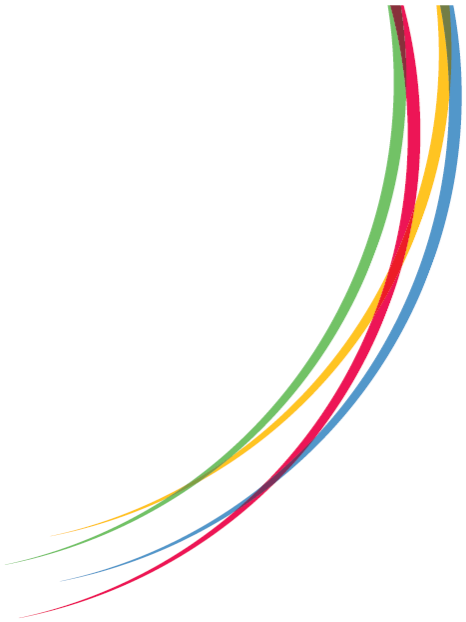

Understanding Society
The UK Household Longitudinal Study
Innovation Panel, Waves 1-6,
User Manual

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1. OVERVIEW

The Innovation Panel (IP) is a separate survey, conducted as part of the UK Household Longitudinal Study, *Understanding Society.* It is designed for experimental and methodological research relevant to longitudinal surveys. As far as practical its design, content, and data collection procedures are similar to the main stage *Understanding Society* survey.

The IP has multiple experimental studies in which households are randomly assigned to a particular instrument or survey procedure. It is important to understand all the different experimental manipulations in which a household may be involved, since the experiments might interact. It is particularly important to note the variations in variable names related to different experimental versions of the questionnaire.

Researchers might also be interested using the Innovation Panel for non-experimental research. As an example, researchers might use measures incorporated in the Innovation Panel but not in the main *Understanding Society.*

2. ROUTE GUIDE FOR USERS OF INNOVATION PANEL DATA

As an introduction to the IP data we recommend the following reading:

1. The summary of the methodological studies and experiments and corresponding variables (Section 3).

2. The notes on naming conventions (Section 7), summary content of the questionnaires (Section 8), structure and content of data files (Section 9), information on derived variables and identifiers (Section 10), and how to read the questionnaires (Section 11).

3. The description of the sample design (Section 4), weighting (Section 5), and fieldwork procedures and outcomes (Section 6). Several experiments have involved different fieldwork procedures or multiple modes of data collection so also see Section 3 on experimental studies.

4. The example Stata code for matching variables from different records and waves (Section 12).

3 EXPERIMENTAL STUDIES

Each wave of the Innovation Panel has experiments related to measurement or fieldwork procedures, or to address substantive social science questions. Researchers may have research questions related to the experimental manipulation or simply need to be aware of potential effects the experiment may have on their own research questions. This information may also be useful in formulating research ideas. Researchers can apply in an annual competition to have their own methodological studies on the IP, see

https://www.understandingsociety.ac.uk/research/get-involved/innovation-panel-competition.

We summarise the experiments carried in Waves 1 through 6 of the IP. The descriptions identify variables allocating cases to different conditions and other variables relevant to carrying out the experiment. Allocation variables are copied into the next waves as well.

A series of working papers documenting experiments related to Waves 1 through 5 has been published.[1,2,3,4,5] However, researchers should not view existing analyses as having exhausted the scientific value of a study.

This table summarises experimental studies for Waves 1- 6, categorised as procedural or related to measurement. Studies have been given a brief name and are described in greater detail below.

Table 3.1. Overview of experiments by wave

	W1 A	W2 B	W3 C	W4 D	W5 E	W6 F
Procedural						
Incentives and Response	×	×	×	×	×	×
Mixed Modes		×			×	×
Showcards	×	×	×			
Advance Materials		×			×	×
Interviewer Observations				×		

[1] Burton, J. (2008). Understanding Society: Some preliminary results from the wave 1 Innovation Panel. Understanding Society working paper No. 2008-03, https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2008-03.

[2]Burton, J, Laurie, H, & Uhrig, SCN. (2010). Understanding Society Innovation Panel wave 2: methodological experiments. Understanding Society Working Paper working paper 2010-04. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2010-04.

[3] Burton, J, Budd, S, Gilbert, E, Jäckle, A, McFall, SL, & Uhrig, SCN. (2011). Understanding Society Innovation Panel wave 3: results from methodological experiments Understanding Society working paper 2011-05. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2011-05.

[4]Budd, S, Gilbert, E, Burton, J, Jäckle, A, Kaminska, O, Uhrig, SCN, et al. (2012). Understanding Society Innovation Panel wave 4: results from methodological experiments. Understanding Society working paper 2012-06. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2012-06.

[5] Burton, J. (ed.) (2013). Understanding Society Innovation Panel wave 5: results from methodological experiments. Understanding Society working paper 2013-06. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2013-06.pdf

Re-Issue Letter				×		
Early Bird Scheduling				×		
Measurement						
Consumption/Expenditure	×					×
Random Subsets of Content	×	×	×	×	×	
Satisfaction	×	×	×		×	×
Identity		×				
Change Measures		×	×	×		
Dependent Interviewing			×	×	×	
Wealth			×			
Branched and Unbranched Ratings			×	×	×	
Measurement Contexts				×	×	
Asking for Consent				×		
Mode Preferences				×	×	×
Paper vs. Computer Aided Self Completion				×	×	×
Energy Use					×	×
Vignettes					×	×
Costs/Benefits of Higher Education					×	
Disability Measures Data Quality						×
Item Recall						×
Item Non-Response						×
Time & Risk Preferences						×

PROCEDURAL EXPERIMENTS

3.1 INCENTIVES AND RESPONSE

A set of randomised assignments related to payment of respondent incentives extends across Waves 1-6 of the IP. At Wave 6, experimental allocation was nested within mixed mode treatments (See MIXED MODE EXPERIMENTS). Households within

primary sampling units (PSUs) were randomly allocated to treatments within PSUs. All enumerated adults within a household received the same incentive offer. Tables 3.2 and 3.3 summarise the allocation variables and incentive amounts for the 6 waves.

At Wave 1, each household received an initial unconditional £5 incentive sent with the advance letter, which was "topped-up" with the total incentive amount for the household after the interview. It contrasts lower and higher payments, uniform for the household, with a higher incentive if all eligible enumerated adults in the household were interviewed. The experimental treatment groups were as follows:

Group 1 – £5 per interviewed household member
Group 2 – £10 per interviewed household member
Group 3 – £5 per interviewed household member increasing to £10 per person if all eligible enumerated adults in the household were also interviewed

The variable in the data that controls allocation at the household level is A_GROUPINCENTIVE on the record A_HHSAMP_IP.

At Wave 2, the incentive experiment had some groups where the payment amount was the same as at Wave 1 and some where the payment level was reduced. Incentives were sent in advance of fieldwork to named individuals through a postal mailing. Rising 16 year olds newly eligible for an adult interview at Wave 2 received an advance mailing with the appropriate adult incentive. The complete co-operation top-up (in Group 5) was posted to households once the final eligible person was interviewed. Within PSUs, households were randomly allocated to each of the 5 treatment groups. All adults within each household received the same treatment:

Group 1 – Receive £5 (as per IP1)
Group 2 – Receive £10 (as at IP1)
Group 3 – Receive £5 (reduction from £10 at IP1 to £5 at IP2)
Group 4 – Receive £5 rising to £10 if complete household co-operation (as per IP1)
Group 5 – Receive £5 (reduction from possible £10 at IP1 to £5)

The controlling variable is B_FF_INCENTW2 on the record B_HHSAMP_IP.

In Wave 3, five of the six treatment groups retained the same treatment as at Wave 2. One of the two groups receiving £10 at both Wave 1 and Wave 2 had the incentive decreased to £5, to test the effect of a decrease at an early stage in the panel. All incentives were sent in advance of fieldwork to named individuals through a postal mailing. Rising 16 year olds newly eligible for an adult interview at Wave 3 received an advance mailing with the appropriate adult incentive. The complete co-operation top-up was posted to households once the final eligible person was interviewed. Households within PSUs were allocated to treatments. There were 6 experimental groups and all adults within each household received the same treatment:

Group 1 – £5 (same at IP1 & IP2)
Group 2 – £10 (same at IP1 & IP2)
Group 3 – £5 (was £10 at IP1 & IP2)
Group 4 – £5 (was £10 at IP1)
Group 5 – £5 to £10 for complete cooperation (same at IP1 & IP2)

Group 6 – £5 (was £5 to £10 at IP1)

The controlling variable is C_FF_INCENTW3 on the record C_HHSAMP_IP.

At Wave 4, some of the continuing sample households received an increase in incentive, from £5 to £10 (See group 2 and group 6 in Table 3.2 below.) Over the history of their participation, group 2 always received £5 in the past, whereas group 6 had started off with £10. All other groups for continuing households remained as at wave 3. The refreshment sample (groups 9, 10, and 11) received larger amounts than those traditional for the UK. See Section 4 about the refreshment sample.

Group 1 – £5 (same at IP1, IP2, IP3)
Group 2 – £10 (was £5 at IP1, IP2, IP3)
Group 3 – £10 (same at IP1, IP2, IP3)
Group 4 – £5 (was £10 at IP1, IP2)
Group 5 – £5 (was £10 at IP1)
Group 6 – £10 (was £10 at IP1 and £5 at IP2 & IP3)
Group 7 – £5 to £10 for complete cooperation (same at IP1, IP2, IP3)
Group 8 – £5 (was £5 to £10 at IP1)
Group 9 – £10 per interviewed household member
Group 10 – £20 per interviewed household member
Group 11 – £30 per interviewed household member

At Wave 4, the controlling variable is D_FF_INCENTW4 on the record D_HHSAMP_IP.

At Wave 5, the Wave 4 conditions were repeated with one exception. Respondents in the experimental treatment receiving £5 unconditionally, rising to £10 if all household members completed the interview, were randomly allocation to receive either a £5 or a £10 unconditional incentive. The result is that at Wave 5, 7/12 of the sample received a £5 incentive and 5/12 received a £10 incentive. All refreshment sample experimental allocations from Wave 4 were repeated at Wave 5.

Group 1 – £5 (same at IP1, IP2, IP3, IP4)
Group 2 – £10 (was £5 at IP1, IP2, IP3, IP4)
Group 3 – £10 (same at IP1, IP2, IP3, IP4)
Group 4 – £5 (was £10 at IP1, IP2)
Group 5 – £5 (was £10 at IP1)
Group 6 – £10 (was £10 at IP1 and £5 at IP2, IP3, IP4)
Group 7 – £5 (was £5 rising to £10 for complete cooperation at IP1, IP2, IP3, IP4)
Group 8 – £10 (was £5 rising to £10 for complete cooperation at IP1, IP2, IP3, IP4)
Group 9 – £5 (was £5 to £10 at IP1)
Group 10 – £10 per interviewed household member
Group 11 – £20 per interviewed household member
Group 12 – £30 per interviewed household member

At Wave 5, the controlling variable is E_FF_INCENTW5 on the record E_HHSAMP_IP.

In addition, Wave 5 had a mixed mode survey interviewing experiment that examined whether incentives can be used to maximize take-up of the web survey. The design had two factors. The first factor was whether the day on which the email invitation to the web survey is sent. The second factor is whether conditional

incentives – offered in addition to the existing unconditional incentives – can increase the take-up of the web survey.

Respondents were allocated to either receive the first email invitation for web interviewing on a Friday or a Monday. This was crossed with an incentive experiment where households were randomly allocated to receive an additional conditional web bonus or no bonus. In the web bonus group, the household reference person was offered a conditional bonus if they complete their part of the survey (household grid, household questionnaire and their individual questionnaire) within 3 days. Once the household grid was completed, all other household members were offered a conditional bonus for completing the web survey. In the control group all household members received the unconditional incentive only.

Group 1 -- Monday, Bonus
Group 2 -- Monday, No bonus
Group 3 -- Friday, Bonus
Group 4 -- Friday, No bonus

The controlling variable is E_FF_INVITEW5 on record E_HHSAMP_IP.

Certain individuals not interviewed on the first visit to the household if face-to-face were approached to do their individual interview either on-line or face-to-face. If on-line, then the offer of a bonus to go on-line was controlled with experimental treatments 1 & 3 versus 2 & 4 on this item.

At Wave 6, experimentation with incentives was nested within mixed mode interviewing treatment (See MIXED MODE EXPERIMENTS). As with previous waves, allocation to experimental treatment groups was at the household level: all individuals within the household received the same experimental treatment and any split-off households retained experimental allocation from the previous household at both the current and all previous waves.

The one-third of households allocated to a face-to-face interviewing approach at Wave 6 were all allocated to a £10 unconditional incentive. For the five of the nine Wave 5 incentive groups in the original sample, this represented an increase from £5. For two of the Wave 5 refreshment sample incentive groups this was a decrease from £20 or £30.

The two-thirds of households allocated to a web interviewing approach at Wave 6 were allocated in equal proportions to three incentive experimental treatments. These were crossed with the Wave 5 incentive treatments. All treatments received an unconditional incentive with differences across them in the amount (£10 or £30) and whether an additional conditional incentive was offered for whole household completion within a two-week web-only interviewing period (See MIXED MODE EXPERIMENTS). The groups are characterised as follows:

Group 1 - £10 unconditional incentive
Group 2 - £10 unconditional with a £20 conditional incentive for full-household completion by web in the allotted time
Group 3 - £30 unconditional incentive

The controlling variable is F_FF_INCENTW6 on record F_HHSAMP_IP.

There were four households in the £10 treatment group who became aware of the £30 treatment group and were sent an extra £20. The variable F_INCENTCOMP on the record F_HHSAMP identifies these cases so that they can be excluded from analyses.

Tables 3.2 and 3.3 document the allocation of cases to experimental groups within mixed mode treatments. In order to reflect all historical incentive treatments, the controlling variable takes 48 unique values. However, only 3 different incentive amounts were used at Wave 6:

Groups 1-12, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40, 43, 46 = £10 unconditional incentive

Groups 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47 = £10 unconditional + £20 conditioned on whole household web completion

Groups 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48 = £30 unconditional incentive

Table 3.2 Incentive experimental allocation for households approached face-to-face (F_FF_GRIDMODEW5 = 1)

CODED VARIABLE						AMOUNT					
ff_group3	ff_incentw2	ff_incentw3	ff_incentw4	ff_incentw5	ff_incentw6	IP1	IP2	IP3	IP4	IP5	IP6
1	1	1	1	1	1	£5	£5	£5	£5	£5	£10
			2	2	2	£5	£5	£5	£10	£10	£10
2	2	2	3	3	3	£10	£10	£10	£10	£10	£10
		3	4	4	4	£10	£10	£5	£5	£5	£10
	3	4	5	5	5	£10	£5	£5	£5	£5	£10
			6	6	6	£10	£5	£5	£10	£10	£10
3	4	5	7	7	7	£5-£10	£5-£10	£5-£10	£5-£10	£5	£10
				8	8	£5-£10	£5-£10	£5-£10	£5-£10	£10	£10
	5	6	8	9	9	£5-£10	£5	£5	£5	£5	£10
Refreshment sample			9	10	10	--	--	--	£10	£10	£10
			10	11	11	--	--	--	£20	£20	£10
			11	12	12	--	--	--	£30	£30	£10

Table 3.3 Incentive experimental allocation for households approached by WEB (F_FF_GRIDMODEW5 = 2)

CODED VARIABLE						AMOUNT					
ff_group3	ff_incentw2	ff_incentw3	ff_incentw4	ff_incentw5	ff_incentw6	IP1	IP2	IP3	IP4	IP5	IP6
1	1	1	1	1	13	£5	£5	£5	£5	£5	£10
					14	£5	£5	£5	£5	£5	£10+£20
					15	£5	£5	£5	£5	£5	£30
			2	2	16	£5	£5	£5	£10	£10	£10
					17	£5	£5	£5	£10	£10	£10+£20
					18	£5	£5	£5	£10	£10	£30
2	2	2	3	3	19	£10	£10	£10	£10	£10	£10
					20	£10	£10	£10	£10	£10	£10+£20
					21	£10	£10	£10	£10	£10	£30
		3	4	4	22	£10	£10	£5	£5	£5	£10
					23	£10	£10	£5	£5	£5	£10+£20
					24	£10	£10	£5	£5	£5	£30
	3	4	5	5	25	£10	£5	£5	£5	£5	£10
					26	£10	£5	£5	£5	£5	£10+£20
					27	£10	£5	£5	£5	£5	£30
			6	6	28	£10	£5	£5	£10	£10	£10
					29	£10	£5	£5	£10	£10	£10+£20
					30	£10	£5	£5	£10	£10	£30

Continued…

Table 3.3 continued…

CODED VARIABLE						AMOUNT					
ff_group3	ff_incentw2	ff_incentw3	ff_incentw4	ff_incentw5	ff_incentw6	IP1	IP2	IP3	IP4	IP5	IP6
3	4	5	7	7	31	£5-£10	£5-£10	£5-£10	£5-£10	£5	£10
					32	£5-£10	£5-£10	£5-£10	£5-£10	£5	£10+£20
					33	£5-£10	£5-£10	£5-£10	£5-£10	£5	£30
				8	34	£5-£10	£5-£10	£5-£10	£5-£10	£10	£10
					35	£5-£10	£5-£10	£5-£10	£5-£10	£10	£10+£20
					36	£5-£10	£5-£10	£5-£10	£5-£10	£10	£30
	5	6	8	9	37	£5-£10	£5	£5	£5	£5	£10
					38	£5-£10	£5	£5	£5	£5	£10+£20
					39	£5-£10	£5	£5	£5	£5	£30

Continued…

Table 3.3 continued…

CODED VARIABLE						AMOUNT					
ff_group3	ff_incentw2	ff_incentw3	ff_incentw4	ff_incentw5	ff_incentw6	IP1	IP2	IP3	IP4	IP5	IP6
Refreshment sample			9	10	40	--	--	--	£10	£10	£10
					41	--	--	--	£10	£10	£10+£20
					42	--	--	--	£10	£10	£30
			10	11	43	--	--	--	£20	£20	£10
					44	--	--	--	£20	£20	£10+£20
					45	--	--	--	£20	£20	£30
			11	12	46	--	--	--	£30	£30	£10
					47	--	--	--	£30	£30	£10+£20
					48	--	--	--	£30	£30	£30

3.2 MIXED MODE EXPERIMENTS

There is considerable interest in using mixed mode strategies for conducting social surveys, in particular to enhance response rates and fieldwork efficiency while at the same time reducing costs. There is also interest in mode differences in survey measures. In Wave 2, Computer Assisted Personal Interviewing (CAPI) and Computer Assisted Telephone Interviewing (CATI) were examined. In Waves 5 and 6, we contrasted CAPI and Web interviewing.

In the Wave 2 mixed mode experiment, the IP2 sample was divided into three equal sized experimental groups, and each group received a different treatment in terms of questionnaire mode and sequence of modes. Within PSUs, households were randomly assigned to experimental treatment – and all individuals within households were treated the same way. There were three experimental groups:

Group 1, CAPI: Households in this group were only eligible for face-to-face interviews.

Group 2, CATI "Move one, move all": All households in this group were issued for telephone interviewing; if one person could not be interviewed by telephone all remaining members were transferred to CAPI. CATI was the mode of first contact, if that mode failed; the case was transferred to face-to-face. If enumeration was completed in CATI, individual interviews would be attempted within CATI until any household member indicated that they were unable to complete the interview by telephone. This may be because they refused, were classified as a noncontact or were unwilling/unable to complete the interview by phone. As soon as one individual interview could not be obtained, all outstanding household members were allocated to field and attempts were made to interview the remaining sample members face-to-face.

Group 3, CATI "Try all": All households in this group were issued to telephone interviewing and more attempts were made to complete interviews by telephone. CATI was the mode used to contact the household. If that mode failed; the case was transferred to face-to-face for follow-up. If enumeration was completed in CATI, individual interviews were attempted within CATI. Households in this group were only eligible to be transferred once attempts had been made to contact and interview all household members by telephone. Attempts to contact each household member by telephone continued even if one household member was unable to be interviewed by telephone. The case was transferred to field for face-to-face interviews only after all eligible adults had either refused, were classified as non-contacts or were unwilling/unable to complete the interview by phone.

Experimental allocation is given by the variable B_FF_MODEW2 in the data file B_HHSAMP_IP. It is important to realize that the household enumeration and household questionnaire could be completed in one mode, with the individual questionnaires being completed in different modes from these or from other individuals interviewed in the household. The variable B_TRTOCAPI on the record B_HHSAMP_IP indicates that the case was transferred at some point from CATI to

CAPI. The variable B_MODETYPE on the record B_HHSAMP_IP indicates the mode the household enumeration was completed in, the variable B_HHMODETYPE in the data file B_HHRESP_IP indicates the mode of administration for the household questionnaire. Finally, the variable B_INDMODE in the data files B_INDALL_IP and B_INDRESP_IP indicates the mode of administration for the individual questionnaire.

The same questionnaires were used for CAPI and CATI, with only some necessary adaptations for telephone, such as dropping references to showcards.

Twenty households and 37 individuals were issued face-to-face and interviewed face-to-face but used the telephone instrument. The variable B_MODEALLERR on the datafile B_INDRESP_IP flags the cases with this error in mode allocation.

Analyses of the IP2 modes experiment have been reported.[6,7,8,9]

3.3 WEB AND FACE TO FACE MODES

At Wave 5 and Wave 6, the Understanding Society IP was used to investigate the use of web interviewing. The incorporation of web into a mixed mode design has potential both to reduce survey costs and improve quality. Initial results of the Wave 5 mixed mode experiment are described in a working paper.[10]

The Wave 5 sample had two components: the original sample, for which this was the 5th wave, and the refreshment sample, for which this was the 2nd wave. Households in both samples were randomly assigned within PSUs to one of two treatment groups:

Group 1 - Face-to-face (one-third of each sample);

Group 2 - Mixed mode (two-thirds of each sample).

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[6] Lynn, P, Uhrig, SCN, & Burton, J. (2010). Lessons from a randomised experiment with mixed-mode designs for a household panel survey. Understanding Society working paper 2010-03. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2010-03.

[7] Lynn, P. (2011). The effect of a mixed mode wave on subsequent attrition in a panel survey: evidence from the Understanding Society Innovation Panel Understanding Society working paper 2011-06. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2011-06.

[8] Nandi, A., & Platt, L. (2011). Effect of interview modes on measurement of identity. Understanding Society working paper 2011-02. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2011-02.

[9] Pudney, S. (2010). An experimental analysis of the impact of survey design on measures and models of subjective well-being. Understanding Society working paper 2010-01. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2010-01.

[10] Jäckle, A, Lynn, P & Burton, J. (2013). Going online with a face-to-face household panel: initial results from an experiment on the *Understanding Society* Innovation Panel. *Understanding Society* Working Paper No. 2013-03. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2013-03.

The Wave 6 sample replicated this allocation with households receiving the same experimental treatment. Wave 6 differed from Wave 5, however, by incorporating a 'mop-up' of uncompleted households at the end of standard fieldwork. The allocation variables and variables reporting in which mode interviews were conducted in both waves are described below.

The distribution of the Wave 5 issued sample of households across samples and mode treatments is summarized in Table 3.4. The randomization was implemented across PSUs, so that each sampling point contained a mix of households in each treatment group.

The face-to-face treatment involved standard *Understanding Society* procedures. Each adult sample member (aged 16 or over) was sent an advance letter with an unconditional incentive, after which interviewers called to attempt computer-assisted personal interviewing (CAPI) interviews. The value of the incentive (in both samples) was subject to experimental allocation. In each household one person was asked to complete the household grid and household questionnaire. All household members aged 16 or over were asked for an individual interview and to complete a self-completion questionnaire, which was randomly allocated to be either a computer assisted self-interview (CASI) or a paper questionnaire booklet. Young people aged 10-15 were administered a paper self-completion questionnaire.

Table 3.4. Number of households allocated to experimental groups

	Original Sample		Refreshment sample	Total
	Responded at Wave 4	Did not response at Wave 4		
Face-to-face	321	43	168	532
Mixed modes	618	110	315	1043
Total	939	153	483	1575

Note: Numbers shown are the numbers of households issued to the field, based on information held prior to the start of field work. During the course of field work, additional (split) households were identified. In the Refreshment sample, only responding households from their first wave (Wave 4 of the panel) were issued at Wave 5.

At both Wave 5 and Wave 6, fieldwork procedures for the web mode treatment were as follows. Sample members aged 16 or over were sent a letter with the unconditional incentive, inviting them to take part by web. The letter included the URL and a unique user ID, which was to be entered on the welcome screen. A version of the letter was additionally sent by email to all sample members for whom we had an email address. For people who had indicated at previous waves that they do not use the internet regularly for personal use, the letter said that they would also have the opportunity to do the survey with an interviewer. Up to three email

reminders were sent at 3-day intervals. Sample members who had not completed the web interview after two weeks were sent a reminder by post and interviewers started visiting them to carry out CAPI interviews. Note that this was the two-week web-only period in which households allocated to the additional £20 incentive conditional on whole household treatment at Wave 6 could qualify for the additional incentive (See PROCEDURAL EXPERIMENTS: INCENTIVES AND RESPONSE). The web survey remained open throughout the fieldwork period.

The first household member to log on to do the web survey was asked to complete the household grid, which collects information on who is currently living in the household. The web grid included an additional question to identify who is responsible for paying bills. The household questionnaire could be completed by either this person or their spouse/partner. For these sample members the household questionnaire was displayed first, then leading on to the individual questionnaire. (The household questionnaire is relatively short –around 10 minutes – and collects household-level information such as housing tenure, rent/mortgage payments, expenditure, utility bills, household consumer durables and some measures of material deprivation.) Once one partner had completed the household questionnaire, it would not appear for the other partner.

The web interview was kept open throughout the entire fieldwork period. At Wave 6 but not Wave 5, interviewers could also call the helpline to ask for the log-on code for an individual, if during their visit the individual said they preferred to complete the questionnaire online but had lost their access code.

At Wave 6 but not Wave 5, interviewers informed sample members in the mixed mode group that the interview would be closed approximately 1 week before the end of the standard fieldwork period to encourage sample members to either complete the web interview or give a CAPI interview.

At Wave 5, the youth survey was administered either on paper or by web, depending on the mode used by the parent(s). If the parent(s) had responded by web and we had their email address, an invitation was sent to the parent by email with a request to forward it to their child. If the parent had been interviewed in CAPI, the interviewer gave the youth the paper self-completion questionnaire. Otherwise a questionnaire was sent by post.

At Wave 6, the youth survey was administered only on paper. Interviewers distributed paper self-completion questionnaires to youth whose parent(s) were interviewed in CAPI. Youth whose parents were interviewed by web were sent a questionnaire by post.

