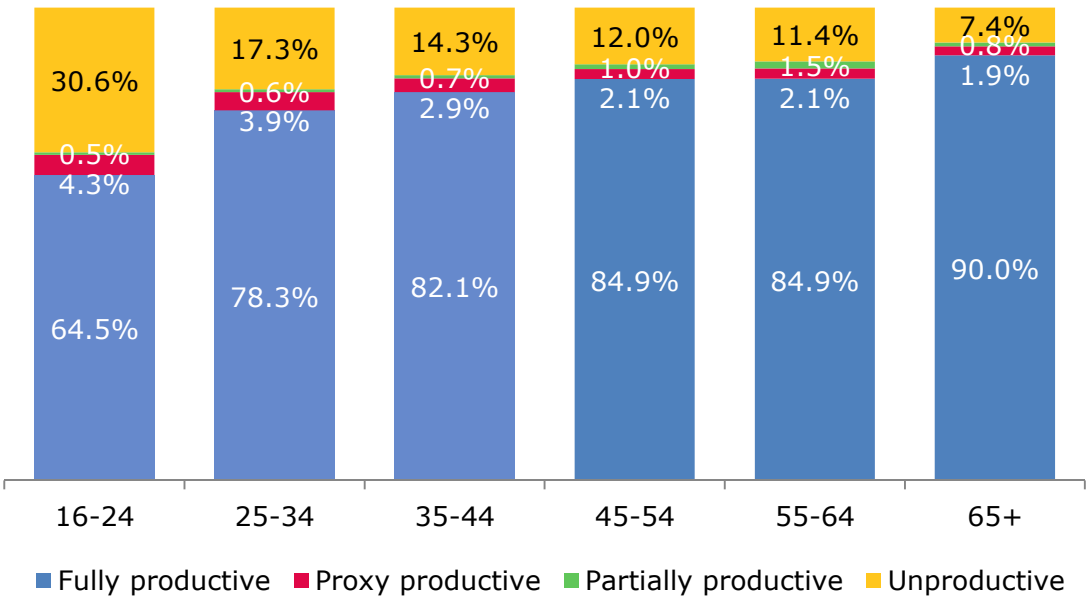
One area where there is a difference between the levels of incentive given is the mode of interview completion (Table 8.13). In total, 53.9% of individuals in households allocated to the web sample completed their interview online. However, this was significantly greater where a higher level of incentive was offered, thus avoiding the operational costs for an interviewer to attempt to achieve an interview with these respondents.

Table 8.13 Mode of completion by incentive group				
Base: Adults in productive households allocated to WEB first	**£10 incentive**	**£10 incentive + £20 on full household completion**	**£30 incentive**	**Total**
Productive – CAWI	44.0% 171	57.2% 265	58.5% 288	53.9% 724
Productive - CATI	0.3% 1	0.2% 1	0.2% 1	0.2% 3
Productive – CAPI	37.3% 145	26.8% 124	26.0% 128	29.5% 397
Proxy productive (CAPI)	2.1% 8	2.4% 11	1.6% 8	2.0% 27
Unproductive	16.5% 64	13.4% 62	13.6% 67	14.4% 193
Bases	*389*	*463*	*492*	*1,344*

8.2.5 **Response rates by age**

As in previous waves, there was a substantial difference in individual response given the age of respondents (Figure 8.3). Nine out of ten adults aged 65 or above in productive households completed a full interview at IP7. However, this was only two thirds for 16-24 year olds.

Figure 8.3 Individual response rates by age



Base (All adults in productive households): 16-24 (392); 25-34 (336); 35-44 (407); 45-54 (513); 55-64 (517); 65+ (639)

8.2.6 **Youth response**

189 youth questionnaires were received from productive households, as well as a further 8 partially completed youth questionnaires. This represents an overall youth response rate of 79.1% within households where at least one full adult interview was completed.

8.3 Time diaries

All adults in productive households were invited to complete time diaries for both a day during the working week and a day at the weekend.

1,190 respondents completed and returned both diaries, with a further 73 completing the diary for one of their designated days (Table 8.14). The overall response rate was 45.5%. However, the response was much higher among respondents who took part online, with two thirds completing and returning at least one of the diaries.