The adult web questionnaire was based on the CAPI one, with some adaptations, e.g. incorporating interviewer instructions into question wording, removing references to showcards, and making “help” screens more respondent-appropriate. There were differences in the visual display of items between the web survey and the computer-assisted self-completion portion of the CAPI administered survey. Notably, self-completion components as part of CAPI were self-administered using the standard Blaise visual presentation ordinarily seen by interviewers. On the web survey, were a

series of items utilised the same set of response options, the items were formatted in a grid rendering a difference in the visual presentation of these items across modes.

The web survey was not suitable for completion using a small mobile device (e.g. smart phone). If a mobile device was used to access the log-on page, the respondent was automatically directed to a page requesting that they log on from a computer.

The Wave 5 mixed mode treatment also included two (crossed) experiments to test ways of increasing web response rates:

- Half the households were offered an additional conditional incentive: if all eligible household members completed the web survey within two weeks, they each received an additional £5. This was mentioned in the advance letters to all household members in this treatment group.
- Half the households were sent the advance letter and first email to arrive on a Friday. The other half were sent them to arrive on a Monday.

The Wave 6 mixed mode treatment included an incentive experiment to test an incentive plan that might increase whole household web response rates:

- One-third of mixed mode households were offered a £30 pound unconditional individual incentive to participate
- One-third of mixed mode households were offered a £10 unconditional individual incentive with an additional £20 per individual if the whole household completed within the two-week web-only period.

Please see PROCEDURAL EXPERIMENTS: INCENTIVES AND RESPONSE for details.

At Wave 6, households who were not completed at the end of the standard face-to-face fieldwork period, and were not adamant refusals, were contacted again in a 'mop-up' stage of fieldwork. This included non-responding individuals in partially responding households. The nature of the mop-up contact was differentiated, however, by mixed mode allocation:

- In the mixed mode group, the 'mop-up' contact was made by telephone. The telephone interviewer reminded the sample member that they could participate on the web, but was also able to administer the Wave 6 interview by telephone (CATI). Cases for which a telephone number was not known were not contacted again at the mop-up stage.
- The face-to-face group was contacted to offer a web interview during the 'mop-up' stage. Individuals were sent a letter with the URL of the web instrument and their unique log-on code. Those for whom we had email addresses, this invitation was sent by email. A few days later, a telephone interviewer contacted all those for whom phone number was known in order to remind them of the web questionnaire, and to administer a telephone interview if possible.

The controlling variables in the data which control mode allocation and related variables containing information on interview outcomes are outlined below. The letter "w" indicates Wave 5 or 6 taking the letters "E" and "F" respectively.

On record w_HHSAMP_IP:

- w_FF_GRIDMODEW5 contains the treatment allocation
- w_IVFHQO indicates whether household questionnaire was completed, note that the household grid is always completed
- w_HHGRIDMODE indicates the mode in which the household grid was completed
- w_HHINTMODE indicates the mode in which the household questionnaire was completed
- w_IVFHO provides a summary of which instruments were completed by the household
- w_HHMODES indicates whether the instruments a household completed were done by face-to-face, web or telephone only, or by using a mix of modes. Note, a cross-tab against w_IVFHO can be used to identify whether the household completed all instruments or whether some are missing at a particular wave.
- w_WEB_OUTCOME indicates the household outcome at end of web-only period
- w_F2F_OUTCOME indicates the household outcome at end of face-to-face interviewing period
- F_TEL_OUTCOME indicates household outcome at end of Wave 6 telephone mop-up period

On record w_INDALL_IP

- w_IVFIO indicates the individual interview outcome
- w_INDMODE indicates the mode in which the individual interview was completed

3.4 SHOWCARD VS. NO SHOWCARD

There were experiments involving showcards in Waves 1-3. Face-to-face interviews often rely heavily on the use of showcards to enhance measurement. However, showcards are not necessarily available in a mixed mode approach to data collection particularly when the use of telephone interviewing is included in the mode mix.

Experimentation in Wave 1 examined whether there may be a primacy effect (selecting the first listed choice) of visual cues when a showcard is used or a recency effect (selecting the last listed choice) if the list is read. Also there was experimentation with different methods of obtaining information on unearned income sources without showcards. The question topics are about labour force status and unearned income.

For the labour force status experiment, there was random allocation of households within PSUs. All interviewed adults within households received the same experimental treatment. The groups are:

Group 1: Question asked using a showcard
Group 2: Question asked as a “read out” without a showcard

The variable for allocation to treatments is A_GROUP2 on the record A_HHSAMP_IP. The variable A_JBSTAT on the record A_INDRESP_IP contains the substantive information.

The experiment also compares three methods of obtaining measures of unearned income sources. These sources include benefits paid by the government as well as money from loans, rents, private grants, and money transfers from private individuals. The British Household Panel Survey (BHPS) protocol for enumerating unearned income sources has relied heavily on showcards to remind respondents of all potential sources in order to obtain more accurate reporting. Such reliance on showcards may not be feasible in a mixed modes approach. The UK Labour Force Survey uses an enumeration protocol that does not rely on showcards but a complex array of filter questions. A three-way split-ballot (different wordings) experiment contrasts the BHPS approach to unearned income enumeration with alternative "no showcard" designs.

Within PSUs, households were randomly allocated to treatments and all adult respondents within households were treated the same:

Group 1 – Original British Household Panel Study version with showcard enumeration
Group 2 – Adapted Labour Force Survey approach without showcards, no filter
Group 3 – Adapted Labour Force Survey without showcards, with two initial filter questions

The variable in the data that controls allocation to treatments is A_GROUP3 on the record A_HHSAMP_IP. A list of items about substantive benefit and payment sources for the three experimental groups follows:

Table 3.5. Variables measuring unearned income sources

Group 1 – showcard	**Group 2 – no showcard, no filter question**	**Group 3 – no showcard, filter question**
a_benpeng11 *to* a_benpeng196 a_bendisg11 *to* a_bendisg196 a_bensupg1 *to* a_bensupg196 a_benpayg11 *to* a_benpayg196 a_nfa_g1 a_nfb_g1	a_btypeg21 *to* a_btypeg296 a_benunempg21 *to* a_benunempg296 a_bendisg21 *to* a_bendisg296 a_bendlag21 *to* a_bendlag296 a_benpeng21 *to* a_benpeng296	2 initial filter questions: a_benefit_g3 a_payment_g3 a_btypeg31 *to* a_btypeg396 a_benunempg31 *to* a_benunempg396 a_bendisg31 *to* a_bendisg396

a_nfc_g1 a_benalg11 *to* a_benalg196 a_nfe_g11 *to* a_nfe_g13 a_nff_g1 a_nfg_g1 a_f2_g1 a_niserps	a_niserps2 a_benctcg2 a_benfamg21 *to* a_benfamg296 a_bentaxg21 *to* a_bentaxg296 a_benhoug21 *to* a_benhoug296 a_benstag21 *to* a_benstag296	a_bendlag31 *to* a_bendlag396 a_benpeng31 *to* a_benpeng396 a_niserps3 a_benctcg3 a_benfamg31 *to* a_benfamg396 a_bentaxg31 *to* a_bentaxg396 a_benhoug31 *to* a_benhoug396 a_benstag31 *to* a_benstag396

At Wave 2, the showcards study was expanded to incorporate the entire interview, though the experiment to measure unearned income sources was discontinued. CAPI respondents were randomly allocated into groups interviewed with showcards and those interviewed without showcards. The showcard experiment was independent of all other experiments, including the mixed modes experiment carried at Wave 2. Thus, all households were allocated to experimental treatments. If a telephone case was transferred to a face-to-face interviewer for follow-up, then they received their allocated showcard treatment.

Allocation was at the PSU level so that interviewers would be either with or without showcards for all of their interviews to avoid contamination through the inadvertent use of visuals within face-to-face interviews. The experimental allocation is as follows:

Group 1 Showcards
Group 2 No showcards

The controlling variable on the data is B_FF_SHOWCARDW2 on the record B_HHSAMP_IP. The experiment applies to all items in the questionnaire which are indicated as having a showcard for use with face-to-face interviewing.

At Wave 3, the showcard experiment was repeated. As in Wave 2, manipulations were done at the PSU level such that each interviewer either used or did not use showcards. Note, at Wave 2, the showcard experiment was confounded with the showcard treatments of other experiments. At Wave 3, these are not confounded. However, the use of showcards was still consistent across all other experiments except for the life satisfaction and job satisfaction experiment where a special showcard was required for all interviewers. There is further information about this

implementation problem below. See the satisfaction experiment implementation notes (below) for further details. Showcards were used extensively throughout all portions of the questionnaire. The questionnaire indicates which questions use a showcard.

The controlling variables are C_FF_SHOWCARDSW2 and C_FF_SHOWCARDSW3 on record C_HHSAMP_IP. Note that C_FF_SHOWCARDSW3 represents a rotation from the Wave 2 allocation. The rotation pattern is as follows:

Table 3.6. Rotation pattern for showcard experiment, waves 2 and 3

Values for C_FF_SHOWCARDSW2 AND C_FF_SHOWCARDSW3 showing the allocation rotation		
Wave 2	Wave 3	
1	1	Showcards both waves
1	2	Showcards at Wave 2 & no showcards at Wave 3
2	1	No showcards at Wave 2 & showcards at Wave 3
2	2	No showcards at Wave 2 and Wave 3

Note that there was an error in the implementation of the IP3 showcard experiment, which meant that the treatments were not necessarily implemented as allocated. For details see Section 10 Known Issues.

3.5 ADVANCE MATERIALS

There is interest in whether various types of advance communications and their content can influence household and individual survey response rates. An experiment in Wave 2 compared different advance material formats whilst at Wave 5 the content of the advance material was at issue.

WAVE 2 EXPERIMENT: FORMAT OF ADVANCE MATERIALS

The Wave 2 experiment compared a formal letter on printed stationery with a greeting card type format. The messages in cards and letters were equal in length, text, incentives, and information related to legitimacy of the study and privacy concerns. Thus, differences were only in appearance and format. The envelopes for both cards and letters were personally addressed. The letter was also personally addressed internally. The experimental treatments were as follows:

Group 1: A formal letter on printed letterhead stationery with the survey logo
Group 2: A card in a greeting card format

Within PSUs, households were randomly allocated to one of two treatment groups and all eligible respondents in the household were treated the same. The controlling variable is B_FF_ADVANCE on the record B_HHSAMP_IP.

WAVE 5 EXPERIMENT: CONTENT OF ADVANCE LETTERS

In Wave 5, the content of the advance letters was varied to test theories about how people can be persuaded to take part in surveys. A two factor manipulation tested the effects of persuasion ideas, being a helpful person and being similar to other respondents. In the advance letters, one half of sample members received an additional sentence "your responses in previous survey show that you are a helpful person"; the other half of the sample had no such sentence. Second, one-half the sample received the sentence "almost everyone like you responded in the last wave of the survey" and the other half received no such sentence:

Group 1: Helpful person
Group 2: Respondents like you
Group 3: Helpful person, Respondent like you
Group 4: Control group

Within PSUs, households were randomly allocated to treatment groups and all eligible respondents in the household were treated the same. The controlling variable is E_FF_PERSUASIONW5 on the record E_HHSAMP_IP.

In addition, the self-completion questionnaire has items to assess self-rated helpfulness, conformity, and preference for consistency as potentially useful predictors of response status in future waves.

WAVE 6 EXPERIMENT: TARGETED ADVANCE LETTERS

At Wave 6, multiple versions of the advance letter were used to test whether letters targeted at particular sample subgroups and referenced issues of likely importance to them could positively affect participation rates.

Half the sample received a standard advance letter. The other half of the sample received a 'targeted' letter. The 'targeted letter' enlisted respondents by saying that Understanding Society "helps researchers and policy makers understand the changes in the needs of the country across diverse subjects…"

- For 16-29 year olds the letter referenced "…subjects like the impact of the economic climate on employment prospects and the influence of mobile technology on life"
- For the employment-busy (working 39+ hours, or working 30+ hours and commuting 60+ minutes one way) the letter referenced "…subjects like your work-life balance, your position on your employment and your retirement"
- For those who had dependent children under age 15 the letter referenced "…diverse subjects like the provision of child care, schooling and education"
- For those living in London the letter referenced "…subjects like the cost of living and the provision of schools, housing and public transportation"
- For those of pensionable age the letter referenced "…subjects like the provision of social care and the cost of energy and fuel"

Random allocation to treatment of standard versus tailored letter was of households within PSUs. The controlling variable is F_FF_ADVANCEW6 on record F_HHSAMP_IP which takes the values:

1 'Standard' advanced letter
2 "Tailored" advanced letter

The specific type of advance letter with respect to his experiment is indicated by the variable F_FF_LETTERW6 on record F_INDSAMP_IP which takes the values

1 "Standard Letter"
2 "Employment busy"
3 "Children"
4 "Age 16-29"
5 "London or SE"
6 "Pensionable age"

3.6 IMPROVING INTERVIEWER OBSERVATIONS

This Wave 4 experiment examines the utility of observation data provided by interviewers. It is limited to the refreshment sample cases. The focus was on questions of evidence for children in the household or for access to personal transport such as a car or van. Version A of these questions used the original interviewer observations, which read as follows, "*Based on your observation, is it likely that this address has a* ***car or van****?*" with response options "Definitely has a car / van", "Likely", "Unlikely", "Definitely does not have a car/van", and "Cannot tell from observation". The items continue, "*Based on your observation, is it likely that this address contains one or more* ***children aged under 10*** *(including babies)?*" with response options "Definitely has a child/children aged under 10", "Likely", "Unlikely", "Definitely does not have a child/children aged under 10", and "Cannot tell from observation".

Version B of these items was written more objectively. First, "*Standing outside, can you observe any signs of a car or a van belonging to this address*?" with response options "Yes, probably belonging to this address", "Yes, unsure whether belonging to this address", and "No". Next, "*Standing outside, can you observe any signs of children under 10 (including babies) at this address*?" with response options "Yes" and "No".

Households were randomly allocated within PSUs. The controlling variable is D_FF_ARFEXPW4 on the record D_HHSAMP_IP. The experimental allocation is as follows:

Group 1 "Version A" original wording
Group 2 "Version B" alternative wording.

The substantive information is contained in D_CHILDREN_B, D_CHILDREN_A, D_CARVAN, and D_CARVAN2.

3.7 CONTENT OF RE-ISSUE LETTER

This experiment carried at Wave 4 examined whether additional information included in the re-issue letter would help boost response at this stage. All households were allocated within PSU to a treatment group, but only re-issued households were included in the experiment. Version A received the standard re-issue letter, and

Version B received the re-issue letter plus an additional leaflet explaining the importance of participating in the study.

The controlling variable is D_FF_REISSUESW4 on record D_HHSAMP_IP. The experimental allocation is as follows:

Group 1 Standard re-issue letter
Group 2 Letter plus leaflet.

3.8 EARLY BIRD SCHEDULING OF INTERVIEWS

This experiment carried at Wave 4 tested whether response rates could be improved if respondents are encouraged to telephone their interviewer in advance of fieldwork to set an appointment to be interviewed. A portion of the sample was given an incentive for setting and keeping an appointment. The incentive was £5 if the respondent called to make an appointment and was interviewed.

All addresses were allocated to treatment groups. However, only prior wave productive households were included in the offer and the refreshment sample and suspected split-households were excluded.

The controlling variable is D_FF_APPTSW4 on record D_HHSAMP_IP whereas D_FF_SAMPLECAT on record D_HHSAMP_IP contains the actual manipulation as used in field at IP4 after prior unproductive and splits were excluded. D_FF_APPTSW4 is coded as follows:

1 = Early-bird offer, with incentive
2 = Early-bird offer, no incentive
3 = No offer

D_FF_SAMPLECAT is coded as follows:

1 = Early-bird offer, with incentive
2 = Early-bird offer, no incentive
3 = No offer
4 = Refreshment sample

In addition, information about the appointment made and whether it was kept was recorded for all sample members. Variables containing this information are D_CONMTH, D_EBMOVER, D_CONOC, D_APPTOC, D_APPTDAY2, D_EBEND, D_ISSUE_NUM, D_CONDAY, D_EBMOVTYPE, D_APPTMTH, D_FIRSTAPPT, D_APPTTIME2, D_EBINTRO, D_CONMETHOD, D_EBMOVCONF, D_APPTDAY, D_CONPERSON2, D_APPTOC2,. D_EBCONTACT, D_CONPERSON, D_EBADDUPDATE, D_APPTTIME, D_APPTMTH2, and D_EBOTHINF on record D_ADMINEB_IP.

QUESTIONNAIRE DESIGN EXPERIMENTS

3.9 MEASURES OF CONSUMPTION AND EXPENDITURE

At Wave 1, an experiment was conducted to help develop efficient data collection instruments concerning household consumption. There is methodological concern about whether respondents consider all possible categories of expenditure to arrive at reports of household consumption. The way respondents formulate answers could also be affected by categorical cues in the question text. This three-way split-ballot (different questions) experiment in the household questionnaire addressed these concerns.

There was random allocation of households within PSUs to one of three treatments:

Group 1 Question about overall expenditure without cues
Group 2 Question about overall expenditure with detailed categorical cues
Group 3 Separate questions about amounts of expenditure broken out into reporting on each category rather than an overall figure.

The variable in the data that controls allocation to treatments is A_GROUP3 on the record A_HHSAMP_IP.

The substantive information from each experimental treatment can be found in the following variables on the record A_HHRESP_IP:

Group 1 A_XPALL_G1
Group 2 A_XPALL_G2
Group 3 A_XPFOOD1_G3, A_XPFOOD2_G3, A_XPFOOD3_G3, A_XPFOOD4_G3, A_XPFDOUT_G3, A_XPALTOB_G3, A_XPCLFTW_G3, A_XPHEALTH_G3, A_XPTRANS_G3, A_XPTEL_G3, A_XPREC_G3

Results of this study have been reported.[11]

At Wave 6, a further experiment was incorporated to address concerns about the way respondents report information on expenditure and consumption. While the experiment was administered in the household questionnaire, the questions were about “benefit unit” consumption rather than household consumption. For the purposes of this research, a ‘benefit unit’ was defined as an adult, their spouse or partner, and any dependent children under the age of 18 living in the household. The experimental questions were only asked if the household respondent qualified as responsible for paying the bills, such as rent, mortgage, gas or electricity. The PNO of this person is listed in item F_CONSPER on the record F_HHRESP_IP.

Households were randomly allocated to two experimental treatments. In one treatment (Version A), respondents are asked to give total benefit unit expenditure by adding up a set of expenditure categories using a showcard to trigger recall of

[11]Uhrig SCN. (2011). Using experiments to guide decision making in Understanding Society: Introducing the Innovation Panel. In: McFall SL, Garrington C, editors. Understanding Society: early findings from the first wave of the UK's household longitudinal study. Colchester: University of Essex; https://www.understandingsociety.ac.uk/research/publications/findings/early.

expenditure on each category. In the alternative treatment (Version B), respondents provided an amount of expenditure for each expenditure category, then reconciled the total amount spent for accuracy.

The variable in the data that controls allocation to treatments is F_CONSEXPW6 on the record F_HHSAMP_IP taking a value of 1 if Version A and 2 if Version B.

The substantive information from each experimental treatment can be found in the following variables on the record F_HHRESP_IP:

F_CONSPER and F_CONSINTRO for all treatments

Version A	F_CONSTOTATSHH; F_CONSTOTATSMM; F_CONSTOTATSSS; F_CONSTOTAL_A; F_CONSTOTATEHH; F_CONSTOTATEMM; F_CONSTOTATESS; F_CONSTRAT1 to F_CONSTRAT5; F_CONSOTH_CODE; F_OPUSLTSHH; F_OPUSLTSMM; F_OPUSLTSSS; F_OPUSL1; F_OPUSL2; F_OPUSLTEHH; F_OPUSLTEMM; F_OPUSLTESS
Verson B	F_EXPBRKTSHH; F_EXPBRKTSMM; F_EXPBRKTSSS; F_EXPMORT; F_EXPBILLS; F_EXPTRANS; F_EXPFOOD; F_EXPCLOTHES; F_EXPCHILD; F_EXPDIY; F_EXPHEALTH; F_EXPHOBBY; F_EXPTREATS; F_EXPHOLS; F_EXPGIVE; F_EXPOTH; F_BREAKTOT; F_BREAKAD; F_EXPBRKTEHH; F_EXPBRKTEMM; F_EXPBRKTESS

3.10 RANDOM SUBSETS OF QUESTIONNAIRE CONTENT

In Wave 1, the Innovation Panel tested the feasibility of using random sub-sets of questionnaire content. The purpose was to explore the possibility of maximising survey content while minimising overall questionnaire burden for respondents. Three areas were covered by random subsets asked of half the sample--the Partnership and Fertility Histories, Environmental Behaviour and Attitudes, and Self-reported Height and Weight.

In Wave 2, the other half of the sample was asked the Partnership and Fertility History, whilst the full sample received questions on environmental behaviour and attitudes and also self-reported height and weight.

In Waves 3 and 5 and Waves 5 and 6, this two-wave pattern for the environmental, height and weight topics was repeated to provide evidence on the effect of rotation schedule in content on the response process.

Within PSUs, households were randomly assigned to sub-sets. In each household, all responding adults received content consistent with their treatment.

The variable in the data which controls which sub-set of survey content the respondent received is A_GROUP2 on the record A_HHSAMP_IP, then w_FF_GROUP2 on w_HHSAMP_IP where “w” indicates waves with values “B” through “F” for Waves 2 through 6 respectively..

The specific details of the sub-sets are as follows:

Environmental Behaviour and Attitudes

Group 1 Not asked the set of questions
Group 2 Asked this set of questions

The relevant items are A_OPEPPLCH, A_OPEICH, A_OPECBN, A_OPEFLOOD, A_OPEFLDUK, A_OPEFOOD, A_OPEFDUK, and A_OPECL30 on records A_INDRESP_IP. At Waves 2 and 3, the effected questions were w_ENVHABIT1_A through w_ENVHABIT11_B, w_OPECL30 and w_OPECL200 on record w_INDRESP_IP where "w" indicates waves and takes values "B" and "C" for Waves 2 and 3 respectively. At Waves 4, 5, and 6 the effected questions were w_ENVHABIT1 through w_ENVHABIT11, w_OPECL30 and w_OPECL200 on record w_INDRESP_IP where "w" takes values "D", "E" and "F".

Height and Weight

Group 1 Not asked the set of questions
Group 2 Asked this set of questions

The relevant items are w_HLHT, w_HLHTF, w_HLHTI, w_HLHTC, w_HLWT, w_HLWTS, w_HLWTP, w_HLWTK, w_HLWTE, w_HLWTL, and w_HLPREG on record w_INDRESP_IP were "w" indicates waves and takes values "A", "B", "C", "D", "E", or "F"..

Partnership and Fertility History

Group 1 A "short-form" history
Group 2 The full life history

The list below shows the affected questions in the partnership and fertility history subsets:

Table 3.7. Partnership and fertility history items

Group 1 (Short form history)	**Group 2 (Full History)**
A_COH1BM on record A_INDRESP_IP A_COH1BY on record A_INDRESP_IP A_CH1BM on record A_INDRESP_IP A_CH1BY4 on record A_INDRESP_IP	A_LCMCOH on record A_INDRESP_IP A_LCMCBM on record A_INDRESP_IP A_LCMCBY4 on record A_INDRESP_IP A_LCMSPM on record A_INDRESP_IP A_LCMSPY4 on record A_INDRESP_IP A_PMARINT on record A_INDRESP_IP A_LMARM on record A_MARRIAGE_IP A_LMARY4 on record A_MARRAIGE_IP A_LMCOH on record A_MARRIAGE_IP A_LMCBM on record A_MARRIAGE_IP A_LMCBY4 on record A_MARRIAGE_IP A_LMEND on record A_MARRIAGE _IP A_LMWWM on record A_MARRIAGE_IP A_LMWWY4 on record A_MARRIAGE_IP

	A_LSPWWD on record A_MARRIAGE_IP A_LMDVM on record A_MARRIAGE_IP A_LMSPY4 on record A_MARRIAGE_IP A_LNCOH on record A_INDRESP_IP A_LCSBM on record A_COHAB_IP A_LCSBY4 on record A_COHAB_IP A_LCSEM on record A_COHAB_IP A_LCSEY4 on record A_COHAB_IP A_LADOPT on record A_INDRESP_IP A_LNADOPT on record A_INDRESP_IP A_LACBD which is not released A_LACBM on record A_ADOPT_IP A_LACBY4 on record A_ADOPT_IP A_LACSX on record A_ADOPT_IP A_LASCST on record A_ADOPT_IP A_LACYB4 on record A_ADOPT_IP A_LACLV on record A_ADOPT_ip A_LACNO on record A_ADOPT_IP A_LACAL on record A_ADOPT_IP A_LACYD4 on record A_ADOPT_IP A_LCHLV on record A_NATCHILD_IP A_LCHYD4 on record A_NATCHILD_IP A_LCHSX on record A_NATCHILD_IP A_LCHDOBY on record A_NATCHILD_IP A_LCHDOBM on record A_NATCHILD_IP A_LCHBD which is not released A_LCHAL on record A_NATCHILD_IP A_LCHNO on record A_NATCHILD_IP A_LCHCHK on record A_NATCHILD_IP A_BWTXP on record A_NATCHILD_IP A_BWTEL on record A_NATCHILD_IP A_BWTWK on record A_NATCHILD_IP A_BWT on record A_NATCHILD_IP A_BWTLB on record A_NATCHILD_IP A_BWTOZ on record A_NATCHILD_IP A_BWTK on record A_NATCHILD_IP A_BWTG5 on record A_NATCHILD_IP A_LCHMOR on record A_INDRESP_IP A_LCHMORN on record A_INDRESP_IP

In Wave 2, both groups were asked the "long-form" partnership and fertility history items. These items include:

B_LCMCOH on record B_INDRESP_IP	***List continued***
B_LCMCBM on record B_INDRESP_IP	B_LACNO on record B_ADOPT_IP
B_LCMCBY4 on record B_INDRESP_IP	B_LACAL on record B_ADOPT_IP
B_LCMSPM on record B_INDRESP_IP	B_LACYD4 on record B_ADOPT_IP
B_LCMSPY4 on record B_INDRESP_IP	B_LCHLV on record B_NATCHILD_IP
B_PMARINT on record B_INDRESP_IP	B_LCHYD4 on record B_NATCHILD_IP
B_LMARM on record B_MARRIAGE_IP	B_LCHSX on record B_NATCHILD_IP
B_LMARY4 on record B_MARRIAGE_IP	B_LCHDOBY on record B_NATCHILD_IP
B_LMCOH on record B_MARRIAGE_IP	B_LCHDOBM on record B_NATCHILD_IP
B_LMCBM on record B_MARRIAGE_IP	B_LCHBD which is not released

B_LMCBY4 on record B_MARRIAGE_IP	B_LCHAL on record B_NATCHILD_IP
B_LMEND on record B_MARRIAGE _IP	B_LCHNO on record B_NATCHILD_IP
B_LMWWM on record B_MARRIAGE_IP	B_LCHCHK on record B_NATCHILD_IP
B_LMWWY4 on record B_MARRIAGE_IP	B_BWTXP on record B_NATCHILD_IP
B_LSPWWD on record B_MARRIAGE_IP	B_BWTEL on record B_NATCHILD_IP
B_LMDVM on record B_MARRIAGE_IP	B_BWTWK on record B_NATCHILD_IP
B_LMSPY4 on record B_MARRIAGE_IP	B_BWT on record B_NATCHILD_IP
B_LNCOH on record B_INDRESP_IP	B_BWTLB on record B_NATCHILD_IP
B_LCSBM on record B_COHAB_IP	B_BWTOZ on record B_NATCHILD_IP
B_LCSBY4 on record B_COHAB_IP	B_BWTK on record B_NATCHILD_IP
B_LCSEM on record B_COHAB_IP	B_BWTG5 on record B_NATCHILD_IP
B_LCSEY4 on record B_COHAB_IP	B_BRFED on record B_NATCHILD_IP
B_LADOPT on record B_INDRESP_IP	B_BRFEDEND on record B_NATCHILD_IP
B_LNADOPT on record B_INDRESP_IP	B_BRFEDEND2 on record B_NATCHILD_IP
B_LACBD which is not released	B_LCHMOR on record B_INDRESP_IP
B_LACBM on record B_ADOPT_IP	B_LCHMORN on record B_INDRESP_IP
B_LACBY4 on record B_ADOPT_IP	
B_LACSX on record B_ADOPT_IP	
B_LASCST on record B_ADOPT_IP	
B_LACYB4 on record B_ADOPT_IP	
B_LACLV on record B_ADOPT_IP	

3.11 MEASUREMENT OF SATISFACTION

The way you ask subjective evaluation questions (e.g., satisfaction) may have a big influence on the types of answers that you get. A series of experiments with question wording, format and placement have been run in Waves 1-3 and 5 of the IP. Experiments across Waves 1-3 concerned the measurement properties of various questions on satisfaction whereas experimentation in Wave 5 concerned the nature of the judgement. In addition, an experiment in the Wave 5 youth questionnaire examines satisfaction measurement amongst young people.

In Wave 1, the experiment compared 11 and 7 point scales for job satisfaction. There is debate about the number of response categories which is substantively meaningful for respondents and for analysis.

Within PSUs, households were randomly allocated to one of two conditions. All interviewed adults within household received the same experimental treatments. The conditions are:

Group 1 11 point scale, no showcard, only end-points labelled
Group 2 7 point scale, no showcard, only end-points labelled

The variable that controls allocation to treatments is A_GROUP2 on the record A_HHSAMP_IP. The variables A_JBSAT_G1 and A_JBSAT_G2, for Groups 1 and 2 respectively, on the record A_INDRESP_IP contain the substantive information.

At Wave 2, the experiment expanded to other satisfaction items about the participant's satisfaction with their health, family income, leisure, job (if applicable) and their life overall.

As well as the mode and showcard experiments, households were independently assigned to treatment groups formed by varying question design, delivery and position within the interview.

All eligible adults within a household received the same experimental treatment. Table 3.8 sets out the 10 treatment groups at Wave 2 for this experiment.

Table 3.8. Definition of experimental groups in Wave 2 experiment: measurement of satisfaction.

Group	Response Mode	Timing of Question
1	CASI Full-labels	Late in questionnaire
2	CASI Polar-labels	Late in questionnaire
3	F2F + showcard Full-labels	Late in questionnaire
4	Tel + F2F Full labels: branched	Late in questionnaire
5	F2F + showcard Polar labels	Late in questionnaire
6	Tel + F2F Polar-labels	Late in questionnaire
7	F2F + showcard Full-labels	Early in questionnaire
8	Tel + F2F Full labels: branched	Early in questionnaire
9	F2F + showcard Polar-labels	Early in questionnaire
10	Tel + F2F Polar labels	Early in questionnaire
CASI = Computer assisted self interview; Tel = telephone; F2F = Face-to-face		

The standard questions have an initial question, "How dissatisfied or satisfied are you with the following aspects of your situation: (a) your health; (b) the income of your household; (c) the amount of leisure time you have"? This was followed by the question, "Using the same scale, how dissatisfied or satisfied are you with your life overall?" Respondents who were employed or self-employed were in addition asked, "All things considered, which number best describes how dissatisfied or satisfied you are with your job overall?"

The responses were measured using a seven-point scale. There were 3 different delivery methods (showcard, oral, CASI). Groups 3, 5, 7 and 9 had the response categories on a showcard. Groups 4, 6, 8 and 10 had no showcard; the question was purely oral. Groups 1 and 2 were presented with the computer and asked to complete the question by themselves (CASI).

The response scale was presented in three different ways. For groups 1, 3 and 7 each of the points on the seven-point scale was labeled (Full labels: 1-stage): *7 Completely satisfied; 6 Mostly satisfied; 5 Somewhat satisfied; 4 Neither satisfied nor dissatisfied; 3 Somewhat dissatisfied; 2 Mostly dissatisfied; 1 Completely dissatisfied*. Participants in groups 4 and 8 were also able to answer using the fully-labelled scale, but the question was broken into two parts (branched), with the participant first being asked, "How dissatisfied or satisfied are you with your (life/job) overall? Would you say that you are… (1 Dissatisfied; 2 Neither dissatisfied nor

satisfied; 3 Satisfied)." If the participant indicated that they were either dissatisfied or satisfied they were asked the follow-up question, "Are you somewhat, mostly or completely (dissatisfied/satisfied) with your (life/present job) overall? (1 Somewhat; 2 Mostly; 3 Completely)." The third treatment, for groups 2, 5, 6, 9 and 10, is the "Polar labels" option. In this treatment group, only the labels for the extreme points on the scale were conveyed; i.e., completely dissatisfied and completely satisfied.

The timing of the job satisfaction question in the questionnaire was fixed for all participants who had a job, following a section about employment or self-employment. The life satisfaction questions were either asked early in the interview (about a quarter of the way through, Groups 7-10) or late in the interview (very near the end, Groups 1-6).

The controlling variable for the job satisfaction split-ballot design is B_FF_JOBSATW2 on the record B_HHSAMP_IP. Values of this variable correspond to groups 1-6 in the table above.

The controlling variable for the split-ballot design of the remaining satisfaction items is B_FF_LIFESATW2 on the record B_HHSAMP_IP with values corresponding to the entire set of experimental treatments outlined in the table above.

The substantive data for job satisfaction can be found in the items B_JBSAT_A through B_JBSAT_F on the record B_INDRESP_IP. The substantive data for the remaining satisfaction items can be found B_LFSAT1_A through B_LFSATO_J on the record B_INDRESP_IP.

Analyses of the IP2 satisfaction experiments are reported in a working paper.[12]

At Wave 3 and Wave 6 this experiment was repeated with a rotation in experimental treatments. The life and job satisfaction split-ballot question wording experiment carried at Wave 2 was repeated at Waves 3 and 6. The experimental allocation at Waves 3 and 6 varied the Wave 2 allocation, however. As well as the showcard experiments, described above, households were independently assigned to experimental groups formed by varying question design, delivery and position within the interview. All eligible adults within a household received the same experimental treatment. Also, while the Wave 2 allocation was nested within the showcard experiment, the Waves 3 and 6 allocations were not. Therefore, a separate showcard was required for the satisfaction items for interviewers not otherwise issued with showcards at Wave 3, and there was no showcard experiment in Wave 6. There was no manipulation of placement for the life satisfaction items.

This manipulation was of households within PSU's, therefore interviewers received different versions of these questions depending on which household they were interviewing.

[12]Pudney S. An experimental analysis of the impact of survey design on measures and models of subjective well-being. Understanding Society working paper 2010-01. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2010-01.

Note that there was an error in the implementation of the Wave 3 satisfaction experiment, which meant that some respondents were asked the life-satisfaction questions twice, once at the beginning and once at the end of the questionnaire. For details see section 10 Known issues. For this reason, the exact experimental allocation from Wave 3 was replicated in Wave 6.

The questions at Waves 3 and 6 match Wave 2. The standard question-set involved an initial question, "How dissatisfied or satisfied are you with the following aspects of your situation: (a) your health; (b) the income of your household; (c) the amount of leisure time you have". This was then followed by the question, "Using the same scale, how dissatisfied or satisfied are you with your life overall?" Those participants who were employed or self-employed were asked, "All things considered, which number best describes how dissatisfied or satisfied you are with your job overall?" The responses were measured using a seven-point scale. Whereas in Wave 2, 10 different experimental treatment groups captured variation in the presentation of satisfaction items, only 6 different groups were used at Waves 3 and 6. The group allocation was permuted for Waves 3 and 6 to achieve higher sample sizes across groups when waves are pooled.

For the Life Satisfaction Items, the permutation of treatments is as follows:

Table 3.9. Treatment groups in Wave 2 and Waves 3 and 6 for experiment on measurement of life Satisfaction

Group	**Treatment at Wave 2**	**Group**	**Treatment at Waves 3 and 6**
1	Full labels, CASI, beginning	2	Polar labels, CASI
2	Polar labels, CASI, beginning	5	Polar labels, showcards
3	Full labels, showcards, Beginning	1	Full labels, CASI
4	Full labels, unfolding design, Beginning	6	Polar labels, no showcards
5	Polar labels, showcards, beginning	3	Full labels, showcards
6	Polar labels, no showcards, beginning	4	Full labels, no showcard, branched rating
7	Full labels, showcards, end	4	Full labels, no showcard, branched rating
8	Full labels, unfolding design, end	3	Full labels, showcards
9	Polar labels, showcards, end	6	Polar labels, no showcards
10	Polar labels, no showcards, end	5	Polar labels, showcards

At Wave 3, the controlling variable is C_FF_LIFESATW3 on record C_HHSAMP_IP while at Wave 6 the controlling variable is F_FF_LIFESATW3 on record C_HHSAMP_IP. In both Wave 3 and Wave 6, this variable is coded:

1 fully labelled CASI, end of interview
2 polar point labelled CASI, end of interview
3 fully labelled with showcards, end of interview

4 fully labelled without showcards, unfolding design, end of interview
5 polar-point labelled with showcards, end of interview
6 polar-point labelled without showcards, end of interview

Groups 3 and 5 had the response categories presented visually on a showcard. Groups 4 and 6 had no visual cue, the question was purely oral. Groups 1 and 2 were presented with the computer and asked to complete the question by themselves (CASI).

As well as the different delivery methods at Waves 3 and 6 (showcard, oral, CASI), the response scale was presented in three different ways. For groups 1, 3 and 4 each of the points on the seven-point scale was labelled; *7 Completely satisfied; 6 Mostly satisfied; 5 Somewhat satisfied; 4 Neither satisfied nor dissatisfied; 3 Somewhat dissatisfied; 2 Mostly dissatisfied; 1Completely dissatisfied*. This is the "Full labels: 1-stage" response scale. Participants in group 4 were also able to answer using the fully-labelled scale, but the question was broken into two parts, with the participant first being asked, "How dissatisfied or satisfied are you with your (life/job) overall? Would you say that you are… (1 Dissatisfied; 2 Neither dissatisfied not satisfied; 3 Satisfied)." If the participant indicated that they were either dissatisfied or satisfied they were asked the follow-up question, "Are you somewhat, mostly or completely (dissatisfied/satisfied) with your (life/present job) overall? (1 Somewhat; 2 Mostly; 3 Completely)". The third treatment, for groups 2, 5, and 6 is the "Polar labels" option. In this treatment group, only the labels for the extreme points on the scale were conveyed; i.e., completely dissatisfied and completely satisfied.

Wave 3 substantive data for job satisfaction can be found in the items C_JBSAT_A through C_JBSAT_F on the record C_INDRESP_IP. Comparable Wave 6 variables are F_JBSAT_A through F_JBSAT_F on the record F_INDRESP_IP.

Wave 3 substantive data for the remaining satisfaction items can be found C_LFSAT1_A through C_LFSATO_F on the record C_INDRESP_IP. Comparable variables for Wave 6 are F_LFSAT1_A though F_LFSATO_F on the record F_INDRESP_IP..

Analyses related to this experiment using Wave 2 and Wave 3 data have been reported in a working paper.[13]

WAVE 5 EXPERIMENT ON REFERENCE GROUPS IN MEASUREMENT OF SATISFACTION

At Wave 5, an experiment examined the comparison groups women have in mind when they answer questions about life satisfaction. Respondents were randomly allocated to one of four treatments groups. The first three experimental groups had respondents rate their life satisfaction comparing themselves to (1) others of the same gender, (2) others with the same level of education, or (3) others of their gender and education. The fourth experimental treatment group was a control where

[13] Pudney S. An experimental analysis of the impact of survey design on measures and models of subjective well-being. Understanding Society working paper series [serial on the Internet]. 2010; (2010-01): Available from: https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2010-01.

respondents provided a measure of satisfaction without reference to any comparison group. All satisfaction items were subject to this experiment: employment, health, leisure, income and overall life satisfaction, as well as job satisfaction.

The variable E_FF_LIFESATW5 on the record E_HHSAMP_IP controls allocation to versions of this question. This variable is coded:

1 Same gender comparison
2 Same education comparison
3 Same gender, education comparison
4 Control group

The substantive variables containing data from this split-ballot experiment are E_SCLFSAT1_SG through E_SCLFSATO, and E_JBSAT_SG through E-JBSAT on the record E_INDRESP_IP.

WAVE 5 EXPERIMENT ON SMILEY FACES

At Wave 5 and Wave 6, the youth questionnaire examines how to adapt questions on satisfaction for children, focusing on the use of pictorial evaluations of feelings. A split-ballot design was incorporated in the Waves 5 and 6 youth questionnaire where half of the child self-completion uses smiley faces for the questions on satisfaction in different domains, and the other half use a scale with a textual description but no smiley faces. Within PSUs, households were randomly allocated to experimental treatment all youth aged 10-15 within households received the same treatment:

Group 1 Smiley faces
Group 2 Text descriptions.

The experiment is controlled in Wave 5 by the variable E_FF_SMILESW5 on record E_HHSAMP_IP and in Wave 6 by the variable F_FF_SMILESW5 on record F_HHSAMP_IP. The affected variables in Wave 5 are E_YPHSW, E_YPHAP, E_YPHFM, E_YPHFR, E_YPHSC, and E_YPHLF on record E_YOUTH_IP. Comparable affected variables in Wave 6 are F_YPHSW, F_YPHAP, F_YPHFM, F_YPHFR, and F_YPHSC.

3.12 MEASURING IDENTITY

In Wave 2, the Innovation Panel tested a set of questions on identity based on items carried in the Citizenship Survey in 2007-2008. In total, respondents were given 13 categories with which they could identify (or not). This experiment compared endorsement of the words “profession” versus “occupation” via a split-ballot design. Within PSUs, households were randomly allocated to experimental treatment and all adults within households received the same treatment:

Group 1 Occupation
Group 2 Profession

The variable B_FF_IDENTITYW2 on the record B_HHSAMP_IP controls allocation to versions of this question. The substantive variables containing data from this split-

ballot experiment are B_ETHEXP_AA through B_ETHEXP_BM on the record B_INDRESP_IP.

Analyses of this experiment are reported in a working paper.[14]

3.13 QUALITY OF MEASURES OF CHANGE

Measuring how people's social and economic circumstances change over time is a key purpose of household panel surveys. Levels of change are often overestimated in panel surveys. That is, responses to a question are often not consistent across interviews, even if the respondent's situation has not changed. Various methods have been proposed to address these issues, but little is known about the mechanisms giving rise to the observation of spurious change. For this reason, a series of split-ballot experiments was incorporated into several waves of the Innovation Panel. The ultimate aim is to understand the processes that lead a respondent, whose situation has not changed from one interview to the next, to give a different response to a survey question in different interviews.

For the experiments, allocation was of households within PSUs. The variable that controls allocation to versions of Experiments 1-3 in Wave 2 is B_FF_CHANGEW2 on record B_INDRESP_IP:

Group 1 Version A of questions
Group 2 Version B of questions

Wave 2 experiment 1: Ambiguous wording. This contrasts questions where terms or definitions in the question were potentially ambiguous – contrasted with less ambiguous question wording. Respondents were randomly allocated to either version for the following questions:

Identifying disability status: items B_HEALTH_A and B_HEALTH_B on record B_INDRESP_IP

Identifying whether the respondent is in work: items B_JBHAS_A1 through B_JBHAS_B on record B_INDRESP_IP

Identifying whether the respondent saves regularly: item B_SAVE_A1 through B_SAVE_B on record B_INDRESP_IP

Wave 2 Experiment 2: Ambiguous instructions. This contrasts a question where the instructions were ambiguous in that response options were not mutually exclusive and there were no clear instructions about how to select the "main" category if more than one applied, with a "select all that apply" version of the same question whose instructions are less ambiguous:

[14] Nandi A, Platt L. Effect of interview modes on measurement of identity. Understanding Society working paper 2011-02. Https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2011-02.

Obtaining main labour market status: items B_JBSTAT_A through B_JBSTAT_D2 on record B_INDRESP_IP

Wave 2 experiment 3: Implicit or explicit questions about dates. This examines the effect of the clarity of instructions for questions about the dates of events. Questions in which the request for a date was implicit (e.g. "Since when have you…?") were contrasted with questions where the request for the date was explicit (e.g. "In which month and year did you…?):

Obtaining dates of moves: items B_MVMNTH_A through B_MVYR_B3, and B_PLNOWM_A through B_ PLNOWY4_B3, on record B_INDRESP_IP

Obtaining dates of the onset of health conditions: items B_HCONDA_A through B_HCONDA_B3Y on record B_INDRESP_IP

Obtaining dates of joining private pension schemes: items B_PPYRS_A through B_PPYRS_B3Y on record B_INDRESP_IP

REPETITION OF EXPERIMENTS 1-3 AT WAVE 3

In Wave 3 the experiments were repeated with the same wordings, treatments and allocations. The controlling variable is C_FF_CHANGEW2 on record C_HHSAMP_IP. Relevant variables are: C_HEALTH_A, C_HEALTH_B, C_JBHAS_A1 to C_JBHAS_B, C_SAVE_A1, C_SAVE_B, C_JBSTAT_A to C_JBSTAT_D2, C_MVMNTH_A to C_MVYR_B3, C_PLNOWM_A to C_PLNOWY4_B3, C_HCONDA_A to C_HCONDA_B3Y, C_PPYRS_A to C_PPYRS_B3Y on record C_INDRESP_IP

WAVE 3 EXPERIMENT 4: CONTEXT AND FREQUENCY

This experiment tests whether changes in the context of a question across waves can affect measures of change. The experiment uses a question about frequency of events, where the preceding question is either about high or low frequency events. The controlling variable is the IP2 variable allocating treatments to the measures of change experiments: C_FF_CHANGEW2 on record C_HHSAMP_IP. Items about the frequency of political discussions follow either a high frequency item (C_MDAFRQ – media watching) or low frequency item (C_VTEFRQ frequency of voting). These items are on record C_INDRESP_IP. The political discussion items are C_POLDISC1A through C_PLDISC6A or C_POLDISC1B through C_PLDISC6B.

REPETITION OF EXPERIMENTS 1-4 AT WAVE 4

At Wave 4, Experiments 1 through 4 were repeated with identical wording and format. However, allocation to experimental group was rotated for some of the items in experiments 1, 3 and 4 (listed below), as compared to Wave 3. The controlling variable for the Wave 4 unchanged allocation is D_FF_CHANGEW2 on record D_HHSAMP_IP. The controlling variable for the Wave 4 rotated allocation is D_FF_CHANGEW4 on record D_HHSAMP_IP.

Table 3.10. Change in questions in wave 4 compared to waves 2 and 3		
	Wave 4	
Wave 2 & Wave 3	Version A	Version B
Version A	Same questions	Rotated questions
Version B	Rotated questions	Same questions

Specifically, allocation at Wave 4 was unchanged (same questions) over prior waves for the following items: D_MVMNTH_A to D_MVYR_B3, D_JBSTAT_A to D_JBSTAT_D2, D_PLNOWM_A to D_PLNOWY4_B3, D_JBHAS_A1 to D_JBHAS_B, D_SAVE_A1, D_SAVE_B on record D_INDRESP_IP.

Allocation at Wave 4 was rotated as compared to prior waves for the following items: D_MDAFRQ, D_VTEFRQ, D_HEALTH_A, D_HEALTH_B, D_HCONDA_A to D_HCONDA_B3Y, D_PPYRS_A to D_PPYRS_B3Y on record D_INDRESP_IP.

Note, the refreshment sample was allocated to all controlling variables for Experiments 1-4 and included in all treatments.

3.14 DEPENDENT INTERVIEWING

At Wave 3, an experiment was included to examine the potential effects of different wording of dependent interview questions on responses. A split-ballot experiment contrasted two versions of phrasing. In both cases respondents were first reminded of the answer they had given in the previous interview. With Version A they were asked “Is that still the case?”, with Version B they were asked “Has that changed?” The experiment was audio-recorded.

Allocation to treatment groups was of households within PSUs.

Group 1 Version A: “Is that still the case?”
Group 2 Version B: “Has that changed?”

The variable that controls allocation is C_FF_CHANGEW2 on record C_HHSAMP_IP. Relevant variables are C_SF1_A, C_SF1_B, C_JBTERM1_A, C_JBTERM1_B, C_JBHRS_A, C_JBHRS_B, C_JSHRS_A, C_JSHRS_B on record C_INDRESP_IP.

At Wave 4 the experiment was repeated with the same allocation to treatment groups. The refreshment sample was not asked dependent interviewing questions, since we did not have any wave 3 responses for this sample. Again, the experiment was audio-recorded.

The variable that controls allocation is D_FF_CHANGEW2 on record D_HHSAMP_IP. Relevant variables are D_SF1_A, D_SF1_B, D_JBTERM1_A, D_JBTERM1_B, D_JBHRS_A, D_JBHRS_B, D_JSHRS_A, D_JSHRS_B on record D_INDRESP_IP.

The experiment in Wave 5 contrasts the two question formats with similar questions not answered by "yes" or "no". Furthermore, this work exploits the mixed mode experiment carried at Wave 5 to study potential response order effects, and whether these differ in CAPI and web, by varying the order of response options in the new format. Respondents were assigned to one of four experimental question variants: (1) "Still the case? Yes/No", (2) "Has this changed? Yes/No" (3) "Still the case or has this changed?" and (4) "Has this changed or is it still the case?". The variable that controls allocation is E_FF_DIW5 on record E_HHSAMP_IP. This variable is coded as:

1 Still the case
2 Has this changed
3 Balanced, still first
4 Balanced, changed first

Relevant variables are E_HSROOMCHK_A through E_HSROOMCHK_D, E_HSOWNDCHK_A through E_HSOWNDCHK_D, E_XPMG_A through E_XPMG_D, and E_RENTCHK_A through E_RENTCHK_D on record E_HHRESP_IP, and E_LKMOVE_A through E_LKMOVE_D, E_EDTYPE_A through E_EDTYPE_D, E_SF1_A through E_SF1_D, E_JBTERM1_A through E_JBTERM1_D, E_JBSIC07_A through E_JBSIC07_D, E_JBSOC00_A through E_JBSOC00_D, E_JBSEMP_A through E_JBSEMP_D, E_JBSIZECHK_A through E_JBSIZECHK_D, E_JBHRSCHK_A through E_JBHRSCHK_D, E_PAYTYPCHK_A through E_PAYTYPCHK_D, E_WKTRAVCHK_A through E_WKTRAVCHK_D, E_JSHRSCHK_A through E_JSHRSCHK_D, E_JSPARTCHK_A through E_JSPARTCHK_D, E_JSTRAVCHK_A through E_JSTRAVCHK_D on record E_INDRESP_IP.

Note that the Wave 5 implementation of this experiment was corrupted. Further details can be found in Section 10 Known issues.

3.15 PAPER VS CASI SELF-COMPLETION

This study was relevant to changes toward Computer Assisted Self Completion (CASI) in the main *Understanding Society* survey in Wave 3. It tests the effects of paper vs. CASI self-completion on substantive measures and attrition. Attrition cannot be evaluated until later waves. The experiment was initiated at Wave 4 and continued until Wave 6.

At Wave 4, half of the Innovation Panel sample received the CASI instrument whereas the other half received the paper instrument. The refreshment sample was included in this experiment.

The controlling variable D_FF_CASIW4 is on record D_HHSAMP_IP and is coded as follows:

Group 1 = CASI
Group 2 = Paper.

The variable D_SCAC on record D_INDRESP_IP records the actual use of the self-completion. It is coded as follows:

1 – accepted as self-completion
2 – accepted as self-completion but interviewer to complete due to reading or sight problems
3 – accepted as self-completion but interviewer or someone else to help translate
4 – refused self-completion
5 – not able to do self-completion.

At Wave 5, households were randomly allocated to either receive the same self-completion mode as at Wave 4, or the other mode. At Wave 6, only those groups that switched mode at Wave 5 were randomly allocated to the opposite condition. This design will give the opportunity of looking at the effects of (i) different and (ii) changing modes of the self-completion instrument have on the reliability of longitudinal measures. Table 3.11 outlines the experimental allocation at Waves 4, 5, and 6.

It should be noted that all respondents were allocated to an experimental treatment, but only face-to-face respondents received the actual implementation.

Table 3.11. Experimental allocation to self-completion instruments

Wave 4	**Wave 5**	**Wave 6**
1 – CASI	1 – CASI	1 – CASI
	2 – Paper	2 – Paper
		1 – CASI
2 – Paper	1 – CASI	2 – Paper
		1 – CASI
	2 – Paper	2 – Paper

The Wave 5 controlling variable E_FF_CASIW5 is on record E_HHSAMP_IP, while F_CASIW6 on record F_HHSAMP_IP controls the Wave 6 allocation. Both variables are coded as follows:

Group 1 = CASI
Group 2 = Paper.

As with Wave 4, the Wave 5 variable E_SCAC on record E_INDRESP_IP records the actual use of the self-completion. In Wave 6, the variable is F_SCAC on record F_INDRESP_IP. Both items are coded as follows:

1 – accepted as self-completion
2 – accepted as self-completion but interviewer to complete due to reading or sight problems
3 – accepted as self-completion but interviewer or someone else to help translate
4 – refused self-completion
5 – not able to do self-completion.

Note, due to a programming error at Wave 5 around 50 per cent of those eligible to receive the questions in face-to-face CASI mode did not get asked the experimental questions (313 people, based on unedited data). It should be noted that this does not confound the experiment (i.e. no respondents were asked questions in the wrong mode), but this error does reduce its power to detect mode differences. Cases affected by this programming error are flagged with the item E_CASIFLAGER on record E_INDRESP_IP. Please see Section 10 Known issues for details concerning programming errors in the Wave 5 questionnaire.