Table 8.14 Time diary response by mode of interview completion

Base: All adults in productive households	**CAPI interview completion**	**CAWI interview completion**	**Total***
Any productive	49.7% 783	66.3% 495	45.5% 1283
Completed and returned both time diaries	45.6% 718	62.7% 468	42.2% 1190
Completed and returned one time diary	3.0% 48	3.2% 24	2.6% 73
Partially completed time diary returned	1.1% 17	0.4% 3	0.7% 20
Unproductive	50.3% 792	33.7% 252	54.5% 1534
Bases	*1575*	*747*	*2817*

**Total includes cases where the main interview was conducted by telephone (CATI), where proxy interviews were obtained and where no main interview was achieved.*

10. Data preparation

10.1 Data keying and scanning

Youth self-completion questionnaires were scanned by TNS. Responses from the paper questionnaires used for the time diary exercise were recorded by ISER at the University of Essex by data entry.

10.2 Data coding and editing

The majority of data validation was carried out in the field. Extensive range and consistency checks were included in the CAPI program in order to prompt interviewers to clarify and query any data discrepancies directly with the respondent in real time. Equivalent checks were built into the CAWI program to query unlikely or unfeasible responses with respondents as they progressed through the interview.

Both hard and soft checks were built into the scripts. Hard checks required the interviewer/respondent to change a response before progressing to the next question and were used for unfeasible response combinations. Soft checks were used for unlikely but feasible responses and prompted respondents to review their answers before progressing further.

All CAPI and CAWI cases were also passed through an in-house edit to identify any further issues.

All self-completion data was passed through an edit to check for any respondent routing and coding errors.

10.3 SIC and SOC coding

Four-digit SIC and SOC coding was carried out in the employment and proxy sections of the questionnaire.

10.4 Reconciling outcome codes

All outcome codes were reviewed at the close of fieldwork. This process involved assessing final CAPI and/or CAWI outcome codes recorded for each household and individual and ensure that the correct outcome was taken. Consistency checks were also carried out between the household and individual outcomes – e.g. ensuring that only households where all eligible adults had completed an interview were given a fully complete household outcome code.

11. Fieldwork documents

Document	Format	Quantity
Assignment materials		
Assignment Map		1 per area
Results Summary Sheet		1 per area
Assignment Sheet		1 per area
Sample Information Sheet (SIS)		1 Per HH
Police Form	TNS letterhead	2
Interviewer Pay Chart	White	1
Interviewer Feedback Form	White	1
Supporting materials/information		
Project Instructions		1
Showcards	A5 card, Green cover	1
Information Leaflet	Colour	5
'Understanding Society in the News' slide	Laminated	1
Advance Letter (generic)	Laminated	1
Self-completion questionnaires		
Youth questionnaire (self-completion)	Green A5 booklet	10
Adult Time Diary (weekdays)	Green A4 booklet	10
Adult Time Diary (weekend days)	Blue A4 booklet	10

Document	Format	Quantity
Special equipment		
Finger length measurement memo	White	1
Digital vernier callipers	-	1
Handsfree microphone	Black	1
Letters, cards and flyers		
Tracing Letter	White A4	10
Stable Contact Letter	White A4	10
Thank you flyer	Colour	20
MRS leaflet	Colour	20
Change of Address card	White card	10
Interviewer card	White A6 card	20
Envelopes		
ISER Freepost Envelope	White DL	15
'Private and Confidential' privacy brown envelopes for youth questionnaire	Brown C5	10
Freepost brown peel and seal envelopes addressed to High Wycombe (for returning youth questionnaires in their privacy envelopes and Adult Time Diaries)	Brown C4	35
Pre-stamped/Queen's Head 1st Class Blank envelope (for sending Tracing and Stable Contact letters)	White DL	10
Gift voucher/Gift card materials		
Incentive book – standard 32 page receipt book – CAPI specific	-	1
Love2Shop Gift voucher £10	-	10
Love2Shop Gift voucher £5	-	15
Love2Shop Gift cards: Time/Risk experiment	-	2
Promissory notes book: Time/Risk experiment	White A6 card	10