3.16 MEASURES OF WEALTH

Wave 3 of the Innovation Panel was used to examine four different question designs for collecting the amount of money held in savings and investments:

Table 3.12. Schematic design of Wave 3 measuring wealth experiment treatments

	Individual Reporting	Financial Reporting
Aggregate Amounts	*Group 1*	*Group 2*
Itemised Amounts	*Group 3*	*Group 4*

For all groups, an initial question asks respondents to report which specific types of savings or investments they hold. The two factors concern whether reports are collected as aggregate amounts or itemised (itemisation) and whether reports are from each individual adult or about the entire household (individual vs. financial reporting). Under *financial* reporting, all individuals reported on savings or deposit accounts, National Savings accounts, Individual Saving Accounts (ISAs), and Premium Bonds, whereas the 'financial reporter' at the household level reported on National Savings certificates, Unit or Investment Trusts, all Shares apart from ISAs, National Savings bonds, and any other investment the household may have.

Households within PSUs were randomly assigned to one of the four experimental treatments. Allocations were independent of the showcard experiment. All individuals interviewed as part of the household were treated the same. The controlling variable is C_FF_HHDAW3 on record C_HHSAMP_IP and is coded as follows:

Group 1 Aggregation, Individual reporting
Group 2 Aggregation, Financial reporting
Group 3 Itemisation, Individual reporting
Group 4 Itemisation, Financial reporting

The variables affected by the design are as follows:

Table 3.13. Variables in experiment measuring wealth

Group 1	Group 2	Group 3	Group 4
	Household Questionnaire: C_NVESTRT_A4 to C_NVESTRT_B		*Household Questionnaire:* C_NVESTRT_A4 to C_NVESTRT_B96 on record

	96 on record C_HHRESP_IP C_NVESTKRT to C_NVESTSPRT on record C_HHRESP_IP		C_HHRESP_IP C_INVESTRTCODE to C_NVESTLSPRT on record C_HHOLDINVEST_IP
Individual Questionnaire: C_NVEST_A1 to C_NVEST_A96, C_NVEST_B1 to C_NVEST_B96, C_NVEST1 to C_NVEST96 on record C_INDRESP_IP C_SVACK to C_NVESTC4 on record C_INDRESP_IP C_NVESTSJ to C_NVESTSP on record C_INDRESP_IP	*Individual Questionnaire:* C_NVEST_A1 to C_NVEST_A96, C_NVEST_B1 to C_NVEST_B96, C_NVEST1 to C_NVEST96 on record C_INDRESP_IP C_SVACK to C_NVESTC4 on record C_INDRESP_IP	*Individual Questionnaire:* C_NVEST_A1 to C_NVEST_A96, C_NVEST_B1 to C_NVEST_B96, C_NVEST1 to C_NVEST96 on record C_INDRESP_IP C_INVESTCODE to C_NVESTLSP on record C_WEALTH_IP	*Individual Questionnaire:* C_NVEST_A1 to C_NVEST_A96, C_NVEST_B1 to C_NVEST_B96, C_NVEST1 to C_NVEST96 on record C_INDRESP_IP C_INVESTCODE to C_NVESTLSP on record C_WEALTH_IP

Analyses of the IP3 wealth experiment are reported in a working paper.[15]

3.17 BRANCHED VS. UNBRANCHED RATING SCALES

The most common method for eliciting attitudes and beliefs in surveys is to employ rating scales where respondents are asked to choose the alternative that best describes their belief in, attitude towards or agreement with a statement. Such response scales typically contain between three and seven alternatives and can be bipolar (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree) or unipolar (always, often, sometimes, occasionally, never).

[15] Uhrig SCN, Bryan ML, Budd S.(2012) UKHLS Innovation Panel household wealth questions: preliminary analysis. Understanding Society working paper 2012-01. Https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2012-01

Attitude items that use a single bipolar rating scale are ubiquitous in surveys. Evidence suggests that a two-step branched method may be more advantageous in terms of response processes and statistical properties. In the branched or unfolding bipolar format, respondents are first asked about the overall direction of their belief or attitude (e.g. satisfied or not satisfied). Then they are asked about degree (very satisfied, somewhat satisfied, slightly satisfied). A composite score can then be computed for the pair of items.

This experiment was first conducted in Wave 3. Households within PSUs were assigned to one of two experimental treatments, with special attention to being independent of the any showcard experiments.

The controlling variable is for Wave 3 is C_FF_BRANCHINGW3 on record C_HHSAMP_IP. The two groups are:

Group 1 Branched
Group 2 Unbranched

The affected questionnaire items are C_NBRCOH1_A to C_NBRCOH4_D2, and C_POLEFF1_A to C_POLEFF_D2 on record C_INDRESP_IP. The questions are about neighbourhood cohesion and political efficacy.

At Waves 4 and 5, the experiment was repeated, with the same allocation to treatments as at Wave 3. The controlling variable is w_FF_BRANCHINGW3 on record w_HHSAMP_IP, with relevant questionnaire items w_NBRCOH1_A to w_NBRCOH4_D2, and w_POLEFF1_A to w_POLEFF_D2 on record w_INDRESP_IP where “w” indicates “D” and “E” for Waves 4 and 5.

3.18 CONTEXT OF ASKING CONSENTS

Often the survey design decisions regarding how to obtain consent for administrative data linkage to social survey data are based on anecdotal accounts and common sense rather than empirical evidence. This set of experiments and additional data collection examined: (a) the reasons for consenting or not consenting; (b) whether survey context matters in asking consent; (c) the stage in the life of a panel in which data linkage should be performed; and (d) the method of re-asking consent when maintaining consent in a panel is at issue.

The experiment has two factors. First, consent to link to benefit and tax credit records held by the Department for Work and Pensions was asked either just after questions on the amounts received in these forms of unearned income, or at the end of the questionnaire (*context* dimension). Second, respondents were either reminded of their consent or non-consent given previously and asked whether this consent should still apply (*dependent interviewing*) or asked independent of any previous consent given (*independent interviewing*). If no information about prior consent was available, then the consent question was asked independently.

Table 3.14. Schematic design of Wave 4 consent experiment

	Independent	Dependent Interviewing

	Interviewing	
Ask consent in context	*Group 1*	*Group 2*
Consent asked at end of interview	*Group 3*	*Group 4*

The controlling variable for this experiment is D_FF_CONEXPW4 on record D_HHSAMP_IP:

Group 1 Independent question within context
Group 2 Dependent question within context
Group 3 Independent question at end of interview
Group 4 Dependent question at end of interview

The relevant variables affected by this experiment are D_BNCN_A1 to D_BCOI_A, B_BNCN_B1 to D_BCOI_B, D_BCSIG, D_BCRAT1 to D_BCRAT9, and D_BCCHNGE on record D_INDRESP_IP.

3.19 MODE PREFERENCE

In Wave 4 a split-ballot experiment was used to collect information about the preferred mode of administration for the survey. The ordering of questions about mode preference was randomly varied across two different experimental groups: (a) first, ratings of how likely the survey participant is to respond in specific modes, followed by questions about which mode is preferred and least preferred (generalised preference) vs. (b) a generalised mode preference questions followed by ratings of specific modes. The experiment was repeated at Waves 5 and 6 with the same allocation.

The Wave 4 controlling variable for this split-ballot design is D_FF_GROUP2 on record D_HHSAMP_IP and is coded:

Group 1 Ratings of specific modes then generalised preference.
Group 2 Generalised preference then ratings of specific modes.

The relevant variables affected by this experiment are D_MPINT_A to D_MPNOT_A, and D_MPINT_B to D_MPWEB_B on record D_INDRESP_IP.

The controlling variable for this design in Wave 5 is E_FF_GROUP2 on record E_HHSAMP_IP, with relevant variables affected being E_MPINT_A to E_MPNOT_A, and E_MPINT_B to E_MPWEB_B on record E_INDRESP_IP.

The controlling variable for this design in Wave 6 is F_FF_GROUP2 on record F_HHSAMP_IP, with relevant variables affected being F_MPINT_A to F_MPNOT_A, and F_MPINT_B to F_MPWEB_B on record F_INDRESP_IP.

3.20 CONTEXT EFFECTS IN FERTILITY DECISIONS

This Wave 4 experiment examines priming effects that impact on the respondent's thoughts about expected total fertility. Fertility intentions can be highly dependent on wider context, such as partnership, age, actual childbearing, economic position and

social pressures. Since long-running panel studies often rotate questionnaire content, there is concern that changes in answers over time may reflect the changing context effects to certain measures. That is, observed change in longitudinal data may reflect the priming effects of preceding questions. The experiment was repeated at Wave 5 with the same allocation.

Households within PSUs were randomly allocated to receive expected fertility questions either before or after questions about friendship networks.

The Wave 4 controlling variable is D_FF_FERTW4 on record D_HHSAMP_IP and is coded:

Group 1 Version A (before friendship questions)
Group 2 Version B (after friendship questions)

The expected fertility questions are *"Do you think you will have any (more) children?"* And, if the answer is yes, then *"How many (more) children do you think you will have?"* . The affected variables are D_LCHMOR_A to D_LCHMORN_A, and D_LCHMOR_B to D_LCHMORN_B on record D_INDRESP_IP.

The Wave 5 controlling variable is E_FF_FERTW4 on record E_HHSAMP_IP, with affected variables E_LCHMOR_A to E_LCHMORN_A, and E_LCHMOR_B to E_LCHMORN_B on record E_INDRESP_IP.

Note, this experiment applies only to continuing respondents being administered the CASI self-completion instrument at Waves 4 and 5.

3.21 Assessing the feasibility of directly measuring household energy use

This experiment assesses the feasibility of investigating certain key environmental behaviours and outcomes directly. Specifically, IP respondents were asked to report on two occasions meter readings for gas and electricity, and odometer readings for the motor vehicle used most often by the household. The experiment examines whether providing respondents with advance notice of the required data encourages the provision of the data within the interview. Collecting the readings on two occasions would allow the first reading to be subtracted from the second, thereby directly measuring vehicle and energy use over an identifiable period of time. Errors in implementing the experiment at Wave 5 meant that data from the experiment were not released. Instead, the experiment was re-implemented Wave 6.

The experiment takes a 2x2 design:

Table 3.15. Design of household energy use experiment

	Gas, Electric and Odometer reading	Odometer reading alone
Notification of meter readings in advance letter	Group 1	Group 2
No notification	Group 3	Group 4

Randomisation was of households within PSUs into one of the four groups for the experiment.

Approximately 4 weeks after the standard fieldwork period, a follow-up postal questionnaire collected the matching information gathered in the main Wave 6 interview from households providing at least one meter reading (N=825). The household questionnaire respondent was notified during the interview of this subsequent data collection and questionnaires were sent to this named individual. To be able to compare readings from two occasions, respondents to the follow-up confirmed their address and the make and mode of the vehicle about which they reported in the main interview.

After two-weeks, any non-response was followed-up with a reminder and a telephone follow-up was used after a further 10 days of non-response to collect information through the alternative mode.

Controlling variable if F_FF_METERSW6 on record F_HHSAMP_IP, and takes the values:

1 Gas, Electric, Odometer, advanced letter warning
2 Odometer only, advanced letter warning
3 Gas, Electric, Odometer, no advanced letter warning
4 Odometer only, no advanced letter warning

Substantive variables containing initial meter readings are F_GASUSE, F_GASMETER, F_GASEST, F_ELECUSE, F_ELECMETER, F_VARMETER1, F_VARMETER2, F_ELECEST, F_METERFOL, F_ODOUSE, F_ODOMETER, F_ODOEST, F_ODOFOL on the record F_HHRESP_IP.

Follow-up meter reading data are contained in variables F_INTLEN1, F_MODETYPE, F_REMIND, F_FF_METERSW6, F_QUTYPE, F_MRFADDCHCK, F_MRFUELHAVE1, F_MRFUELHAVE2, F_MRFUELHAVE3, F_MRFUELHAVE4, F_MRFUELHAVE96, F_MRGASUSE, F_MRGASMETER, F_MRGASEST, F_MRELECUSE, F_MRELECMETER, F_MRVARMETER1, F_MRVARMETER2, F_MRELECEST, F_MRVEHCHCK, F_MRODOUSE, F_MRODOMETER, F_MRODOEST, F_READDATED, F_READDATEM, F_READDATEY on record F_METERREADING_IP.

3.22 SATISFACTION WITH DIVISION OF HOUSEHOLD LABOUR VIGNETTES

In Waves 5 and 6 respondents evaluated a set of vignettes related to the sharing of domestic work.

The hypothetical arrangements varied along five dimensions: (1) paid work; (2) earnings; (3) presence of children; (4) housework allocations; and (5) use of paid help. All adult respondents were asked to report their expected level of satisfaction with the set of hypothetical household division of labour arrangements using a seven-point scale, from completely dissatisfied, 1, to completely satisfied, 7. Each respondent was asked to rate three randomly allocated vignettes varying over the five dimensions.

Household within PSU were randomly allocated to treatments and all individuals within the household received the same set of hypothetical vignettes to evaluate. The allocation to vignettes allows sufficient number of cases to do population level analyses. The exact allocation at Wave 5 was replicated at Wave 6.

Table 3.8 outlines the variables and categories to which respondents were allocated, where "w" indicates wave and takes values "E" and "F" for Waves 5 and 6 respectively. The variables are w_FF_PAID_WORK1 to w_FF_PAID_WORK3, w_FF_EARNINGS1 to w_FF_EARNINGS3, w_FF_CHILDREN1 to w_FF_CHILDREN3, w_FF_HOUSEWORK1 to w_FF_HOUSEWORK3, and w_FF_PAID_HOUSEWORK1 to w_FF_PAID_HOUSEWORK3 on record w_HHSAMP_IP. Please see the questionnaire for overall wording of each vignette.

Table 3.16. Dimensions in division of household labour vignettes

Controlling variables	**Dimension**	**Value & wording**
w_FF_PAID_WORK1 to w_FF_PAID_WORK3	Paid work	Group 1: you and your partner both have full time jobs Group 2: you and your partner have part time jobs and both of you work 2 and a half days per week Group 3: you and your partner both have jobs, you work full time while your partner works 2 and a half days per week Group 4: you and your partner both have jobs, your partner works full time while you work 2 and a half days per week
w_FF_EARNINGS1 to w_FF_EARNINGS3	Earnings	Group 1: and your partner has an hourly pay which is twice as much as yours Group 2: and your hourly pay is twice as much as your partner Group 3: and you have approximately the same hourly pay
w_FF_CHILDREN1 to w_FF_CHILDREN3	Children	Group 1: no children Group 2: one child aged 6 months Group 3: one child aged 5 years Group 4: one child aged 15 years

w_FF_HOUSEWORK1 to w_FF_HOUSEWORK3	Housework	Group 1: your partner does all of the housework while you do none of it Group 2: your partner does three quarters of the housework while you do one quarter of it Group 3: you and your partner share the housework equally Group 4: your partner does one quarter of the housework while you do three quarters of it Group 5: you do all of the housework while your partner does none of it
w_FF_PAID_HOUSEWORK1 to w_FF_PAID_HOUSEWORK3	Paid housework	Group 1: but you employ somebody to help with the housework one morning per week Group 2: and you do not employ anybody to help with the house work

The satisfaction ratings for the three vignettes are in w_VIG1, w_VIG2, w_VIG3 and w_HWSAT on record w_INDRESP_IP.

3.23 Subjective expectations about the returns to higher education and decisions to attend university

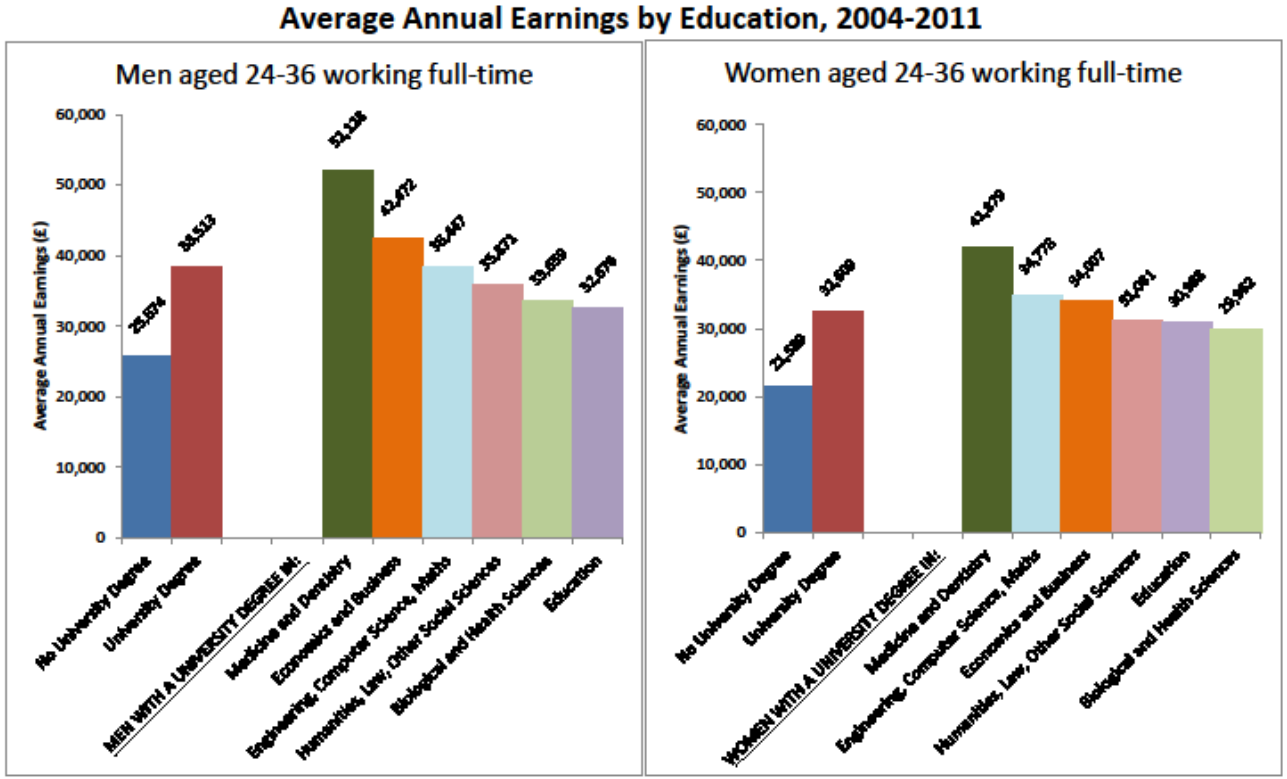
This Wave 5 study tested ways of measuring perceptions about the economic returns to higher education, the costs involved, and experimentally tests the effects of information on actual decisions to attend university.

Respondents aged 16-21, and one of their parents, were asked questions about their expectations regarding the following: the likelihood of achieving A-levels, of applying to university for different subjects, of being accepted at university, expected costs, expectations of finding a job and of earnings conditional on having a university degree in a particular subject or conditional on having only a high school degree. This content is available at items E_ODDSQUAL to E_EARNINFO, and E_KIDSTAT to E_PEARNINFO on record E_INDRESP_IP.

In addition, half of the respondents were provided with information about the economic returns to higher education consisting of the distribution of wages among university graduates in various degree areas by gender. The other half of the sample did not receive any information. The controlling variable for this information treatment is E_FF_WAGEINFOW5 on record E_HHSAMP_IP:

Group 1 Wage information
Group 2 No wage information

The information treatment provided to respondents is shown in Figure 1, Average annual earnings by education, 2004-2011.



For example, the average earnings of men working full-time aged 24-36 without a university degree are £25,874, and with a university degree are £38,513 overall, and with a university degree in Economics and Business are £42,472.
All amounts are before tax and expressed in the value of the pound in 2011.
Data Source: UK Labour Force Survey, 2004 - 2011.

Figure 1. Average annual earnings by education, 2004-2011.

3.24 DATA QUALITY OF DISABILITY MEASURES

This experimentation uses dependent interviewing to investigate the measurement of change in self-assessed measures of long-standing illness or disability. The current UKHLS method of obtaining information about disability is to use a yes/no question about long-standing conditions which is followed-up by a check-list of 11 areas of everyday life where people may have difficulties (i.e., "Activities of Daily Living", or ADL indicators). The Wave 6 sample was split into two experimental treatments and a control group. The first experimental treatment compared the response to the initial question about long-standing conditions to the previous wave's response and followed-up any responses which were different from previous with a "Why?" question. The ADL check-list was administered at a later point in the questionnaire for this set of respondents. The second experimental condition asked only the ADL check-list without filtering on whether the respondent reported that they had a long-standing condition. Finally, the control group repeated the original UKHLS approach.

Randomisation was of households within PSUs into the experimental treatments and control as follows: one-half of the sample into the first experimental treatment, one-quarter of the sample into the second experimental treatment, and the remaining quarter of the sample into the control group. All new entrants received the control version by default.

This experiment is controlled by variable F_FF_DISABILITYW6 on record F_HHSAMP_IP. It takes the values:

1 edit check/explain inconsistencies, move DISDIF to annual events
2 only DISDIF, are not asked HEALTH
3 original design

Affected variables in the questionnaire are: F_HEALTH, F_HTHRDI11, F_HTHRDI12, F_HTHRDI13, F_HTHRDI14, F_HTHRDI15, F_HTHRDI16, F_HTHRDI21, F_HTHRDI22, F_HTHRDI23, F_HTHRDI24, F_HTHRDI25, F_HTHRDI26, F_DISDIF1- F_DISDIF12, F_DISDIF96, F_DISDIFB1- F_DISDIFB12, F_DISDIFB96, F_DISDIFAA- F_DISDIFA12, F_DISDIFA96 on record F_INDRESP_IP.

3.25 DATA QUALITY WHEN SWITCHING FROM FACE TO FACE TO WEB MODE IN A PANEL SURVEY

This experiment aimed (a) to investigate differences in data quality arising from switching Innovation Panel members from face-to-face to web mode of survey administration, (b) to test methods for the mitigation of a hypothesised decline in quality associated with moving to web data collection and (c) to contribute to a general understanding of how web data collection methods can affect data quality. The experiment asks respondents to recall facts gathered contemporaneously at earlier waves and uses earlier wave data as a validation check. Half of respondents completing the survey on the web received a commitment pledge as an experimental treatment to encourage more accurate reporting of historical information.

Randomisation was of households across the complete sample, i.e., regardless of PSU, into one of two experimental treatments.

The controlling variable is F_FF_ITEMW6 on record F_HHSAMP_IP. It is coded as:

1 no commitment pledge
2 commitment pledge

Affected variables in the questionnaire are F_EMPV1 F_EMPV2 F_SF1RECALL F_SF5RECALL F_SF6CRECALL F_HEALTHRECALL F_HLWTRECALL F_HLWTSRECALL F_HLWTPRECALL F_HLWTKRECALL F_RECALLEASE F_RECALLEFFORT F_WEBRECALL F_WEBINTERRUPT on record F_INDRESP_IP.

3.26 Improving levels of item non-response

Elevated levels of item non-response in WEB surveys are a concern. To see whether the incidence of item non-response can be reduced, Wave 6 contained an experiment on 6 questions which showed relatively high levels of item non-response in past waves. Wave 6 WEB respondents were assigned to one of two experimental treatments, or to a control group. The control group received the standard non-response protocol. The routine approach for accessing non-response codes is to not present the codes on the screen presenting the question to respondents but then if the respondent attempts to skip the question without answering codes for “Don’t know” and “Rather not answer” appear in blue with a message stating “You forgot to answer this question”. Respondents must select an answer at this point before moving to the next screen.

The first experimental treatment received a re-active prompt for item non-response which altered the non-response message. The altered message read, “If possible, please provide an answer to this question as this is one of the key questions in this study. Please be assured that the information you give us will be treated confidentially.” The same set of response categories appeared, but without specific item non-response codes. If the respondent attempted to skip the question, the item non-response codes appeared and respondents were forced to pick an answer.

The second experimental treatment replicated the standard non-response protocol. However, respondents who provided a “Don’t know” or “Refused” code at the tested items received a set of follow-up questions at the end of the questionnaire. These questions enquired about any difficulties in answering the questionnaire, confirming who answered the questionnaire, and re-presented the questions to which the respondent answered “Don’t know” or “Refused”. At this re-presentation of items, respondents was thanked for their participation, informed that they had not answered certain key questions, told the importance of these questions, told that these are the last questions and asked to complete them before finishing.

Households within PSUs were randomly allocated to the two treatments and control in equal proportion, one-third in each group. However, the experiment only applied to respondents interviewed via WEB and this mode control was implemented in question filtering within the survey instrument.

The controlling variable is item F_FF_ITEMNONW6 on record F_HHSAMP_IP. The groups are:

1 Standard procedure
2 Prompt for item non-response
3 Follow-up questions at end of questionnaire

Affected questionnaire items are F_PLBORNUK, F_MSTATSAM, F_PAYGL, F_BASRATE_CAWI_1 to F_BASRATE_CAWI_3, F_JSPRF, F_FIYRDIA, F_PAYGL, F_WEBEXP1_CODE to F_WEBEXP3_CODE, F_WEBWHO1 TO F_WEBWHO16, F_WEBNRNUM, F_PAYGL_FU, F_PAYGLWC_FU, F_FIYRDIA_FU, F_JSPRF_FU, F_PLBORNUK_FU, F_BASRATE_FU, F_MSTATSAM_FU,and F_WEBINCWHY on record F_INDRESP_IP.

The variables F_variable_CAWI_1, F_variable_CAWI_2, F_variable_CAWI_3 and F_variable_FU correspond to the serial order of attempts asking the question, such that F_variable_CAWI_3 is the final time for the initial query, and the only attempt with opt-out options available for each question. These variables correspond to the responses in the three conditions in the following way:

f_variable_cawi_1= The first time the question was asked in the motivational statement condition.

f_variable_cawi_2= The second time the question was asked in the motivational statement condition and the first time the question was asked in the control and follow-up conditions.

f_variable_cawi_3 =The third time the question was asked in the motivational statement condition and the second time the question was asked in the control and follow-up conditions. The only time the opt-out options are available.

The only way to identify this is to control using f_ff_itemnonw6 on file F_HHSAMP.

If the respondent does not answer or selects an opt-out option, this response is coded in an entirely different variable (i.e. not f_variable_cawi_3). These are all prefixed with DKRF, but have numbers that follow that identify it for specific variables. These are as follows

Basrate=	DKRF34
FiYrDIA=	DKRF41
JsPrf=	DKRF8
Mstatsam=	DKRFY1
Paygl=	DKRF31
Paygwc=	DKRF31
Plbornuk=	DKRF13

Note that these DKRF variables are coded as the positive values 1 and 2 instead of -1 and -2 for “Don’t Know” and “Refused”, respectively.

Respondents in the follow-up condition who have a value in DKRF variables are asked the question in the follow-up section, coded in F_variable_FU. However, unlike F_variable_cawi_3, missing values can be recorded in this variable.

Using the experimental variables the main variable is coded. Important to note is that the default for all variables is -2 ("Refused") and only changed if some other answer is given. The backcoding to the main variable is done following this logic:

f_variable = -2
IF DKRF[N]=1 THEN f_variable=-1
ELSE IF f_variable _CAWI_3>0 THEN f_variable= f_variable _CAWI_3
ELSE IF f_variable _CAWI_2>0 THEN f_variable= f_variable _CAWI_2
ELSE IF f_variable _CAWI_1>0 THEN f_variable= f_variable _CAWI_1

F_VARIABLE_FU is not backcoded to the main variable, so the main variable only constitutes the first set of queries.

Error in F_FIYRDIA and F_FIYRDIA_FU:

An error occurred in coding of f_fiyrdia and the implementation of f_fiyrdia_fu. This occurred because of the above logic. In the above logic the experimental variables are backcoded to the main variable only if the response is greater than 0.

However, the majority of respondents have and gave a zero value to this question. Hence these answers were not backcoded and responses remained incorrectly coded as -2, the default.

Due to this, everyone in the follow-up condition who gave an answer of zero were also coded as a refusal, and asked f_fiyrdia_fu even though they provided a substantive answer.

These variables can be corrected by using the provided experimental variables, correcting the above logic to greater or equal to 0.

3.27 Measuring Time and Risk Preferences

The study aims to combine survey data from the Innovation Panel with data on risk and time preferences. Risk preference is defined as the attitude for taking a gamble and is operationalised by systematically asking respondents to choose between lotteries yielding different pay-out probabilities and different pay out amounts. Through a series of 18 questions, pay-out amounts and pay-out probabilities were varied thus allowing for risk preference to be quantified.

Time preference is defined as the degree to which time closer to the present is valued more highly than time more distant in the future. It is operationalised by systematically asking respondents to choose between receipt of money closer or further away in time with interest. Through a series of 72 questions, the time differential and interest rate varied thus allowing for time preference to be quantified.

A target sample of around 580 respondents was selected such that only one respondent participated per household. Household within PSUs were randomly selected and then selection of respondents within households was made with a Kish grid of enumerated adults. One-tenth of selected participants were given a payment upon completion of the questions. Among those selected to receive a payment, the amount was based on one of the 91 questions that they answered. If one of the lottery questions was selected, the preferred lottery was played and pay-out was made accordingly. The study will be replicated at Wave 7 among the same set of respondents as at Wave 6 but with re-randomisation of pay-outs.

Controlling variables will be released as part of the Wave 6 data. However due to proprietary research interests, the substantive data will be released in September 2015.

The selection of respondents and items for pay-out are controlled by the variables F_FF_TIMERISKW6, F_FF_TRSEL2, F_FF_TRSEL3, F_FF_TRSEL4, F_FF_TRSEL5, F_FF_TRWINW6, F_FF_TRQW6, and F_FF_TRDW6, on record F_HHSAMP_IP. The variable F_FF_TIMERISKW6 indicates selected households. The variables F_FF_TRSEL2 through F_FF_TRSEL5 were used to create the Kish grid. The variable F_FF_TRWINW6 was randomised within those respondents selected to receive the lottery questions and determine whether they received a pay-out. The variable F_FF_TRQW6 indicates from which question the pay-out was determined. Finally, if a 'lottery' question was selected, the variable F_FF_TRDW6 indicates the randomised outcome relevant for determining the lottery pay-out.

Substantive variables to be released in September 2015 are F_TRFLAG, F_TRNOTES, F_TRPRE, F_TRPREI, F_CHOICE01 through F_CHOICE71, F_RISKPRE, F_RISKPREB, F_TRENDA, F_CHOICE73 through F_CHOICE91, F_TREND, F_SELPAY, F_DIEROLL, F_TRNOWIN, F_TRWIN, F_DRAWBALL, F_PAYOUT0172, F_PAYOUT7390, F_PAYOUT91, F_TRDIE, F_TRPAYOUT, F_RUNTR, F_TMPRF3, F_TMPRF12, F_TMPRF1, F_TRRISKA, F_TRHLRISK, F_TRFLRISK, F_TRIMPAT, F_TRIMPUL, F_TRWEMWBA, F_TRSMOKER, F_TRNCIGS, F_TREVRALC, F_TREGALCO, F_TRDKLM, F_TR5ALCDR, F_TRDRNKYR, F_TRFFDWK, F_TRJFD, F_TRFRUTPPD, F_TRHLWTR, F_TRTRYDIET, F_TREXTYPE1 through F_TREXTYPE97, and F_TRPSPRT which will appear on record F_INDRESP_IP.

4 SAMPLE DESIGN

DESIGN OF WAVE 1 IP SAMPLE

The IP is similar to the main stage survey in having a stratified and geographically clustered sample design. The Innovation Panel is a sample of England, Scotland and Wales. Areas north of the Caledonian Canal and Northern Ireland are excluded (unlike the main *Understanding Society* survey). Post code sectors from the Postcode Address File were ordered by Government Office Region, the percentage of household heads classified as National Statistics Socio-Economic Classification (NS-SEC) categories 1 and 2 (non-manual) and population density. A systematic

random sample of 120 sectors was drawn with probability proportional to population size. Within each selected sector, 23 addresses were selected by systematic random sampling, making a total sample of 2,760 addresses from 120 sectors.

The final stage of sampling was carried out in the field by interviewers. So for each sampled address, the interviewer identified the sample persons. All persons resident at the sample address at the time the interviewer collected the household grid information for wave 1 were defined as sample members. If more than three dwellings were found at an address, three were selected at random for inclusion using a Kish grid procedure. If more than three households were found to be resident at a sampled dwelling (which usually only happens when the sampled address is a single dwelling), again three were selected at random for inclusion using a Kish grid procedure. Additional detail can be found in the working paper on the weighting strategy.[16]

All household members aged 16 years or older were eligible for interview. As with the main stage fieldwork design, all persons resident at the address, including children, were defined as original sample members (OSM) to be followed throughout the life of the study. In contrast to the main general population sample, the IP does not attach absent household members living in institutional accommodation to the IP sampled households. This introduces some degree of coverage error since these persons do not otherwise have an independent chance of selection through the Postcode Address File. Despite these differences the IP has many similarities to the overall sample design of *Understanding Society*.

REFRESHMENT SAMPLE IN WAVE 4

An additional 960 addresses, eight in each of the original 120 PSU's, were added as the refreshment sample. If a household at one of the added addresses responded, members were defined as Original Sample members, from Wave 4 onwards.

SAMPLE DESIGN VARIABLES

The sample design is described by three variables, indicating sampling stratum, primary sampling unit and design weight.

Sampling stratum and primary sampling unit (PSU) are identified by W_STRATA and W_PSU respectively. They are on individual level enumeration and response files, as well as W_HHSAMP_IP. The individual level enumeration files are W_INDALL_IP. The individual level response files are W_INDRESP_IP and W_YOUTH_IP.

The person-level design weight is A_PSNENIP_XD and it is on A_INDALL_IP, A_INDRESP_IP AND A_YOUTH_IP. The household level design weight is A_HHDENIP_XD. It is on A_HHRESP_IP and A_HHSAMP_IP.

[16]Lynn P. (2009). Sample design for Understanding Society. Understanding Society working paper 2009-01. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2009-01.

5 WEIGHTING

Weights are provided in order to adjust for differential nonresponse, and for unequal selection probabilities and potential sampling error. Weighted analysis will adjust for response rate differences between subgroups of the sample. The appropriate weight to use will depend on the nature of the analysis being undertaken. Weights should be selected carefully following advice provided below. There is information on strata and clusters, needed to correctly estimate standard errors and confidence intervals in Section 4. Researchers may wish to consult the working paper on the study's weighting strategy (1).

If you aim to generalise results to the UK population, our advice is to always use weights. Note that adjusting for first wave nonresponse is different from adjusting for attrition and requires variables which have values for both responding households and never responding households.

SELECTING THE CORRECT WEIGHT FOR YOUR ANALYSIS

A number of different weights are provided to meet different needs of users. The weight for your analysis reflects the survey instrument(s) which is/are the source of the data, the analysis level (household or individual) and the wave(s).

All weights follow a naming convention, designed to help users to pick the correct weight. The name of each weight reflects the wave for which the weight is calculated, level of analysis, data source and its nature (design weight, cross-sectional analysis weight or longitudinal analysis weight). The rules are described in the "Naming Conventions for Weighting Variables" section below.

We have presented variable names and segments of variable names in upper case so they stand out from the text. Analysts will need to modify if their statistical package is case sensitive, e.g., Stata.

If your analysis uses only data from one wave, select the "XW" (cross-sectional) version of the weight. This weight is defined for all sample members[17] who responded to the relevant survey instrument at that wave. If your analysis uses data from two or more waves, select the "LW" (longitudinal) version of the weight for the most recent wave included in your analysis. This weight is defined for sample members who responded to the relevant survey instrument at each wave.

For individual level analysis you may want to combine information from different questionnaire sources. In this situation please select the weight suitable for the lowest level according to the hierarchy below:

Level of Analysis	**Questions available for**
4	household level (all enumerated individuals)
3	proxy and main adult interview

[17] With just a few exceptions, which are documented below in the "Technical Details" section

2	Main adult interview only (no proxy)
1	self-completion interview, adult or youth

For example, if in one model you use wave 1 data from the adult main and proxy interview as well as from the self-completion, then the correct weight will be A_INDSCIP_XW – the weight for the self-completion questionnaire as its level (1) is lower than the level for main and proxy interview (3).

Table 5.1 List of available weights for the Innovation Panel

Analysis level	**Wave(s)**	**Data source**	**Analysis Weight**
HH	*n*	Household grid and/or household interview	*n*_HHDENIP_XW
IND	*n*	Household grid and/or household interview	*n*_PSNENIP_XW
IND	1 through *n*	Household grid and/or household interview	*n*_PSNENIP_LW
IND	4 through *n*	Household grid and/or household interview	*n*_PSNENI1_LW
IND	1&3	Household grid and/or household interview	C_PSNENIP5_LW
IND	1&3&4	Household grid and/or household interview	D_PSNENIP13_LW
IND	*n*	Adult main and proxy interview	*n*_INDPXIP_XW
IND	1 through *n*	Adult main and proxy interview	*n*_INDPXIP_LW
IND	4 through *n*	Adult main and proxy interview	*n*_INDPXI1_LW
IND	1&3	Adult main and proxy interview	C_INDPXIP5_LW
IND	1&3&4	Adult main and proxy interview	D_INDPXIP13_LW
IND	*n*	Adult main interview	*n*_INDINIP_XW
IND	1 through *n*	Adult main interview	*n*_INDINIP_LW
IND	4 through *n*	Adult main interview	*n*_INDINI1_LW
IND	1&3	Adult main interview	C_INDINIP5_LW
IND	1&3&4	Adult main interview	D_INDINIP13_LW
IND	*n*	Adult self-completion	*n*_INDSCIP_XW
IND	4 through *n*	Adult self-completion	*n*_INDSCI1_LW
IND	1&3	Adult self-completion	C_INDSCIP5_LW
IND	1&3&4	Adult self-completion	D_INDSCIP13_LW
IND	1&3&4&5	Adult self-completion	E_INDSCIP29_LW
IND	1&3&4&5&6	Adult self-completion	F_INDSCIP61_LW
IND	1	Youth self-completion	A_YTHSCIP_XW

IND	1&2	Youth self-completion	B_YTHSCIP_LW
IND	*n* (w3 onwards)	Youth self-completion	*n*_YTHSCIP_XW
IND		(Design weight)	A_PSNENIP_XD

HH = household; IND = individual

NOT USING WEIGHTS

Note that an unweighted analysis does not reflect the population structure correctly unless the assumptions below are true. It is suggested that researchers publishing or presenting unweighted estimates make these assumptions explicit.

If no weighting is used, the analysis assumes:

1. that people who live at an address with more than three dwellings or more than three households are the same as those who don't;
2. that people who responded at wave 1 are the same with respect to your estimates as those who did not; that people who continued to respond at subsequent waves are the same as those who did not; and that people who responded to each particular instrument used in the analysis (individual interview, self-completion questionnaire etc) are the same as those who did not.

We therefore strongly suggest using weighted analyses whenever inference to the population is required.

NAMING CONVENTIONS FOR WEIGHTING VARIABLES

Naming conventions have been adopted for the weighting variables. This will help users to select the name of the weight they need or to identify the nature of a weight. The structure is as follows, and is consistent with (a subset of) the naming conventions for the main survey:

W_XXXYYZZ_AA, where

W=wave
XXX=target population
YY=instrument
ZZZ=sample
AA=weight type

Target population (XXX):
HHD: household
PSN: persons 0+
IND: persons 16+
YTH: persons 10-15

Instrument (YY):
EN: enumeration (grid)
IN: interview
PX: interview or proxy
SC: self-completion

Sample (ZZ):
IP: Innovation panel
I1: Innovation panel since 2010, including first refreshment

Type of weight (AA):
LW: longitudinal analysis weight
XW: cross-sectional analysis weight
LD: longitudinal design weight
XD: cross-sectional design weight

Example

A_INDINIP_XW is the cross-sectional analysis weight for adult main interview data from IP wave 1, representing the population of persons aged 16+.

Longitudinal weights for partial wave sets

An additional device is used to indicate weights for longitudinal analysis of combinations of waves that do not include all waves up to the current one ("partial wave sets"). This consists of a numeric indicator following the "ZZ" part of the variable name. The number is a decimal representation of the binary number that indicates the combination of waves, where 1 indicates inclusion and 0 indicates exclusion, and where the waves are in reverse order. For example, data from waves 1, 3 and 4 can be represented by the binary number 1101, which translates to the decimal number 13 (1+4+8). Thus, D_INDINIP13_LW is the weight for individual interview data from waves 1, 3 and 4 (whereas D_INDINIP_LW is the weight for the "complete wave set" of waves 1, 2, 3 and 4). For ease, the variable label indicates the combination of waves, e.g. "(ACD)" to indicate waves 1, 3 and 4.

The partial wave sets presented with this release are 5(Wave 1 and Wave 3) and 13 (Wave 1, Wave 3, and Wave 4), etc.

TECHNICAL DETAILS

This section describes how the following weights were derived:

- IP1 cross-sectional weights;
- IP2 longitudinal and cross-sectional weights;
- Longitudinal and cross-sectional weights for later waves.

Common features of all weights

Note that all models used to predict response propensities as described in the Technical Details are fitted using stepwise backward logistic regression with p=0.05. Each set of weights has been scaled by a constant factor to produce a mean of one amongst cases eligible to receive the weight. In consequence, weights which are defined as equal (e.g. D_HHDENIP_XW AND D_PSNENIP_XW for the refreshment sample) will not necessarily have the same numeric value, but will retain the same between-person/household relative value.

IP1 CROSS-SECTIONAL WEIGHTS

A_HHDENIP_XW
A_PSNENIP_XW
A_INDINIP_XW
A_INDPXIP_XW
A_INDSCIP_XW
A_YTHSCIP_XW

Each IP1 cross-sectional weight consists of a design weight, which is adjusted for non-response and post-stratified to population estimates.

The design weight is the same for a household (A_HHDENIP_XD) and for each member of the household (A_PSNENIP_XD). Design weights are equal for the vast majority of sample members and differ only for cases that involved a) sub-sampling of dwellings because there were more than three dwellings at the address, or b) sub-sampling of households because there were more than three households in the dwelling (see section 4 on sampling).

The first stage of non-response adjustment is at the household level. The adjustment consists of the reciprocal of predicted values from a logistic regression model of household response, where this is defined as completion of at least the household grid (around 59% of households responded in IP1). The covariates in the model were a set of small area indicators and Census 2001 variables, including those used in sample stratification, as well as interviewer observation variables collected during the survey field work. The household weight consists of the design weight with this household-level adjustment. This weight (A_HHDENIP_XW) is defined for all households that participated in IP1.

The enumerated person weight (A_PSNENIP_XW) is defined for all persons in households that participated in IP1. The weight equals the IP1 household weight, post-stratified by age, sex, and grouped Government Office Region. The post-stratification targets are taken from Office for National Statistics 2008 mid-year population statistics. The post-stratification adjustments were calculated for each cell of a 56-cell matrix, as the ratio of population count to weighted sample count. The cells were defined by seven age categories, sex, and four (groups of) regions/countries.

The adult main interview weight (A_INDINIP_XW) is defined for the 85% of IP1 enumerated persons aged 16 or over who completed the individual interview. It consists of the enumerated person weight, adjusted by the reciprocal of predicted values from a logistic regression model of adult main interview response, conditional on enumeration. The covariates in the model were as described above for household response, plus personal characteristics from the household grid and a limited number of household characteristics from the household grid and household questionnaire. After this non-response adjustment was applied, post-stratification was implemented, based upon the same 56-cell matrix described above for the enumerated person weight.

The adult main or proxy interview weight (A_INDPXIP_XW) is defined for the 91% of IP1 enumerated persons aged 16 or over for whom either an adult main interview or a proxy interview was completed. It was derived in the same way described above for the adult main weight, the only difference being the definition of response in the logistic regression model.

The adult self-completion weight (A_INDSCIP_XW) is defined for all respondents to the adult main interview who also completed the self-completion questionnaire. (A small number of persons 16 or over completed the self-completion questionnaire but not the adult main interview – these responses are not included in the data set.) The weight was derived in the same way described above for the adult main weight, but the logistic regression model is based on all enumerated persons aged 10 or over and predicts response to the self-completion (adult or youth) questionnaire.

The youth self-completion weight (A_YTHSCIP_XW) is defined for all persons aged 10 to 15 who completed the youth questionnaire. The weight was derived in an identical way to that described above for the adult self-completion weight.

IP2 LONGITUDINAL WEIGHTS

B_PSNENIP_LW
B_INDINIP_LW
B_INDPXIP_LW
B_YTHSCIP_LW

The IP2 longitudinal enumerated person weight (B_PSNENIP_LW) is defined for all Original Sample Members (OSMs) enumerated at both IP1 and IP2 – that is, in a responding household at both waves, plus newborns (children of OSM mothers, born between IP1 and IP2). It consists of the IP1 enumerated person weight, adjusted for conditional non-response at IP2. The adjustment consists of the reciprocal of predicted values from a logistic regression model of IP2 enumeration conditional on IP1 enumeration. The covariates were the same as those described above for the IP1 adult main interview weight. Newborns were assigned the same weight as their mother.

The IP2 longitudinal adult main interview weight (B_INDINIP_LW) is defined for all OSMs who completed the adult main interview at both IP1 and IP2 and for 16 year-

old OSMs who completed the interview at IP2 but were too young to be eligible for it at IP1. It consists of the IP1 adult main interview weight (or the IP1 enumerated person weight in the case of IP2 16 year-olds), adjusted for conditional non-response at IP2. The adjustment consists of the reciprocal of predicted values from a logistic regression model of IP2 adult main interview response conditional on IP1 adult main interview response. The covariates were measures from the IP1 adult main interview and the IP1 household grid and household interview, plus interviewer observations.

The IP2 longitudinal adult main or proxy interview weight (B_INDPXIP_LW) is defined for all OSMs who at both IP1 and IP2 *either* completed the adult main interview *or* had a proxy interview carried out on their behalf, and for 16 year-old OSMs who completed either instrument at wave 2 regardless of their response in IP1 as they were too young to be eligible for the adult main interview at IP1. It should therefore be used in preference to the IP2 longitudinal adult main interview weight for analysis which is restricted to variables that are available from the proxy interview. The weight was derived by adjusting the IP1 adult main or proxy interview weight (or the IP1 enumerated person weight, in the case of IP2 16 year-olds) for non-response at IP2. The adjustment came from a model of IP2 response (main or proxy) conditional on IP1 response (main or proxy). Model covariates were the same as described above for the longitudinal adult main weight, except that variables from the individual interview were restricted to those also included in the proxy interview.

The IP2 longitudinal youth self-completion weight (B_YTHSCIP_LW) is defined for all persons who completed the youth self-completion questionnaire at both IP1 and IP2 and for 10-year-old OSMs who completed it in IP2 but were too young to have been eligible for it at IP1. The weight was derived by adjusting the IP1 youth weight (and the IP1 enumerated person weight, in the case of 10 year-olds at IP2) for non-response to the youth self-completion at IP2. The adjustment came from a model of IP2 youth response conditional on IP1 youth response.

IP2 CROSS-SECTIONAL WEIGHTS

B_HHDENIP_XW
B_PSNENIP_XW
B_INDINIP_XW
B_INDPXIP_XW

The IP2 cross-sectional enumerated person weight (B_HHDENIP_XW) is defined for all persons (OSMs and Temporary Sample Members (TSMs)) enumerated at IP2. For persons in households where all household members are OSMs, it is equal to the longitudinal enumerated person weight. For persons in households with at least one TSM at wave 2, it is derived through the weight share method: each person in the household is given a weight of *a*/*b*, where *a* is the sum of the longitudinal enumerated person weights for all OSMs in the household and *b* is the total number of persons (OSMs and TSMs) in the household.

The IP2 cross-sectional household weight (B_HHDENIP_XW) is defined for all households who responded at IP2. It consists simply of the mean[18] of the IP2 cross-sectional enumerated person weights for all persons (OSMs and TSMs) in the household.

The IP2 cross-sectional adult main interview weight (B_INDINIP_XW) is defined for all persons who completed the IP2 adult main interview (with one exception, noted in the following). In households containing one or more responding TSMs, each respondent in the household is given a weight of *a*/*b*, where *a* is the sum of the longitudinal weights (B_INDINIP_LW) in the household and *b* is the total number of respondents in the household who are either an OSM with a non-zero longitudinal weight or a TSM. In all other households (OSM-only households and households in which no TSMs completed the main interview), the cross-sectional weight is equal to the longitudinal weight. Note, that B_INDINIP_XW will equal zero for all persons in the household if no persons have a non-zero B_INDINIP_LW. This can happen, for example, if the only person completing the IP2 interview is a TSM or is an OSM who did not complete the IP1 interview.

The IP2 cross-sectional adult main or proxy weight (B_INDPXIP_XW) is defined for all persons who *either* completed the adult main interview *or* had a proxy interview carried out on their behalf. It is derived in a way exactly analogous to that described above for the cross-sectional adult main interview weight, but based upon B_INPXNIP_LW instead of B_INDINIP_LW. Thus, there will be weights of zero for persons in households in which no person has a non-zero value of B_INPXNIP_LW.

IP3, IP4, IP5 AND IP6 LONGITUDINAL WEIGHTS FOR COMPLETE WAVE SETS

*n*_PSNENIP_LW
*n*_INDINIP_LW
*n*_INDPXIP_LW

At each wave subsequent to IP2, the basic longitudinal enumerated person weight (*n*_PSNENIP_LW) is defined for all persons who were enumerated at all waves up to and including the current one. It consists of the enumerated person longitudinal weight from the previous wave, with an adjustment for nonresponse at the current wave. The adjustment consists of the reciprocal of the predicted probability of enumeration at the current wave conditional on enumeration at all previous waves. The probability is predicted by a model based on OSMs only in which covariates come from the previous wave household grid and household questionnaire. Newborns are assigned the enumerated person longitudinal weight of their biological mother.

[18] On the mainstage survey, and for subsequent waves of IP, cross-sectional household weights were defined as the minimum of the cross-sectional enumerated person weights, rather than the mean. This was done on the grounds that the probability of a household being enumerated is equal to or greater than the probability of the highest-probability individual in the household being enumerated, so variation between households in the maximum probability may better reflect household probability than variation in the mean probability.

At each wave subsequent to IP2, the longitudinal adult main interview weight (*n*_INDINIP_LW) is defined for all OSMs who at each wave up to and including the current one completed the interview (or were aged under 16 but were continuously enumerated)[19]. The weight is derived as follows. First, for all OSMs who had a non-zero longitudinal adult main interview weight at the previous wave, a model is fitted to predict completion of the main interview at the current wave. The reciprocal fitted values are multiplied by the longitudinal adult main interview weight from the previous wave. Second, for all OSMs who have reached the age of 16 since the previous wave, reciprocal fitted values from a model of main interview response at current wave conditional on enumeration at current wave are multiplied by the current wave longitudinal enumerated person weight. The model is based on all OSMs aged 16 or over at the current wave, but the predicted values used only for those aged exactly 16. The weights for 16 year-olds are then scaled so that when combined with those for persons aged 17 or over, the weighted proportion of 16-year olds is equal to that obtained by applying the current wave longitudinal enumerated person weight to all enumerated persons aged 16 or over.

Analogously, at each wave subsequent to IP2, the longitudinal adult main or proxy interview weight (e.g. C_INDPXIP_LW) is defined for all persons for whom either a main or proxy interview was completed at all waves up to and including the current one at which they were eligible (i.e. aged 16 or over). The weight is derived in exactly the same way described above for main interview weights, except that the models predict response to main or proxy interview and that, for persons aged 17 or over, the reciprocal predicted values are multiplied by the previous wave longitudinal adult main or proxy interview weight.

IP3 AND IP4 LONGITUDINAL WEIGHTS FOR PARTIAL WAVE SETS

C_PSNENIP5_LW
D_PSNENIP13_LW
C_INDINIP5_LW
D_INDINIP13_LW
C_INDPXIP5_LW
D_INDPXIP13_LW
C_INDSCIP5_LW
D_INDSCIP13_LW

Longitudinal weights are also provided for the partial wave sets {1, 3}, which is denoted as 5 in the weight variable names, and {1, 3, 4}, which is denoted as 13 in the weight variable names. Note that wave 2 was carried out using mixed modes

[19] Thus, an OSM who turns 16 and subsequently responds to the adult main interview will have a longitudinal adult main interview weight even though they were not eligible to have a longitudinal adult main interview weight at any previous wave. For example, a sample member who responded to the main interview at IP3 and IP4, but was aged 14 at IP1 and 15 at IP2, will have a non-zero value of D_INDINIP_LW.

and, as a consequence, there are a sizeable number of wave non-respondents at that wave.

These longitudinal weights for partial wave sets were derived using methods directly analogous to those for the longitudinal weights for complete wave sets. For example, the longitudinal enumerated person weight for waves 1, 3 and 4 (D_PSNENIP13_LW) consists of the longitudinal enumerated person weight for waves 1 and 3 (C_PSNENIP5_LW), with an adjustment for nonresponse at the wave 4 conditional on response at waves 1 and 3. For weights that involve separately modelling those who were already eligible at the previous wave in the set and those who have become eligible subsequently (INDINIP, INDPXIP, INDSCIP), there will be a larger proportion of sample members defined as newly eligible whenever the previous wave in the set was two or more years previously. For example, creation of C_INDINIP5_LW (waves 1 and 3) involved one model for persons already eligible and responding at wave 1 (to adjust their wave 1 main interview weight) and another for persons who became eligible for the main interview over the 2-year period between waves 1 and 3 (to adjust their wave 3 enumerated person weight).

Note that the only longitudinal weights for the adult self-completion questionnaire are for the partial wave sets {1, 3} and {1, 3, 4} as the self-completion questionnaire was not administered at wave 2.

As with the other longitudinal weights, sample members who had reached age 16 since the previous wave in the set are assigned a longitudinal weight based on their current wave enumerated person weight, adjusted for non-response to the current wave self-completion questionnaire conditional on enumeration.

IP3 CROSS-SECTIONAL WEIGHTS

C_HHDENIP_XW
C_PSNENIP_XW
C_INDINIP_XW
C_INDPXIP_XW
C_INDSCIP_XW
C_YTHSCIP_XW

The cross-sectional enumerated person, main interview, and main or proxy interview weights (C_PSNENIP_XW, C_INDINIP_XW, C_INDPXIP_XW) are each based on the respective longitudinal weight (C_PSNENIP5_LW, C_INDINIP5_LW, C_INDPXIP5_LW), with application of the weight share method to assign weights to TSMs. In households containing one or more responding (to the relevant instrument) TSMs, each respondent in the household is given a weight of *a*/*b*, where *a* is the sum of the relevant longitudinal weights in the household and *b* is the total number of respondents in the household who are either an OSM with a non-zero longitudinal weight or a TSM. In other households, the cross-sectional weight equals the respective longitudinal weight. Some respondents will therefore receive a zero cross-

sectional weight, namely OSMs with a zero longitudinal weight and TSMs in households containing no OSMs with a non-zero longitudinal weight.

The IP3 household weight (C_HHDENIP_XW) equals the minimum of the cross-sectional enumerated person weights (OSMs and TSMs) in the household.

The cross-sectional adult self-completion and youth self-completion weights (C_INDSCIP_XW, C_YTHSCIP_XW) are based on the wave 3 cross-sectional enumerated person weight, with an adjustment for non-response to the self-completion questionnaire. The adjustment is derived from a single model of response to (either) self-completion questionnaire, based on all enumerated persons aged 10 or over at wave 3 (who were therefore eligible for either the youth or adult self-completion questionnaire).

IP4 CROSS-SECTIONAL WEIGHTS

D_HHDENIP_XW
D_PSNENIP_XW
D_INDINIP_XW
D_INDPXIP_XW
D_INDSCIP_XW
D_YTHSCIP_XW

All IP4 cross-sectional weights combine the continuing sample with the refreshment sample, for whom IP4 was the first wave. Weights were derived in different ways for the two samples.

For the refreshment sample, weights were developed in the same way as for IP1, consisting of a design weight adjusted for non-response. The design weight corrected for multiple dwellings or households at an address. The non-response adjustment is based on covariates from Census 2001 and small area statistics. A separate model was used for each of England, Wales and Scotland as different predictors were available for each country. Adjustments for households in England were based on a model for England only; adjustments in Wales were derived from a model for England and Wales; adjustments in Scotland came from a model for all three countries using only common predictors. (The refreshment sample sizes in Wales and Scotland were too small to support separate models.) These weights serve both as household weights (D_HHDENIP_XW) and enumerated person weights (D_PSNENIP_XW) for the refreshment sample. The enumerated person weight was then post-stratified by gender in London and by gender and five age groups for the rest of Great Britain, based on Office for National Statistics mid-2010 population estimates (the most recent available at the time the weights were derived).

Conditional on enumeration, response to the adult main interview, adult main or proxy interview, adult self-completion and youth self-completion were each modelled using stepwise backward logistic regression. Again, separate models were fitted for England, Scotland and Wales. The covariates used were country-specific and came from neighbourhood statistics, household questionnaire and household grid. The inverse predicted response probability was multiplied by the enumerated person weight to produce the respective weight. Post-stratification was applied for each of the three weights (adult main, adult main or proxy, self-completion – where the latter includes both adults and youth) with the same categories as used for enumerated person post-stratification.

All resulting weights were scaled to a mean of one within refreshment sample.

For the continuing sample, weights were created using the same procedure as for the IP3 cross-sectional weights. The source weights were the respective wave 1, 3 and 4 longitudinal weights (e.g. D_INDINIP13_LW in the case of D_INDINIP_XW). As for IP3, self-completion weights consisted of the cross-sectional enumerated person weight with a non-response adjustment derived from a model of response to the self-completion conditional on enumeration. All resulting weights were scaled to a mean of one within the continuing sample.

Note that no adjustment is made for the fact that the refreshment sample, unlike the continuing sample, in principle includes immigrants to Great Britain since 2008. Under the assumption of ignorable immigration, each of the two weighted samples should represent the 2011 population. Using both together will maximise the statistical precision of cross-sectional population estimates. For this reason each cross-sectional weight as described above is released as a single variable encompassing both samples.

IP5 LONGITUDINAL WEIGHTS FOR PARTIAL WAVE SETS

Starting at wave 5 we provide additional longitudinal weights that include the 2010 refreshment sample. These weights are appropriate for any longitudinal analysis starting at wave 4 (2010).

The method for adjusting for attrition between waves 4 and 5 is identical to the one described in the section on longitudinal weights for complete wave sets, with the exception of the base weight. While the weights for complete wave sets do not include refreshment, the weights described here do.

The base weight for enumeration is equal to D_PSNENIP13_LW, scaled to the mean of 1, for the original part of the sample; and is equal to D_PSNENIP_XW scaled to the mean of 1 for the 2010 refreshment part of the sample. Conditional on nonzero value for the base weight, the nonresponse between wave 4 and 5 is modeled. The newborns are assigned the weight of their biological mother. The resulting weight, scaled to the mean of 1, is called E_PSNENI1_LW.

Similarly, individual response weights (E_INDPXI1_LW, E_INDINI1_LW and E_INDSCI1_LW) are calculated. The base weight is D_INDPXIP13_LW and D_INDINIP13_LW for the original sample and D_INDPXIP_XW and D_INDINIP_XW

for the 2010 refreshment sample (for proxy or main interview and only main interview weights respectively). The attrition correction is identical to the one used for the complete wave set weights, reflecting new base weights. Nonresponse correction for 16 year olds is also identical to the one for complete wave set weights with the exception of the enumeration base weight being E_PSNENI1_LW.

Additionally, a self-completion weight (E_INDSCIP29_LW) is provided for the longitudinal analysis of waves 1, 3, 4 and 5. This reflects the omission of self-completion instrument in the second wave of IP. The weight is the product of two parts, the first being self-completion longitudinal weight from wave 4 (D_INDSCIP13_LW) and the second being an adjustment for nonresponse to the wave 5 self-completion conditional on self-completion response in all previous waves, but wave 2. The number 29 reflects the decimal form of the binary representation of the cross-wave response pattern, i.e. 11101 (for waves 5, 4, 3, 2, and 1 respectively), as described above.

IP6 LONGITUDINAL WEIGHTS FOR PARTIAL WAVE SETS

In IP6 longitudinal weights are created to enable analysis including the IP4 refreshment sample. The weights are created in an identical way to the longitudinal weights for complete wave sets with the difference in base weight. The base weight is the IP5 longitudinal weight for the combined (original plus IP4 refreshment) sample (e.g. E_PSNENI1_LW, E_INDPXI1_LW, E_INDINI1_LW or E_INDSCI1_LW).

In addition, to reflect that IP2 did not have a self-completion component, a separate weight (F_INDSCIP61_LW) is created for those panel members who completed the self-completion questionnaire in all eligible waves including wave 6 (waves 1, 3, 4, 5 and 6). This weight was created in the same way as weight E_INDSCIP29_LW, described above, and uses this weight as its base.

IP5 AND IP6 CROSS-SECTIONAL WEIGHTS

The cross-sectional enumerated person weight (*n*_PSNENIP_XW) is based on the respective longitudinal weight (*n*_PSNENI1_LW), with application of the weight share method to assign weights to TSMs. In households containing one or more enumerated TSMs, each respondent in the household is given a weight of *a*/*b*, where *a* is the sum of the relevant longitudinal weights in the household and *b* is the total number of respondents in the household who are either an OSM or a TSM. In other households, the cross-sectional weight equals the respective longitudinal weight. Some respondents will therefore receive a zero cross-sectional weight, namely respondents in households containing no OSMs with a non-zero longitudinal weight. The household weight (*n*_HHDENIP_XW) equals the minimum of the cross-sectional enumerated person weights (OSMs and TSMs) in the household.

The cross-sectional individual response weights for adults (*n*_INDPXIP_XW, *n*_INDINIP_XW and *n*_INDSCIP_XW) are calculated conditional on successful enumeration (*n*_PSNENIP_XW), and response to the relevant instrument: proxy or main questionnaire, only main questionnaire and self-completion questionnaire.

The cross-sectional weight for youth questionnaire data (*n*_YTHSCIP_XW) is calculated as the wave *n* enumerated person weight (*n*_PSNENIP_XW) multiplied by an adjustment for nonresponse to the youth questionnaire conditional on enumeration in wave *n*. Due to the small sample size of youth enumerated sample members, the model uses all respondents age 10 or above and models whether they responded to the self-completion questionnaire. The resulting weight is inferred only to the relevant age group, 10-15 year olds.

6. DATA COLLECTION AND RESPONSE OUTCOMES

In general, interviewing for the IP takes place in the spring of the year before the corresponding wave of the main survey. Figure 2 shows the timing of waves 1 through 5 of the IP.

The IP shares the same basic interview structure as the main survey. This includes:

- household roster and household questionnaire
- individual questionnaire, with a brief proxy interview for any respondents who cannot be interviewed in person
- usually an adult self-completion instrument
- youth self-completion instrument

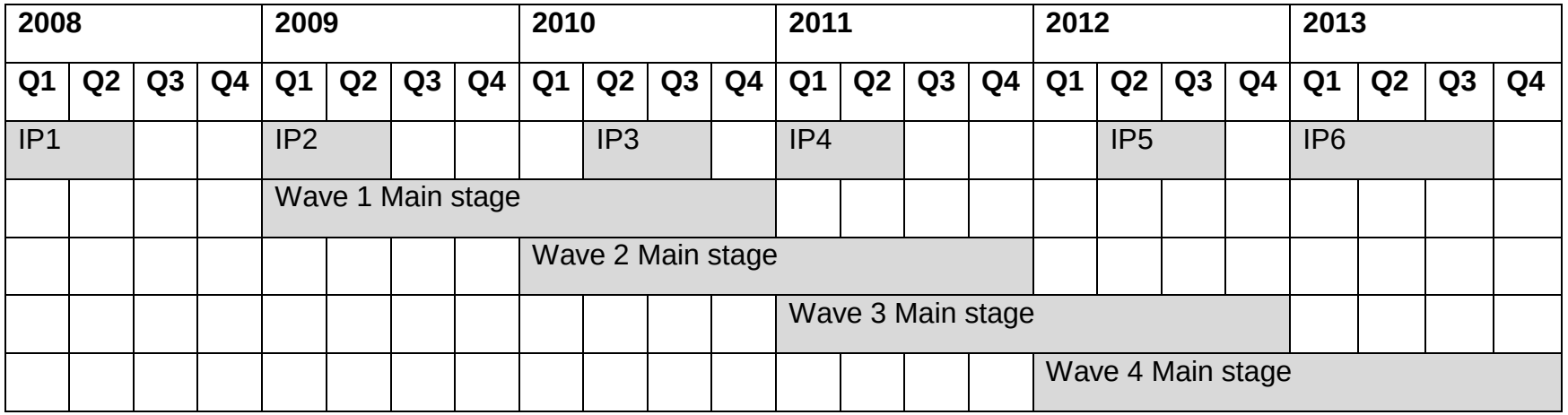
The primary mode of data collection is face-to-face interviews using computer assisted personal interviewing (CAPI). However, IP Wave 2 experimented with a mixed mode design in which a portion of the sample was interviewed via telephone using computer assisted telephone interviewing (CATI). IP Wave 5 also experimented with a mixed mode design; using an on-line web survey (CAWI). In CAPI, the questionnaire is a computer program in which the computer shows the questions on the screen and the interviewer reads them to the respondent and records the respondent's answers. CATI is the same but with the interview taking place over the telephone. For CAWI instruments, the questionnaires are similar to the CAPI version, though designed to be completed on-line by the sample member themselves without an interviewer present.

The self-completion instruments for adults and youth are generally paper-based. There is no adult self-completion interview in IP Wave 2. In Wave 2, the youth self completion was available in two formats: a web questionnaire and a paper self completion. The web address and individual log-on passwords were printed on the advance letter/card of the responsible adult. Interviewers also had paper copies of the self-completion for those that had not done it on-line. This was not experimental. At Wave 5, the youth self-completion was again available on-line as well as paper copies. In Wave 4 and 5, eligible adults in a random half the responding households completed a paper self-completion, while adults in the other half of the sample were asked to complete their questionnaire using the interviewer's lap-top (CASI: Computer-Assisted Self-Interviewing).

The fieldwork documents, organised by wave can be found https://www.understandingsociety.ac.uk/documentation/innovation-panel/fieldwork-documents. They include advance letters for communication with participants, other

correspondence with participants, information leaflets, interview instructions, consent forms, and showcards.

Figure 2. Timing of Innovation Panel and Mainstage data collection



Q - Quarter

FIELDWORK WAVE 1

There were five full-day interviewer briefings in London (2 briefings), Manchester, Edinburgh and Bristol between 7th and 23rd January 2008. Each briefing covered the background to the survey, the main research objectives, the experiments, the sample design, an overview of the survey instruments, methods to minimise non-response and a run-through of the CAPI instrument. In total 128 interviewers worked on IP1.

Three different versions of the advance letter (depending on the incentive group, see Section 3) were addressed to The Occupier. The letters refer to the study as "Living in Britain" because the branding of *Understanding Society* was still in development.

All participating households later received a more detailed brochure, giving further information about the survey and thanking respondents for participating.

Fieldwork on IP1 started on 25th January and ended 21st April 2008. A minimum of six calls was made at each sampled address before it was considered a non-contact; interviewers were encouraged to make further calls, if possible. If NatCen considered a conversion of those households which refused to participate or were non-contact worthwhile, a special conversion letter was sent by NatCen. Post-interview quality control was carried out with a telephone recall on 10% of all completed interviews.

FIELDWORK WAVE 2

The most significant variation in IP2 was experimentation with a mixed mode study design (telephone and face-to-face, see Section 3). This experiment influenced interviewer training and data collection procedures. For IP2 there were eight full-day CAPI briefings and four half-day CATI briefings. The CAPI briefings took place between 9th and 16th March 2009 in London (3 briefings), Bristol, Manchester, Glasgow, Derby and Leeds. The CATI briefings took place in 16th and 17th March 2009, at the NatCen Telephone Unit in Brentwood. There were 116 CAPI interviewers and 50 CATI interviewers who worked on the survey.

The advance letters were addressed to sample members by name and made use of the *Understanding Society* study title and logo.

The fieldwork period for IP2 was from 18th March to 12th June 2009. CAPI fieldwork started two weeks after the CATI start to enable an accumulation of CATI cases to become eligible to transfer to the CAPI interviewers. There were concerns that the CAPI fieldwork would be less efficient if there were only small numbers of households to contact.

FIELDWORK WAVE 3

IP3 had seven full day interviewer briefings in London (2 briefings), Liverpool, Derby, Glasgow, Leeds and Bristol. They took place between 6th and 13th April 2010. In total 120 interviewers worked on IP3.

There were nine different types of advance letter, depending on the incentive group to which the household had been allocated and the outcome at IP2 (IP2 respondent, IP2 non-respondent, rising-16 year old). All adults in issued households received an

advance letter, which included their unconditional incentive (High Street Gift Voucher).

A minimum of six calls was made at each sampled address before it was considered a non-contact; interviewers were encouraged to make further calls, if possible. If households had not been contacted or offered a 'soft' refusal, NatCen considered re-issuing them, sometimes to a different interviewer. In these cases, a re-issue letter was sent by NatCen.

Fieldwork for IP3 started on 22nd April and ended 23rd July 2010. There were some delays to the start of fieldwork to deal with problems related to interviewer allocation to the showcard experiment.

Interviewers uploaded their work daily, including information about all the calls they had made, whether or not there was any response. This information was collated and a summary of fieldwork progress made available to ISER on a daily basis via a secure ftp site. Post-interview quality control was carried out with a telephone recall on 10% of all completed interviews. A debrief of 12 interviewers was held in London on 30th June. All interviewers working on IP3 returned feedback forms to NatCen.

FIELDWORK WAVE 4

Two major variants at Wave 4 of the IP influenced fieldwork and data collection, the introduction of a refreshment sample and the Early Bird experiment. (See Section 3.)

The refreshment sample added an additional 960 addresses sampled at the same areas as the original sample. If a household at one of the added addresses responded, members were defined as Original Sample members, from Wave 4 onwards. The Early Bird experiment called for a modification of the fieldwork period to permit scheduling of appointments with interviewers.

There were eight full-day interviewer briefings between 14th and 18th February 2011, in London (2 briefings), Bristol, Manchester, Glasgow, Derby, Liverpool and Leeds. There were 118 interviewers who worked IP4. A de-brief of 8 interviewers took place in Brentwood on 2nd June.

The Early Bird experiment appointment period ran from 22nd February until 7th March, with the principal fieldwork period from 8th March to 18th April. There was then a re-issue period for non-contacted and soft refusal households from 10th May until 30th May. The re-issue period was extended from the original two weeks because of low response. A second re-issue then took place from 22nd June until 12th July, again because of lower than expected response.

FIELDWORK WAVE 5

The fieldwork for IP5 started later than usual because of the longer development, scripting and testing required for a mixed mode instrument which included a web survey. There were three phases to the IP5 fieldwork. First, there was a two week period in which the WEB sample members were invited to participate on-line (11th-22nd May). Secondly, all non-responding individuals from the WEB sample were allocated to face-to-face interviewers along with the one-third of households who had not been invited to participate on-line. The face-to-face fieldwork started on 24th May

and went through to 15th July. Thirdly, there was a re-issue period for non-responding households from 19th July to 23rd August.

Subsequent to field work, a validation exercise was carried out to check the quality of enumeration data collected by web. A sub-sample of 200 households who completed the grid by web were re-administered the grid by Computer-Assisted Telephone Interviewing (CATI). To avoid a tendency to confirm previous answers, interviewers did not have access to the information from the web grid. The CATI grid was asked with respect to the date at which the web grid was completed.

There were eight full-day interviewer briefings between 9th and 21st May 2012, in London (2 briefings), Brentwood, Bristol, Derby, Glasgow, Leeds and Manchester. There were 116 interviewers who worked IP5. A de-brief of 8 interviewers took place in Brentwood on 29th August.

FIELDWORK WAVE 6

The fieldwork for IP6, another mixed mode wave, had a slightly different fieldwork design to IP5. There is no pilot sample for the Innovation Panel, so at IP6 a small number of households (around 60 households in 5 areas) were issued first ("tranche 1"). The rest of the sample ("tranche 2") were issued one month later. This was done to ensure that the sample management system and the CAWI and CAPI interview scripts were working properly. Similar to IP5, IP6 started with a two week 'web-only' period. After that two weeks, those in the WEB group who had not completed their interview were issued to face-to-face interviewers. At that point, interviewers were also issued with the one-third of the sample who were in the F2F group. Towards the end of fieldwork, non-responding adults in the WEB group were contacted by telephone and asked to complete the on-line interview (which re-opened for this phase) or whether they would like to be interviewed by telephone (CATI). Non-respondents in the F2F group were sent letters at this reissue phase which invited them to participate on-line. After a few days they were contacted by telephone and encouraged to participate on-line, or if they were not willing to do this, they were asked if they would take part in a telephone interview.

The Tranche 1 CAWI fieldwork started on 22nd February 2013, with the CAPI fieldwork starting on 8th March. The Tranche 2 CAWI started one month later; the CAWI on 22nd March and the CAPI on 8th April. The CATI follow-up at the reissue phase started on 4th June (Tranche 1) and 4th July (Tranche 2). Fieldwork on IP6 finished on 29th July.

The face-to-face fieldwork started on 24th May and went through to 15th July. Thirdly, there was a re-issue period for non-responding households from 19th July to 23rd August.

There were ten full-day interviewer briefings between 7th and 28th March 2013, in London (5 briefings), Bristol, Derby, Edinburgh, Leeds and Manchester. There were 115 interviewers who worked IP6. A de-brief of 11 interviewers took place in Brentwood on 23rd July.

RESPONSE OUTCOMES WAVE 1

Household Level response Wave1 resulted in achieved interviews in 1,489 households. Thus, the household response rate was 59.5 percent, not counting ineligible addresses. Fieldwork achieved a total of 2,393 individual interviews.

Table 6.1 shows the household-level response at IP1. Since this is the first wave on a postal address sample, there is greater uncertainty about the eligibility of households that were not contacted or where information could not be obtained to assess eligibility.

Table 6.1. Household response outcomes Wave 1

	n	%
Eligible	2,497	100.0
Response	1,489	59.0
Refusal	697	27.6
Non-contact	114	4.5
Unknown eligibility (contacted)	13	0.5
Unknown eligibility (uncontacted)	115	4.6
Other non-interview	95	3.8

RESPONSE OUTCOMES WAVE 2 AND LONGITUDINAL

Interviews were conducted in 1,122 households including approximately 72 new households formed by splits from original sampled households. Including full, partial or proxy interviews, IP Wave 2 data was gathered for 1,870 individuals

At IP2, only those responding households from IP1 were issued. Table 6.2 gives the household outcome across the whole IP2 sample. Of the 1,489 household issued, 18 were not eligible at IP2 because of death or emigration outside the UK. There were an additional 72 households due to household “splits”, where one or more members of a household had moved out of an IP1 household, with other members remaining.

Table 6.2. Household response outcomes Wave 2

	n	%
Eligible	1543	100.0
Response	1122	72.7
Refusal	261	16.9
Non-contact	88	5.7
Other unproductive	69	4.5

Table 6.2 shows the overall response at IP2. However, IP2 had a mixed mode design, and the response rates were different in each mode. Table 6.3 breaks down the overall response by experimental mode.

Table 6.3. Household response Wave 2, by experimental mode

	Face-to-face (col %)	**CATI: Move one, move all (col %)**	**CATI: Try all (col %)**
Telephone			
Complete	--	76	77

Non-contact	--	3	2
Refusal	--	16	16
Other non-interview	--	5	6
Face-to-Face			
Complete	77	59	62
Non-contact	7	13	10
Refusal	15	22	19
Other non-interview	1	6	10
Total			
Complete	77	70	72
Non-contact	7	6	4
Refusal	15	18	17
Other non-interview	1	5	7
Bases			
Face-to-face	735	213	229
Telephone	--	452	472
Total	735	665	701

Table 6.4 shows the individual-level response within responding households for both IP1 and IP2.

Table 6.4. Individual response outcomes, Wave1 and Wave 2

	IP1	**IP2 (col %)**
Full interview	84	84
Full proxy interview	6	3
Partial interview	0	2
Non-contact	2	2
Refusal	5	6
Other non-interview	1	2
n	2,838	2,101

The individual re-interview rate is an important outcome in a longitudinal survey, since analyses require pairs of observations to measure change. Table 6.5 shows the outcome at IP2 of those who participated at IP1. Of those who gave a full interview at IP1, over two-thirds gave a full interview at IP2, just over one-quarter were in households that did not respond at IP2.

Table 6.5. Longitudinal response outcomes (row%)

	IP2							
IP1	**Full interview**	**Proxy interview**	**Partial interview**	**Non-contact**	**Refusal**	**Other non-interview**	**HH not interviewed**	**N**
Full interview	68.0	1.3	0.8	0.6	2.2	1.2	26.0	2,393
Proxy interview	23.8	13.1	3	5.4	10.1	3.0	41.7	168
Partial interview	42.9	0	0	0	14.3	14.3	28.6	7
Non-contact	18.5	3.1	0	6.2	18.5	3.1	50.8	65
Refusal	16.5	7.5	0.8	2.3	10.5	3.0	59.4	133
Other non-interview	27.6	3.5	1.7	3.5	8.6	12.1	43.1	58

RESPONSE OUTCOMES WAVE 3

The sample at IP3 comprised of 1,131 households that had responded at IP2 as well as a number of households which had been either not contacted (141) or were "soft" refusals (253). In addition, 63 households were created as split-offs of issued households during fieldwork and 12 households were found to be ineligible (through death, emigration or being composed of TSMs only).

Table 6.6 below shows the household-level response at IP3. Two thirds of eligible households participated at IP3.

Table 6.6. Household response IP Wave 3

	n	%
Eligible	1,541	100.0
Response	1,027	66.7
Refusal	240	15.6
Non-contact	236	15.3
Other non-interview	38	3.1

Table 6.7 below shows the individual-level response within responding households for IP3.

Table 6.7. Individual response IP Wave 3

	%
Full interview	79.0
Proxy interview	6.6
Refusal	6.0
Other non-interview	8.4
n	2,052

On a longitudinal survey, a measure which is very important is the individual re-interview rate, since analysts require pairs of observations to measure change. Table 6.8 below shows the outcome at IP3 of those adults who participated at IP2. Almost three-quarters of those who gave a full interview at IP2 also gave a full interview at IP3. There was almost no difference between those whose full interview at IP2 had been a face-to-face or telephone interview.

Table 6.8. Household response outcomes IP wave 3 for respondents in IP wave 2

			IP2		
IP3	**Full F2F interview**	**Proxy interview**	**Full Tel interview**	**Refusal**	**Other non-response**
Full interview	73.3	22.9	73.8	14.6	29.2
Proxy interview	1.7	41.4	3.2	23.3	11.1
Refusal	1.0	4.3	1.8	29.1	11.7

Other non-respondent	2.4	4.3	2.9	12.6	8.8
Household not interviewed	21.4	27.1	18.3	15.5	35.7
ineligible	0.4	--	0.1	3.9	3.5
N	838	70	949	103	171

RESPONSE OUTCOMES WAVE 4

The issued sample, then, consisted of 1,067 households that had responded to IP3, 284 households that had not responded at IP3 and an additional 960 new addresses. In addition, in the continuing sample 39 households were discovered to have 'spilt-off' from an issued address and 16 were no longer eligible. In the refreshment sample, five addresses were found to consist of more than one household.

Table 6.9 below gives the household outcome at IP4 for the continuing and the refreshment samples. The response rate was higher for the continuing sample, for whom this was their fourth wave; almost seven in ten households who were eligible responded. The non-contact rates were similar across sample types. The main reason for the lower response for the refreshment sample was the higher refusal rate – over one-third of eligible refreshment sample households refused to participate.

Table 6.9. Household response IP Wave 4

	Continuing sample		**Refreshment sample**	
	n	%	n	%
Eligible	1,310	100.0	849	100.0
Response	916	69.9	465	54.8
Refusal	277	21.2	316	37.2
Non-contact	99	7.6	68	8.0
Other non-interview	18	1.4	0	--

Table 6.10 below shows the individual-level response within responding households for continuing and refreshment samples in Wave 4.

Table 6.10. Individual response IP Wave 4

	Continuing %	Refreshment %
Full interview	79.4	80.1
Proxy interview	8.3	6.1
Refusal	6.3	7.7
Other non-interview	6.0	5.3
n	1,833	893

Table 6.11 below shows the outcome at IP4 of those adults who participated at IP3. This, by definition, only covers the continuing sample, not the refreshment sample. Over three-quarters of those who gave a full interview at IP3 also gave a full interview at IP4. Around four in ten of those who have a proxy interview taken on their behalf had a proxy interview at the next wave as well, this is the same for both IP3 and IP4. Both tables also show that a proportion of those who refuse or are not interviewed for another reason at one wave do give a full interview, or at least a proxy, at the next wave. This underlies our strategy of re-issuing non-responding households and individuals at the next wave.

Table 6.11. Response outcomes IP wave 4 for Respondents in IP Wave 3

	IP3			
IP4	**Full interview**	**Proxy interview**	**Refusal**	**Other non-response**
Full interview	76.3	16.3	8.1	21.1
Proxy interview	2.2	41.5	13.8	11.7
Refusal	1.2	6.7	41.5	9.4
Other non-respondent	1.7	7.4	3.3	14.1
Household not interviewed	17.8	25.2	30.1	37.5
Ineligible	0.8	2.2	3.3	6.3
N	1,614	135	123	128

There is additional information on the effect of the mixed mode wave at IP2 on the response rates at IP3 and IP4 in this working paper.[20]

RESPONSE OUTCOMES WAVE 5

The issued sample consisted of 1,458 households that had responded to IP4 (969 from the original sample and 489 from the refreshment sample) and 160 households that had not responded at IP4 (all original sample households).

Table 6.12 below gives the household outcome at IP5 for each of the three sample types – the IP4 original sample responding households, the IP4 non-responding original sample households and the refreshment sample. The household response

[20]Lynn P. (2011). The effect of a mixed mode wave on subsequent attrition in a panel survey: evidence from the Understanding Society Innovation Panel. Understanding Society working paper 2011-06. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2011-06.

rate is given for the F2F and WEB samples in each of these groups. This table is taken from the Understanding Society working paper 2013-03 .[21]

Across all sample types the household response rate for the F2F sample was 78%, slightly higher than the household response rate for the mixed mode sample at 74.3%. However this different was not statistically significant. For the original sample who had participated at IP4 and the refreshment sample, the F2F response was higher than the mixed mode response, although not statistically significant. For the original sample who had not responded at IP4 the position was reversed, with the mixed mode response rate being around 4 percentage points higher than the F2F sample (again, not statistically significant).

It does appear, however, that the mode design did affect the proportion of complete households; where all eligible adults participated. For the original sample who had participated at IP4, the proportion of complete household response was 63.9% in the F2F sample and 55.7% in the mixed mode sample. This difference was statistically significant. For this sample type, the single F2F design elicited a higher non-contact rate but a lower refusal rate than the mixed mode design.

[21]Jäckle A, Lynn P, Burton J. (2013). Going online with a fce-to-face household panel: initial results from an experiment on the Understanding Society Innovation Panel. Understanding Society working paper 2013-03. https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2013-03.

Table 6.12. Household response rates in Wave 5

	Original sample									Refreshment sample		
	Total			IP4 responding			IP4 non-responding					
	F2F	**MM**	***P***	**F2F**	**MM**	***P***	**F2F**	**MM**	***P***	**F2F**	**MM**	***P***
HH response rate	78.0	74.3	*0.22*	84.1	81.1	*0.29*	32.6	36.4	*0.66*	85.1	81.9	*0.45*
Complete HHs	58.0	50.3	*0.02*	63.9	55.7	*0.02*	14.0	20.0	*0.43*	60.1	66.0	*0.26*
Partial HHs	20.1	24.0	*0.13*	20.2	25.4	*0.07*	18.6	16.4	*0.72*	25.0	15.9	*0.01*
Non-contact	6.9	5.8	*0.49*	5.6	2.9	*0.04*	16.3	21.8	*0.45*	5.4	6.7	*0.63*
Refusal	13.2	17.4	*0.13*	8.7	14.1	*0.05*	46.5	36.4	*0.22*	8.3	9.5	*0.68*
Other non-response	1.9	2.5	*0.59*	1.6	1.9	*0.68*	4.7	5.5	*0.84*	1.2	1.9	*0.56*
N	364	728		321	618		43	110		168	315	

Notes: F2F = face-to-face; MM = mixed modes; HH = household; *P* = *P*-values from Chi^2 tests adjusted for sample design.

Table 6.13. Individual response rates (including eligible adults in non-respondent households)

	Original sample								Refreshment sample		
	Total			IP4 responding			IP4 non-responding				
	F2F	MM	*P*	F2F	MM	*P*	F2F	MM	*P*	F2F	MM	*P*
Full interview	64.7	58.5	*0.05*	82.8	75.8	*0.04*	18.5	24.1	*0.16*	69.8	71.7	*0.64*
Proxy interview	7.3	4.4	*0.00*	2.6	2.0	*0.50*	20.2	9.4	*0.00*	5.5	1.9	*0.00*
Partial interview	0.1	1.0	*0.02*	0.0	1.2	*0.01*	0.0	0.5	*0.34*	0.0	1.3	*0.03*
Full, proxy or partial	72.1	63.9	*0.01*	85.5	79.0	*0.06*	38.8	34.0	*0.30*	75.3	74.9	*0.93*
Non-contact	7.1	5.8	*0.40*	3.4	2.9	*0.65*	18.0	13.1	*0.20*	5.7	7.1	*0.60*
Refusal	17.2	22.9	*0.06*	8.5	14.2	*0.07*	41.0	43.6	*0.58*	12.9	11.1	*0.59*
Other non-response	3.6	7.4	*0.01*	2.6	3.9	*0.38*	2.2	9.4	*0.00*	6.0	6.9	*0.63*
N	703	1439		495	934		178	406		348	594	

Notes: F2F = face-to-face; MM = mixed modes; HH = household; *P* = *P*-values from Chi^2 tests adjusted for sample design.

Table 6.13 shows the individual-level response within responding households for continuing and refreshment samples in Wave 5. This table is also taken from the Understanding Society working paper 2013-03. The mixed mode design resulted in a lower proportion of individual full interviews (58.5% compared to 64.7% in the F2F group). This difference was only statistically significant for the original sample living in households who had responded at IP4. For the other two sample types, there were higher proportions of full interviews in the mixed mode design, but this difference was not significant. The mixed mode design did result in fewer proxy interviews than the F2F design, possibly partly because it was not possible to do a proxy interview on-line. Again individuals in the original sample who were in households that had responded at IP4 were more likely to refuse in the mixed mode design (14.2%) compared to the F2F design (8.5%).

Table 6.14 below shows the outcome at IP5 of those adults who participated at IP4. Over three-quarters of those who gave a full interview at IP4 also gave a full interview at IP5. Just over one-fifth of those who had a proxy interview taken on their behalf at IP4 also had a proxy interview at IP5 as well, although a little over a quarter gave a full interview at IP5. Around one-fifth of adults who were eligible for interview at IP4 but did not respond gave a full interview at IP5.

Table 6.14. Individual re-interview rates in Wave 5 (whole sample)

		IP4	
IP5	**Full interview**	**Proxy interview**	**Adult not interviewed**
Full interview	77.2	26.5	22.7
Proxy interview	1.8	22.4	7.7
Refusal	1.0	9.4	11.0
Other non-respondent	3.7	9.0	8.9
Household not interviewed	14.7	30.9	47.2
Ineligible	1.6	1.8	2.5
N	2,219	223	598

Table 6.15 below shows the same information, but this time splitting out the original sample (for whom this was their fifth wave) and the refreshment sample (for whom this was their second wave). The individual re-interview rate was slightly higher for the refreshment sample (79.8%) than in the original sample (76.0%). The refreshment sample also included a higher proportion of previous wave proxy interviews 'converted' at IP5 into full interviews. A higher proportion of those adults who had not given an interview at IP4 were interviewed at IP5 in the refreshment sample (32.8%) than the original sample (20.1%). This may be linked to the higher incentives in the refreshment sample (£10, £20 or £30) compared to the original sample (£5 or £10).

Table 6.15. Individual re-interview rates in Wave 5, original and refreshment samples.

	IP4 Original sample			IP4 Refreshment sample		
IP5	**Full interview**	**Proxy interview**	**Adult not interviewed**	**Full interview**	**Proxy interview**	**Adult not interviewed**
Full interview	76.0	22.8	20.1	79.8	37.5	32.8
Proxy interview	2.2	22.8	7.6	1.1	21.4	8.0
Refusal	0.9	9.6	11.4	1.1	8.9	9.6
Other non-respondent	3.4	8.4	7.0	4.2	10.7	16.0
Household not interviewed	15.8	34.7	50.7	12.7	19.6	33.6
Ineligible	1.8	1.8	3.2	1.1	1.8	0.0
N	1,485	167	473	734	56	125

RESPONSE OUTCOMES WAVE 6

The issued sample consisted of 1,273 households that had responded to IP5 and 181 households that had not responded at IP5. There were 35 households which were no longer eligible to participate.

Table 6.16 below, shows the household response rate for the original IP sample (i.e., those sampled at IP1) and for the refreshment sample, for whom this was their third IP wave. The household response rate for the refreshment sample was almost the same as for the original sample. There were also similar rates of refusal and non-contact across the two samples.

Table 6.16. Household response rate by sample type

	Original sample		Refreshment sample	
	N	%	n	%
Eligible	963	100.0	456	100.0
Response	811	84.2	381	83.6
Refusal	80	8.3	42	9.2
Non-contact	60	6.2	32	7.0
Other non-interview	12	1.3	1	0.2

At IP6 there were two survey designs; the mixed mode design (CAWI with a CAPI follow-up of non-responders) and the face-to-face design. Table 6.17, below, shows the household response rates for these two designs. There appears to be very little difference between them; the face-to-face design has a slightly higher response rate and a slightly lower refusal rate but these differences are not statistically significant.

Table 6.17. Household response rate by survey design

	Mixed mode design		Face-to-face only	
	n	%	n	%
Response	774	83.7	418	84.4
Refusal	81	8.7	41	8.3
Non-contact	60	6.5	32	6.5
Other non-response	9	1.0	4	0.8

Although the response rates across the two survey designs look very similar, this may reflect the effect of the incentives, rather than the survey design. All those issued to the face-to-face group received a £10 unconditional voucher in their advance letter. Adults in households allocated to the mixed mode design received one of three different incentive levels. Adults in one-third of households received the same £10 unconditional voucher as the face-to-face sample. Adults in the other two-thirds of households either received an unconditional £10 voucher along with a promise that if all eligible adults completed their interview on-line within the first two weeks of the survey, they would all receive an additional £20 ("£10+£20"), or an unconditional £30 voucher in their advance letter.

Comparing the groups who received £10, the face-to-face household response (86.1%) is much higher than the mixed mode group who also received £10 (79.5%). The mixed mode £10 group had higher refusal and non-contact rates than the face-to-face £10 group. When the incentive is raised to £10+£20 or £30, then the response rates between the mixed mode design and the face-to-face design are comparable.

Table 6.18. Household response rate by survey design and incentive level

	Face-to-face only	Mixed mode design		
	£10	£10	£10+£20	£30
	%	%	%	%
Response	84.4	77.7	85.8	87.7
Refusal	8.3	11.8	6.8	7.7
Non-contact	6.5	8.9	6.8	3.9
Other non-response	0.8	1.6	0.7	0.7
n	495	305	309	310

Turning to the individual adult response, Table 6.19 gives the individual response rate for the issued sample. The full interview rate is slightly higher and the refusal rate slightly lower on the refreshment sample, compared to the original sample.

Table 6.19. Individual-level response rates for the issued sample, by sample type

	Original sample		Refreshment sample	
	N	%	n	%
Full interview	1356	69.8	667	72.9
Proxy interview	91	4.7	35	3.8
Refusal	98	5.1	36	3.9
Other non-interview	55	2.8	28	3.1
Untraced mover	62	3.2	14	1.5
Non-responding HH	280	14.4	135	14.8

Table 6.20, below, shows the individual response rate by survey design. The mixed mode design achieved a slightly higher proportion of full interviews than the face-to-face only design.

Table 6.20. Individual response rates within responding households, by survey design

	Mixed mode design		Face-to-face only	
	n	%	n	%
Full interview	1337	71.7	686	69.1
Proxy interview	56	3.0	70	7.1
Refusal	97	5.2	37	3.7
Other non-interview	51	2.7	32	3.2
Untraced mover	48	2.6	28	2.8
Non-responding HH	275	14.8	140	14.1

At the £10 incentive level, the face-to-face survey gets a higher individual interview rate than the mixed mode design. As the incentive increases, however, the mixed mode design gets higher response. This suggests that the lower response rate for a mixed mode design can be overcome by using a higher level of incentive.

Table 6.21. Individual level response rate within responding households, by issued mode and incentive

	Face-to-face only	Mixed mode design		
	£10	£10	£10+£20	£30
	%	%	%	%
Full interview	69.1	65.8	72.8	76.3
Proxy interview	7.1	3.1	2.9	3.0
Refusal	3.7	5.8	5.7	4.1
Other non-interview	3.2	2.5	2.7	3.0
Untraced mover	2.8	3.0	2.7	2.1
Non-responding HH	14.1	19.8	13.2	11.5
n	993	606	629	629

At IP6 the adult re-interview rate across all modes and samples was just over 85%. As Table 6.22 shows, there was little difference in re-interview rates by sample type (original or refreshment sample).

Table 6.22. Individual re-interview rates

	IP5		
IP6	Full interview	Proxy interview	Adult not interviewed
Full interview	85.3	32.9	35.7
Proxy interview	1.6	40.3	4.2
Refusal	1.2	9.4	13.8
Other non-respondent	1.7	0.7	5.8
Untraced mover	1.8	4.7	4.3
Non-responding HH	8.5	12.1	36.3
N	1997	149	625

Table 6.23. Individual re-interview rates, original and refreshment samples

	IP5 Original sample			IP5 Refreshment sample		
IP6	Full interview	Proxy interview	Adult not interviewed	Full interview	Proxy interview	Adult not interviewed
Full interview	85.0	34.5	37.1	86.0	26.7	32.0
Proxy interview	1.8	36.1	4.2	1.3	56.7	4.0
Refusal	1.1	9.2	14.9	1.3	10.0	10.9
Other non-respondent	1.9	0.8	4.4	1.3	--	9.1
Untraced mover	2.1	5.9	4.7	1.1	--	3.4
Non-responding HH	8.2	13.5	34.7	8.9	6.7	40.6
N	1312	119	450	685	30	175

There was not much difference in individual re-interview rates by issued mode. However, it appears that the mixed mode design was more successful in converting IP5 proxy interviews into full interviews at IP6 (39.5% compared to 26.0% for the face-to-face design). This may be because the on-line survey allows people who are busier and may be more likely to have a proxy interview taken on their behalf to complete the interview themselves at a time and place that best suits them. The mixed mode design was also better for adults who had not participated at the previous wave (39.3% gave a full interview, compared to 27% in the face-to-face

design). It is also a reminder that with on-line surveys we do not know who is actually completing the interview, and so this may be someone completing the full interview on behalf of the person who would normally be proxied.

Table 6.24. Re-interview rates by issued mode

	Face-to-face only			Mixed mode		
IP6	Full interview	Proxy interview	Adult not interviewed	Full interview	Proxy interview	Adult not interviewed
Full interview	84.7	26.0	26.9	85.7	39.5	39.3
Proxy interview	2.4	48.0	7.1	1.2	32.9	2.9
Refusal	0.6	8.2	13.7	1.5	10.5	13.8
Other non-respondent	1.4	--	9.3	1.9	1.3	4.3
Untraced mover	2.4	4.1	4.4	1.4	5.3	4.3
Non-responding HH	8.5	13.7	38.5	8.4	10.5	35.4
N						

7 RECORD AND VARIABLE NAMING CONVENTIONS

The records belonging to a particular wave are identified by the prefix “A_” for wave 1, and “B_” for wave 2, etc. The names of data files (records) in the Innovation Panel have the _IP suffix.

The Innovation Panel has more variable names because of variants for the experiments. Most variables have a mnemonic name. Like the records the variables also begin with a letter designating the wave of data collection (“A_” for the first wave). We have attempted to keep the names of variables that came from the BHPS the same.

Variables ending in “_DV” are derived variables. They include variables copied over from one file to another for analytic convenience, variables that categorize a particular variable, e.g., age category; variables that combine information from multiple variables, e.g., body mass index from self reported height and weight.

Variables ending in “_CODE” are text variables that have been coded. They include text from “other” categories in closed questions and indicators for whether the respondent gave address information, such as an email address.

In Waves 3 and 4, the variable labels for some variables begin with “MC”. This indicates that the variable is related to a multiple choice question. For example, there is the question Does this/Do these health problem(s) or disability(ies) mean that you have substantial difficulties with any of the following areas of your life? The participant could mention problems with mobility, lifting, carrying or moving objects, manual dexterity, etc. D_DISDIF1 is labelled “MC Mobility (moving around home and walking). It is one of several types of impairments or difficulties that can be reported.

Additional codes denote different types of reasons for the lack of a valid response. These values have not been specified as missing in Stata or SPSS. However, these statistical packages have commands to assign values to missing for many variables simultaneously. Codes are

-1 Don't know

-2 Refused

-7 Proxy respondent

-8 Not applicable to the person or because of routing

-9 Missing by error.

The meaning of other codes is explained with the variable's value labels.

8 CONTENT AND INSTRUMENTS

Questionnaires are divided into topical modules, with approximately half appearing yearly, and the remainder being devoted to topical modules that appear on a rotating basis: in general every two or three years. Table 8.1 summarises the content of the instruments. Some complexity related to the experimental studies is not shown. There is minor variation in the names of modules used in the different waves. Also, the content of modules may vary despite having the same name. Researchers should examine the specific questions to ensure comparability across waves.

Researchers should also be aware that there are modules that are asked only of new entrants, e.g., the Initial Conditions module after Wave 1, or of newly eligible respondents, e.g. respondents who have turned age 16. The universe or characteristics of respondents eligible for a question is indicated in the questionnaire.

Table 8.1. Content of adult questionnaire by wave

	W1	W2	W3	W4	W5	W6
Household grid	×	×	×	×	×	×
Household Questionnaire	×	×	×	×	×	×
Adult Proxy Questionnaire	×	×	×	×	×	×
Adult Individual Interview						
Demographics	×	×	×	×	×	×
Initial Conditions	×	×	×	×	×	×
Own First Job			×	×	×	×
Educational Aspirations			×	×	×	×
Young Adults				×	×	×
Family Background	×	×	×	×	×	×
Partnership History	×	×	×	×	×	×
Fertility History	×	×	×	×	×	×
Annual Event History		×	×	×	×	×
Life Satisfaction		×	×			×
Health and Disability	×	×	×	×	×	×

	W1	W2	W3	W4	W5	W6
Height and Weight			×	×	×	×
Cognitive Function			×			
Health Conditions			×	×	×	×
Caring	×	×	×	×	×	×
Current Employment	×	×	×	×	×	×
Employees	×	×	×	×	×	×
Self Employment	×	×	×	×	×	×
Job Satisfaction	×	×	×	×	×	×
Work Conditions				×		×
Non-employment	×	×	×	×	×	×
Mothers Return to Work				×	×	×
Second Jobs	×	×	×	×	×	×
Voluntary Work/Charitable Giving		×	×	×		×
Childcare	×	×	×	×	×	×
Family Networks			×			
Family Access			×			
Contact with non-resident children	×					
Ethnicity and National Identity	×	×	×	×	×	×
Religion	×	×	×	×	×	×
Local Neighbourhood			×			
Neighbourhood Cohesion				×	×	
Neighbourhood Perceptions			×			
Groups and Organisations			×			×
Leisure-Culture-Sport		×				
Environment Behaviour and Attitudes	×	×	×	×	×	×
Transport Modes and Choices		×				×
Commuting Behaviour				×		×
Unearned Income and State Benefits	×	×	×	×	×	×
Child Maintenance		×				
Household Finance	×	×	×	×	×	×
Personal Pensions		×	×	×		×
Retirement Planning				×	×	
Savings		×	×	×		×
Wealth, Assets, Debt			×			
Political Affiliation and Values		×	×	×	×	×
Political Engagement			×			
Political Self-Efficacy			×	×	×	
Political Networks			×	×		
News and Media			×			
General Election			×			
Consents for Data Linkage *	×	×	×	×		
Important Events				×		

	W1	W2	W3	W4	W5	W6
Respondent Contact Details *	×	×	×	×	×	×
Stable Contact Details *	×	×	×	×	×	×
Interviewer Observations	×	×	×	×	×	×
Consent to Audio-record			×	×		
Nutrition					×	
Physical Activity					×	
Smoking History					×	
Twin Check					×	
Physical Work					×	
Parental Educational Expectations					×	
Housework					×	×
Finger Length						×
Time and Risk Preference						×
Item Recall						×
Mode Preference						×
*- Not released						

Table 8.2 summarises the content of the Adult Self-Completion questionnaires by wave. The instruments are annotated with the variable names on the *Understanding Society* website. For Waves 4, 5 and 6, the CASI version is part of the adult questionnaire, with the paper version appearing separately.

Table 8.2. Content of adult self-completion instrument, by wave

	W1	W2*	W3	W4	W5	W6
Short CES-D (Depression)	×		×			
Sleep	×		×	×		
SF-12			×	×	×	×
General Health Questionnaire				×	×	×
Warwick-Edinburgh Mental Well-being Scale (short)				×		
Neighbourhood Cohesion	×		×			
Best Friends	×		×	×	×	
Social Support/Confidant			×			
Satisfaction	×			×	×	×
Risk/Trust	×					
Big Five Personality			×			
Young Adults				×	×	×
Non Co-Resident Relationships				×	×	×
Child Development				×		
Fertility Intentions? Or Expectations?				×	×	
Parenting Styles				×	×	
Sex Orientation				×		
Reaction to CASI				×		
Mode Preference				×	×	
Partner Relationship					×	×
Alcohol Consumption					×	
Vignettes: satisfaction with division of work					×	×
Helpfulness, Conformity					×	
Child Development					×	
Reaction to Dependent Interviewing					×	
Time and Risk Preference Control Questions						×
* There is no adult self-completion instrument in Wave 2.						

Table 8.3 summarises the content of the youth questionnaires. The annotated paper questionnaires appear on the *Understanding Society* webpage.

Table 8.3. Summary of content of youth questionnaires by wave

	W1	W2	W3	W4	W5	W6
Media and computer Use	×	×	×	×	×	×
Homework	×		×		×	
Friends	×	×	×	×	×	×
Relationships with Mother and Father	×	×		×		×
Caring				×		×
Time on Chores			×		×	
Sport-Culture-Leisure			×		×	
Strengths and Difficulties Questionnaire (SDQ)	×	×	×	×	×	×
Self-Esteem			×		×	
Satisfaction	×	×	×	×	×	×
Educational Plans	×	×	×	×		×
Neighbourhoods	×			×		×
Perceived parental interest in schooling		×		×		×
Behaviour problems at school	×	×	×	×		×
Bullying: School and Home	×			×		×
Health Behaviours: Eating and Physical Activity	×	×	×	×	×	×
Health Behaviours: Smoking and Alcohol Use		×	×	×	×	×
Height, Weight, Obesity, Dieting			×		×	
Religion and ethnicity		×		×		×
Illegal drugs			×		×	
Paid work				×		×
Deviant Behaviours: Theft, Violence, Vandalism				×		×
Political Attitudes				×		×
Risk Perceptions			×		×	
Future Intentions (Varied)	×	×	×	×	×	×
Environmental Attitudes and Behaviours					×	

9 QUESTIONNAIRE DATA

Multiple files are released for each wave of the Innovation Panel. Table 9.1 summarises the general content and level of data files that appear in most or all waves. It also points to key variables useful in linking data files for analysis. Variants follow the summary table.

CONTENT OF FILES RELEASED IN MOST WAVES

Table 9.1. List of data files released in most waves of Innovation Panel

Questionnaire data		
Data file	**Description**	**Unique identifiers**
INDALL	all enumerated persons at respondent households	W_HIPD, W_PNO, PIDP
INDRESP	all individual respondents to interview and adult self completion questionnaire, includes data from proxy interviews (IVFIO=2)	W_HIDP, W_PNO, PIDP
CHILDCARE	a record for each child receiving childcare-from CHILDCARE module	W_HIDP, W_PNO, W_CHILDPNO, PIDP
INCOME	one record for each payment recorded for an individual	W_HIPD, W_PNO, W_FICODE
EGOALT	one record for each pair of enumerated individuals within each household – from HOUSEHOLD GRID module	W_HIPD, W_EPNO, W_APNO, PIDP, W_APIDP
HHRESP	household level data for respondent households	W_HIDP
YOUTH	all children aged 10-15 who complete the youth questionnaire	W_HIDP, W_PNO, PIDP
Retrospective data from Life History modules		
ADOPT[C, E]	a record for each adopted or step-child --from FERTILITYHISTORY module	W_HIDP, W_PNO, W_ADOPTNO, PIDP
COHAB[C,D,E]	a record for each cohabitation spell outside of legal marriage except those that preceded marriage--from PARTNERSHIPHISTORY module	W_HIDP, W_PNO, W_COHABO, PIDP
NATCHILD[C,E]	a record for each biological child--from FERTILITYHISTORY module	W_HIDP, W_PNO, W_CHILDNO, PIDP
NEWBORN[A, B]	a record for each child born since previous interview	W_HIDP, W_PNO, W_CHILDNO, PIDP
MARRIAGE[C,E]	a record for each reported legal marriage--from PARTNERSHIPHISTORY module	W_HIDP, W_PNO, W_MARNO, PIDP

Sample information		
INDSAMP[A]	a file with every person enumerated at the current or previous wave; if a household has split then there are two observations for each person of that household: one with the individual interview outcome (W_IVFIO) and identification number (W_HIDP) for the original household, and one observation with the individual interview outcome and identification number for the new household	W_HIDP, W_PNO, PIDP
ISSUE	information about households issued to the interviewers	W_HIDP, W_ISSUE
HHSAMP	all sampled addresses, sampling information, response status, non-respondent household characteristics. Includes experimental allocations (variables with prefix W_FF_)	W_HIDP
Paradata, Information about the collection of data		
CALLREC	information about date, time and status of each call made to attempt to interview the household	W_HIDP, W_ISSUENO, W_INT_NUM, W_CALLNO
PTIMINGS	amount of time for individual interview modules; for web interviews (waves 5, 6) the timings are per screen	PIDP
HTIMINGS	amount of time for household interviews	W_HIDP
[A] Not in Wave 1 [B] Not in Wave 2 [C]Not in Wave 3 [D] Not in Wave 4 [E]Not in Wave 5		

VARIATION IN FILES RELEASED

There is substantial variation in the data files produced in Wave 3 from the FERTILITY and PARTNERSHIP HISTORY modules, which produce MARRIAGE, NATCHILD, ADOPT and COHAB. This is related to the Random Subsets of Questionnaire content experiments (see Section 3).

Generally, we obtain a complete fertility history in the first wave and then ask only about updates. New entrants to the sample are asked a somewhat shorter version of the module about biological (natural) and adopted children. At IP1, we gave the full fertility history to half of the sample, with the other half receiving the full history at IP2. At IP3, we used the “new entrant/never interviewed” short version. At IP4, the refreshment sample members were all OSMs and so got the full history.

The same logic follows for issues related to Marriage and Cohabitation from the Partnership History module.

Some files have only been produced for a few waves:

- In Wave 4, there is a file related to the Early Bird appointment experiment (See Section 3) D_ADMINEB_IP.
- Files related to the Measures of Wealth experiment (See Section 3) in Wave 3 – C_HHOLDINVEST_IP and C_WEALTH_IP.
- Files D_PARSTYLE_IP and D_CHDEV_IP and D_BREASTFED_IP are related to questions about parenting style, child development, and breastfeeding behavior. They appear in Wave 4. File E_PARSTYLE_IP is also released in Wave 5. F_BREASTFED_IP is also released in Wave 6.
- File C_WEALTH_IP is related to types of assets and is released for Wave 3.
- File F_METERREADING_IP contains data from the postal/telephone follow-up collection of electricity, gas and odometer readings in Wave 6. See Section 3 for the description of this experiment.

PARADATA IN THE INNOVATION PANEL

In Innovation Panel additional data collected during the interview process (paradata) is available. These consist of call records, timings data and other information collected by the interviewers during the interview. Call record files have information on the number of calls made as well as the issue number, interviewer identifier (scrambled), time and date and the outcome of each call. This is available in the dataset W_CALLREC_IP. Information on the date of receipt of the case and the interviewer associated with each issue as well as the outcome at the end of each issue period is available in the file W_ISSUE_IP.

In addition to this, information is collected in the address response form (ARF) by interviewers while contacting each household and requesting household members to participate in the survey is available in W_HHSAMP_IP. This includes data on the area surrounding the address, the type of accommodation and other information that the interviewer can observe for both responding and non-responding households. Reasons for refusal are also available. Interviewers also collect some information about the quality of the interview and persons present during the interview process. This is available along with substantive data collected during adult individual interviews (including proxy interviews) in W_INDRESP_IP.

Timings data files (W_PTIMINGS AND W_HTIMINGS) include data on the time taken to complete each question and module in the individual and household questionnaires. In IP1, the start and end times are given for blocks of questions, where blocks are one or more question modules. The times are given in seconds. In IP2 and IP3, the times are given in seconds for individual questions. If the variables are asked in a loop or multi-choice format, the variable name is suffixed with the ulti-choice item number or loop iteration count. In Waves 5 and 6 the timings data for interviews completed by web are per screen rather than per question.

The interviewer ID W-INTNUM can be linked to the mainstage cross-wave file wich contains interviewer characteristics, W_XIVDATA.

10 DERIVED VARIABLES, IDENTIFIERS AND OTHER USEFUL VARIABLES

DERIVED VARIABLES

Derived variables are variables that are computed from one or more variables or copied from one file to another for analytic convenience. Some are drawn from the Blaise CAPI program; others have been derived by users. Blaise-derived variables may be identified in the questionnaires by searching for “Compute” and are placed in order of appearance in the data files.

User-derived variables are positioned last in the data files. They can be identified by the suffix _DV in the variable name. There are exceptions to this rule. Pointers to significant others in the household (such as the natural parents), based on edited information in the household grid, do not include the _DV suffix but end on the familiar _PID and _PNO. Analysts should consult the description of derived variables that they plan to use in their analyses.

The derived variables are documented as part of the online documentation system. A derived variable, e.g., (give name) will have a note giving information about the process of derivation.

IDENTIFIERS AND OTHER USEFUL VARIABLES

Households are identified by W _HIDP, a wave-specific variable with a different wave-specific prefix for each wave. As shown in Table 11.1, W_HIDP can be used to link information about a household from different records within a wave. W_HIDP cannot be used to link information across waves. Since the composition of households changes between waves, the data do not include a longitudinal household identifier.

Individuals are identified by the personal identifier (PIDP), which is constant in all waves, and can be used to link information about a person from different records belonging to one wave, or to link information from different waves. Individuals are also identified by W_PNO – the person number within the household. The combination of W_HIDP and W_PNO_ is unique for each individual and can also be used to link information about individuals within a wave.

Table 11.1. Useful variables

Variable	**Description**
_HIDP	Household identifier
_HHSIZE	Household size
_HSOWND	House owned or rented
_HHTYPE2	Household type
PIDP	Cross wave person identifier
_HIDP	Household identifier
_COUNTRY	Part of the UK
_GOR	Government office region (Wave 1)
_URBAN_DV	Urban-rural indicator
_JBNSSEC8_DV	Social class (NS-SEC) NOT AVAILABLE FOR IP4

_SEX	Sex
_DVAGE	Age
_MARSTAT	Legal marital status
_JBHAS	Whether did paid work in last week
_UKBORN	Born in the UK
_FENOW	Still in further education
_FEEND	Education leaving age
_SF1	General health
_HEALTH	Long standing illness or impairment
_JBSOC00	Current occupation (SOC2000)
_HGPART	PNO of spouse/civil partner
A_PSNDNIP_XW	design weight
_PSU	primary sampling unit
_STRATA	sampling strata

OCCUPATION CODES

Understanding Society collects freetext information on respondents' job titles and industry. Industry descriptions are coded to ONS Standard Industry Code 2007, or SIC 2007. Job titles are coded to the ONS Standard Occupational Classification 2000, or SOC 2000. Coding is undertaken using the Computer Assisted Structured Coding Tool (CASCOT) system. We use look-up files between SOC 2000 and other classifications provided on the CAMSIS website to derive further occupational classifications. For further information and to obtain look-up files, see http://www.cf.ac.uk/socsi/CAMSIS/occunits/distribution.html#UK.

We provide the following classifications International Standard Classification of Occupations (ISCO88), Registrar General Social Class (RGSC), National Statistics Socio-economic Classification (NS-SEC), Employment Status (ES), and Socio-economic Group (SEG).

11 LEARNING ABOUT THE STUDY VARIABLES

There are multiple resources for learning about the study variables in order to plan analyses. These include the questionnaires, variable summaries prepared for each data file released, the code books for each data file, and the summary of derived variables.

Many of the basic (non-derived) variables can be learned about directly from the questionnaires. Figure 3 shows a marked up excerpt of the individual questionnaire from IP Wave 3. You can see that although the variable name consists of the listed variable name and the wave prefix, the wave prefix does not appear in the questionnaire. The document also shows the brief variable label, text of the question, source of the question and value labels. Showcards to help the respondent in answering are also marked as part of the questionnaire. For the Innovation Panel it is particularly important to note that experimental groups may receive different versions of questions and that the responses may be recorded in different variables (see Section 3).

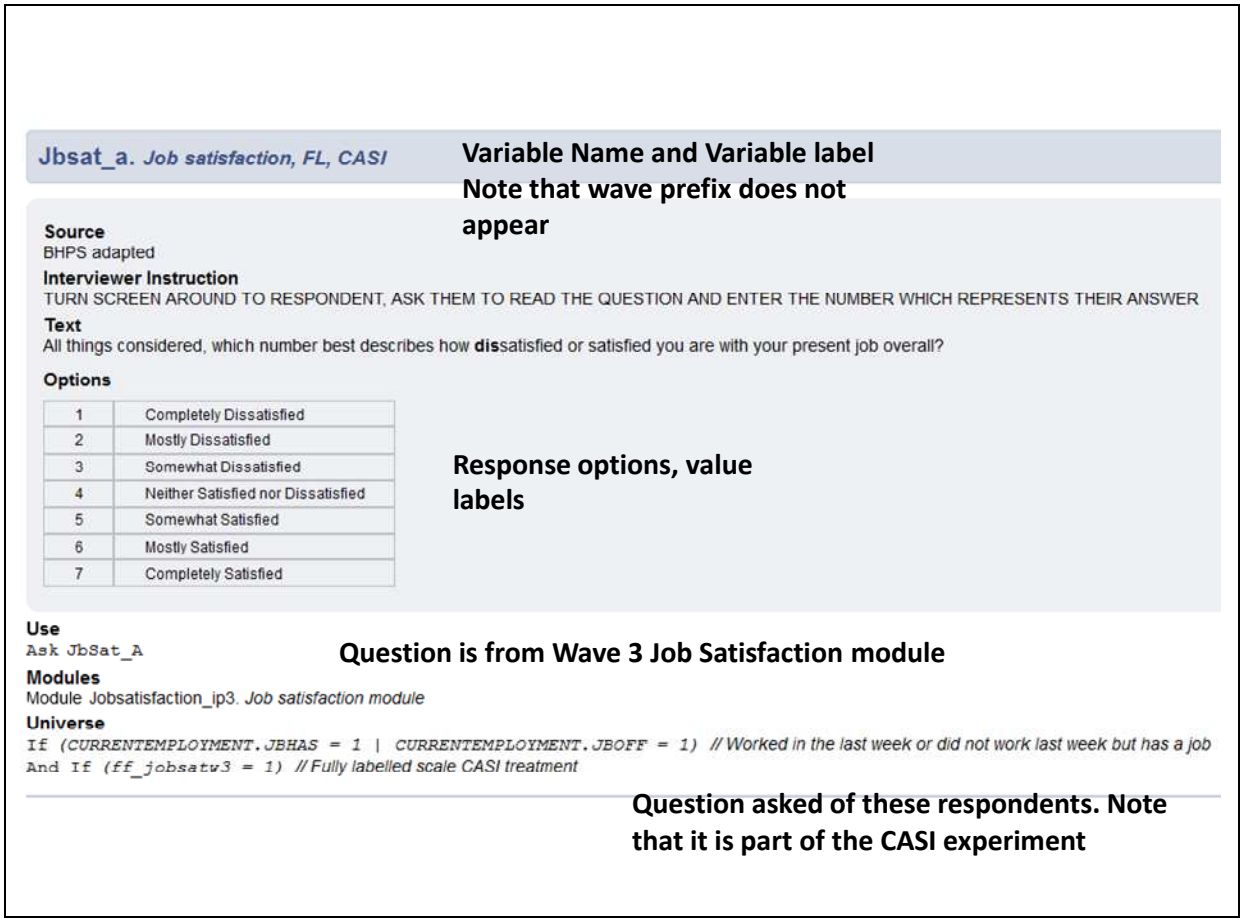


Figure 3 Example from Innovation Panel questionnaire

12 KNOWN ISSUES IN VARIABLES

Some of the known problems relate to problems in implementing the experiments.

In Waves 1 and 2, we asked participants for consent to link administrative records to survey data. We will not be linking the administrative records because some of the consent forms have been lost. In this data release we are including wave 1 consent variables. Wave 2 consent variables have been restructured to improve clarity.

In Wave 2, a variable for W_IVTRANS (translator used) was not collected. However, there is a related variable available in waves 1-4, W_IVAFFCT22 (in what way was the respondent influenced: Other helped in translation, reading showcards, and other survey tasks.

In Wave 3, the Showcard experiment required at least some interviewers to use showcards for some participants and not for others. There are doubts about whether interviewers correctly followed the instruction about which sample members should have showcards. This situation could create errors and there is no check that would tell us whether or not the respondent saw the showcards.

In Wave 3, some respondents were incorrectly asked the experimental IP2 satisfaction questions in addition to the IP3 questions in relation to the satisfaction experiment. This happened with respondents with values 7, 8, 9, or 10 on the IP2 treatment indicator B_FF_LIFESATW2. The responses to the IP3 questions for the respondents are potentially affected by having answered similar questions earlier in the interview. The questions that should not have been asked are C_LFSAT variables ending in _G to _J. The C_LFSAT variables ending in A_ to _F are correct.

Variable C_CONDDATEH, which is about strategies used to recall dates for a health condition beginning says it is a “check all that apply” variable. However, it was implemented as “select one”. Similarly, the variable C_PLDATEH, which is about strategies used to recall dates for a move is documented as a “check all that apply” variable, but was implemented as “select one”.

Variables related to NSSEC in Wave 4 for current and last job were not included in the last release but are in the current release. These include the 3, 5 and 8 category classifications.

A variable for highest qualification is not released because there has been a change in the response categories for educational and vocational qualifications.

In the Wave 3 Annual Events questions about employment, there are inconsistencies. For the first job, the question on the type of employment (NXTJBES) is less detailed than the one in the loop if they have additional jobs after this (NEXTJOB). NXTJBES only asks if they were employed or self employed, whereas NEXTJOB asks if they were doing a different job for the same employer, working for a different employer or working as self-employed. This is only a problem for the first job reported in the annual events.

There are inconsistency in variable names and variable labels in employment histories between IP2 and IP3/IP4 (because of change in the way the histories are collected). From wave 3 the loop through jobs starts at the second employment spell,

whereas in IP2 the loop begins at the first spell. As a result the variable names are slightly inconsistent between IP2 and IP3/IP4. At IP3, the variable NXTST is supposedly equivalent to the variable nextstat1 at IP2 - i.e. it's the first employment spell. However, it seems the variable nextstat1 has been incorrectly labelled as this first spell (it is in fact the 2nd employment spell after NXTST).

In all Waves, the benefit income data has not been edited for outliers.

ERRORS IN THE WAVE 5 QUESTIONNAIRE

The grid, household questionnaire and individual questionnaires were all programmed as separate CAWI instruments, whereas the CAPI was programmed as one combined instrument. In previous waves, the feed-forward data sat within the household grid, and any textfills or routing in the household or individual questionnaires were programmed via a reference to the household grid data. In IP5, because the CAWI instruments were programmed separately, the feed-forward data needed to be copied into these instruments, so that it could be referenced within the household or individual instrument. Each feed forward variable was copied individually (using code), there were mistakes in the code copying feed-forward data into the household and individual questionnaires. For subsequent waves, the whole feedforward is copied as a block, to ensure that all feedforward variables are copied correctly.

Feed-forward variables determine which experimental questions are asked in an interview, so the copying errors corrupted some of the experiments. This section describes their effects.

Household questionnaire. At the household level, three feed-forward variables: E_FF_RENTWC, E_FF_METERSW5 and E-FF_DIW5 were improperly copied. The related variables about gas or electric meter reading were not asked and were not released in the data.

Additionally the E_FF_DIW5 variable did not have the correctly assigned experimental values. This meant that the dependent interviewing (DI) experimental variables in the household questionnaire were confounded, in that some DI questions were asked, but not the ones that should have been according to the experimental design. There were four sets of questions affected by this confounding: HSROOMS/HSBEDS (number of bedrooms and other rooms at the address); HSOWND (tenure); XPMG (monthly mortgage payments) and RENT/RENTWC (amount and frequency of rent). Some variables were combined to facilitate analysis; others were not released (see summary below).

The affected variables in the household questionnaire were:

Table 12.1. Summary of household variables affected by errors

Variable	**Impact**
E_FF_METERSW5	Blank due to programming error
E_FF_DIW5	Incorrect values due to programming error
E_HSROOMCHK	Combined version released
E_HSOWNDCHK	Combined version released
XPMG_A	Asked, but wrong experimental version, not released

XPMG_B	Asked, but wrong experimental version, not released
XPMG_C	Asked, but wrong experimental version, not released
XPMG_D	Asked, but wrong experimental version, not released
FF_RENTWC	Blank due to programming error
RENTCHK_A	Asked, but wrong experimental version, not released
RENTCHK_B	Asked, but wrong experimental version, not released
RENTCHK_C	Asked, but wrong experimental version, not released
RENTCHK_D	Asked, but wrong experimental version, not released
GASUSE	Not asked due to programming error in FF_MetersW5
GASUSE_CAWI	Not released
GASMETER	Asked, but wrong experimental version, not released
GASEST	Asked, but wrong experimental version, not released
ELECUSE	Asked, but wrong experimental version, not released
ELECMETER	Asked, but wrong experimental version, not released
ELECEST	Asked, but wrong experimental version, not released

Errors in Wave 5 individual questionnaire. There was an error in the code copying three feed-forward variables in the employment modules of the individual questionnaire which meant that they were blank, namely: FF_JBMNGR, FF_JBSIZE and FF_JBTERM1. This affected multiple variables which were not released. See the summary below.

Due to an error in the code, none of the E_FF_BENTYPE01 to E_FF_BENTYPE37 variables was copied into the Individual questionnaire. This affected the NFH01 to NFH37 variables about benefit income. It only affected those people who did not mention a benefit that they said they were receiving the previous year. Such people will not have received the additional prompt question reminding them of last year's answer. Our estimate is that around three-quarters of respondents were not eligible to be asked any additional prompt questions in the first place; of those who were eligible to be asked any, a large majority (around 70 per cent) only missed out on one such question, 20 per cent missed out on two, and ten per cent missed out on three or more.

The E_FF_CASIW5 variable was not copied into the individual questionnaire at the start of fieldwork. The variable controls the mode of the self-completion questionnaire. The problem was resolved part way through the fieldwork period (after June 11). We created a variable E_SCFLAGIP5 (on E_INDRESP_IP) to show the status of mode of completion for the self-completion questionnaire in Wave 5. The effect of the error is that around 50 per cent of those eligible to receive the questions in face-to-face CASI mode did not get asked the experimental questions (313 people, based on unedited data). It should be noted that this does not confound the experiment (i.e. no respondents were asked questions in the wrong mode), but the reduced numbers mean that it does reduce its power to detect mode differences.

The affected variables in the Wave 5 individual questionnaire were

Table 12.2. Summary of individual level variables affected by errors in feed forward variables	
Variable	**Impact**
FF_JBMNGR	Blank due to programming error
JBMNGRCHK	Not asked because FF_JBMNGR was blank
FF_JBSIZE	Blank due to programming error
JBSIZECHK_A through JBSIZECHK_D	Not asked, not released
FF_JBTERM1	Blank due to programming error
JBTERM1_A through JBTERM1_D	Not asked, not released
FF_BENTYPE01-FF_BENTYPE37	Blank due to programming error
NFH01-NFH37	Not asked because FF_BENTYPE01 – FF_BENTYPE37 were blank
FF_CAWIW5	not released
SF12 Module	Not asked of some respondents (identified by variable E_CASIFLAGER) due to programming error that meant that some respondents were not asked part of the self-completion questions
GHQ Module	Not asked of some respondents (identified by variable E_CASIFLAGER) due to programming error that meant that some respondents were not asked part of the self-completion questions
Parental Relationships Module	Not asked of some respondents (identified by variable E_CASIFLAGER) due to programming error that meant that some respondents were not asked part of the self-completion questions
Alcohol Module	Not asked of some respondents (identified by variable E_CASIFLAGER) due to programming error that meant that some respondents were not asked part of the self-completion questions
Personaility Module	Not asked of some respondents (identified by variable E_CASIFLAGER) due to programming error that meant that some respondents were not asked part of the self-completion questions

In Wave 6, four households in the £10 incentive treatment group became aware of the £30 treatment. To compensate they were offered an extra £20. The households are identified by the variable F_INCENTCOMP on the record F_HHSAMP.

13 EXAMPLE CODE FOR MATCHING FILES

We include six examples of common data management tasks useful in analysing the data. Each task is illustrated with code for Stata. Because Stata is case-sensitive, we have not displayed file and variable names in upper case, but in lower case. Statements beginning with // are comments. The six tasks include:

- Distributing household level information to individual level
- Summarising individual level information at the household level
- Matching individuals within a household
- Using the egoalt file to create household composition variables
- Merging individual files across waves into long format
- Merging individual files across waves into wide format

EXAMPLE 1: DISTRIBUTING HOUSEHOLD LEVEL INFORMATION TO INDIVIDUAL LEVEL

In this example we will distribute household level information to individuals in those households. We can do this by merging household level file (such as w_household) with an individual level file (such as w_indresp) within the same wave.

```
// open the household level file

use a_hidp a_hhsize using a_hhresp_ip, clear

// sort it on the household identifier, w_hidp

sort a_hidp

// save this temporary file

save hhinfo, replace

// open the individual level file

use pidp a_hidp  a_marstat using a_indresp_ip, clear

// sort it on the household identifier, w_hidp

sort a_hidp

// merge it with the earlier saved file on w_hidp. The output shows how many cases matched

merge m:1 a_hidp using hhinfo

// drop this variable – essential step

drop _merge

save final1, replace

// clean up unwanted files

erase hhinfo.dta
```

EXAMPLE 2: SUMMARISING INDIVIDUAL LEVEL INFORMATION AT THE HOUSEHOLD LEVEL

In this example we will summarise individual level information within a household (number of 18-24 year olds in the household) and then match that onto the household level file.

```
use a_hidp a_hhsize using a_hhresp_ip, clear

sort a_hidp

save hhinfo, replace

use pidp a_hidp a_dvage using a_indall_ip, clear

// create a variable that counts the number of 18-24year olds in each household

bysort a_hidp: egen n1824= sum(a_dvage>=18 & a_dvage<=24)


// keep only first observation for every household

bysort a_hidp: keep if _n==1

// keep only household level information

keep a_hidp n1824

// now merging this household information with the household level file

sort a_hidp

merge 1:1 a_hidp using hhinfo

drop _merge

save final2, replace

erase hhinfo.dta
```

EXAMPLE 3: MATCHING INDIVIDUALS WITHIN A HOUSEHOLD

In this example we will match the information of wives onto that of their partners/spouses.

```
/* Open the dataset with information on all persons in responding households and keep only those persons who have a spouse/partner in the household*/

use a_hidp a_pno a_hgpart a_sex a_dvage using a_indall_ip if a_hgpart>0, clear

// rename the prefix a_ to something that would indicate that this information relates to the spouse or partner

renpfix a_ sp_

/* rename the spouse/partner pno variable to the respondent pno variable as this will be used to match on to the respondent information. Then sort and save the data*/

rename sp_hgpart a_pno
```

```
rename sp_hidp a_hidp

drop sp_pno

sort a_hidp a_pno

save spousepartner, replace


/* Again open the data with information on all persons in responding households*/

use a_hidp a_pno a_hgpart a_sex a_dvage using a_indall_ip if a_hgpart>0, clear

/* rename the prefix a_ to something that would indicate that this information relates to the respondent */

renpfix a_ r_

/* as we want to match on a_hidp and a_pno rename r_hidp and r_pno back to these */

rename r_hidp a_hidp

rename r_pno a_pno

// Now sort and merge with the spouse partner file

sort a_hidp a_pno

merge 1:1 a_hidp a_pno using spousepartner

drop _merge

save final3, replace

erase spousepartner.dta
```

EXAMPLE 4: USING THE EGOALT FILE TO CREATE HOUSEHOLD COMPOSITION VARIABLES

In this example we will create a variable that measures the number of siblings in the household using the EGOALT file.

```
use b_hidp b_epno b_relationship using b_egoalt_ip, clear


// create a variable that counts the number of siblings in the household

bysort b_hidp b_epno: egen nsiblings = sum(b_relationship>=14 & b_relationship<=17)

lab var nsiblings "number of siblings in household"
```

```
// keep one observation per person
bysort b_hidp b_epno: keep if _n==1
sort b_hidp b_epno
save final4, replace
```

Now this information can be merged with any individual level file.

EXAMPLE 5: MERGING INDIVIDUAL FILES ACROSS WAVES INTO LONG FORMAT

To match individual level files across *two* waves into a long format do the following (for more waves add wave specific prefix in the foreach statement):

```
foreach w in a b {
        // open the individual level file
        use pidp `w'_jbhas using `w'_indresp_ip, clear
        // drop the wave prefix from all variables
        renpfix `w'_
        // create a wave variable
        gen wave=strpos("ab", "`w'")
        // save one file for each wave
        save temp`w', replace
}
// open the file for the first wave (wave a_)
use tempa, clear
foreach w in b {
        // append the files for second wave onwards
        append using temp`w'
}
// save the long file
save final5, replace

// erase temporary files
foreach w in a b {
        erase temp`w'.dta
```

```
}
```

EXAMPLE 6: MERGING INDIVIDUAL FILES ACROSS WAVES INTO WIDE FORMAT

To match individual level files across *two* waves into a wide format do the following (for more waves add wave specific prefix in the foreach statement):

```
use pidp a_jbhas using a_indresp_ip, clear

sort pidp

save temp, replace

foreach w in b {

        use pidp `w'_jbhas using `w'_indresp_ip, clear

        sort pidp

        merge 1:1 pidp using temp

        drop _merge

        sort pidp

        save temp, replace

}

save final6, replace

erase temp.dta
```

14 ACCESS AND USER SUPPORT

The Innovation Panel data are released through the Economic and Social Data Service of the UK Data Service (UKDS) according to the conditions of the regular UKDA End User License: http://ukdataservice.ac.uk/get-data/how-to-access/conditions.aspx#/tab-end-user-licence. The data are available in SPSS and Stata formats.

In addition to the main *Understanding Society* data, we have produced data files with information to link the Innovation Panel survey data with geographic units including Local Authority Districts, Area Classification for Output Areas, Travel to Work Areas, Westminister Parliamentary Constituencies, Local Education Authorities, and Primary Care Trusts. They will be released through the Economic and Social Data Service http://www.esds.ac.uk/longitudinal/.

Study documentation is maintained both at the UKDA and on the *Understanding Society* webpage. The documentation specific to the Innovation Panel can be found http://data.understandingsociety.org.uk/documentation/innovation-panel.

The Understanding Society study has a dedicated user support website, https://www.understandingsociety.ac.uk/support/projects/support, where users can

browse Frequently Asked Questions, raise new data issues and find out about forthcoming training courses. We request that researchers notify us about errors, inconsistencies, and other problems with the data identified during their use of the data. Some tips about reporting data issues are first, to only use data from the latest release. If you are using data from past releases the problem may have been corrected. Second, provide a brief description of the issue and, if possible, include examples of syntax and tabulations. Also, specify the instrument and wave of the data with the problem, for example, IP Wave 4.

15 CITATIONS AND ACKNOWLEDGEMENTS

Users should acknowledge both the UKDA and the Institute for Social and Economic Research in any publications arising from analysis of the data. Notifications to ISER can be sent to info@understandingsociety.ac.uk.

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1. LYNN P, KAMINSKA O. WEIGHTING STRATEGY FOR UNDERSTANDING SOCIETY. UNDERSTANDING SOCIETY WORKING PAPER 2010-05 [SERIAL ON THE INTERNET]. 2010: AVAILABLE FROM: HTTP://RESEARCH.UNDERSTANDINGSOCIETY.ORG.UK/PUBLICATIONS/WORKING-PAPER/2010-05.