



FACULTY OF
BUSINESS &
ECONOMICS

**JOURNEYS HOME
WAVE 5 TECHNICAL REPORT
April 2014**

Fieldwork, Response and Weighting

**Report prepared for the Australian Government Department of
Families, Housing, Community Services and Indigenous Affairs**



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1 Introduction

Wave 5 is the first of two additional waves added to Journeys Home as a result of the outstanding response to the first four waves of the survey. This report summarises the outcomes of wave 5 fieldwork.

Fieldwork for wave 5 was conducted over a ten week-period from 1 September 2013. All wave 1 respondents (n=1,682) will be followed through all subsequent waves unless consent is subsequently withdrawn.

In wave 5 we continued to collect information on individuals' personal characteristics (and especially those that can change over time), housing and living arrangements, employment, financial situation, support services and networks, health and well-being, contact with the justice system and exposure to violence. Additional information collected only in wave 5 included personality traits, diet and food security, and mobile telephone usage.

Wave 5 fieldwork concluded on 15 November 2013 with an achievement rate of 87.2 per cent (1,425 interviews out of 1,682 target sample). This technical report documents wave 5 fieldwork administration, fieldwork outcomes, and weighting. The arrangement of the rest of the report is as follows:

- Section 2, Survey Administration: describes important fieldwork protocol, interview length and major difficulties confronted during wave 5 fieldwork, as well as reporting on interviewer feedback.
- Section 3, Response Rate and Sample Characteristics: summarises wave 5 survey outcomes including response rates and sample characteristics.
- Section 4, Weighting: presents the method used to generate response weights and population weights.

2 Survey Administration

Fieldwork period for wave 5 was conducted over a 10-week period from 1 September to 15 November, 2013.

2.1 *Sample*

Journeys Home survey aims to re-interview all 1,682 wave 1 respondents through the entire survey, however due to practical reasons 1,631 were re-approached to participate in wave 5. Of the 51 not approached, 12 are deceased, 37 indicated they no longer wanted to participate in anymore follow-up interviews and 2 are permanently incapable.

2.2 *Survey Mode*

Interviews were conducted either face-to-face or by telephone using a Computer Assisted Personal Interviewing (CAPI) tablet console. The pre-dominant method of data collection is face-to-face interviews, representing 81.9 per cent of completed interviews (N=1,421) this fieldwork period. The rest of the interviews were conducted by telephone upon the sample member's request or if the person had moved to a location outside the reach of the interviewer network. The proportion of telephone interviews increased from 14.8 per cent in wave 4 to 18.1 per cent in wave 5. The increase is attributed to a higher proportion of those outside the interview areas being interviewed by telephone.

2.3 *Interviewers and Interviewer Support*

A total of 28 face-to-face interviewers conducted interviews in wave 5. Among the 28, two were new interviewers joining the Journeys Home survey for the first time. They replaced the two interviewers unavailable for wave 5. These new interviewers had at least 100 hours of face-to-face interviewing experience amongst other skills. The 26 interviewers who had interviewed in previous fieldwork periods received 4 hours of training that focused on changes for the wave 5 survey instrument and any areas which needed re-iteration. The new interviewers underwent two days of training. The material covered in the training sessions was the same as those for the experienced interviewers but was covered in more detail. The topics covered included:

- Background and purpose of survey
- Overview of wave 4 results
- The sample, interviewing areas, managing sample movement, and call attempts
- The survey materials
- Team 1800 and Journeys Home resources (e.g. 1800 number, inbox, website)
- Field protocols and tips for tracking their sample

- DEEWR updates
- Support for interviewers and personal safety
- Duty of care issues and protocols and other support for respondents (e.g. providing counseling numbers)
- Complaint handling
- Tips for telephone interviewing, if required
- Working with service providers to find respondents
- Gaining cooperation and building and maintaining rapport with respondents
- Recording activities, focusing on the importance of recording activities and information and any changes made for wave 5
- Utilising previous wave information (e.g. recommended re-approach and helpful comments on the respondent)
- Incentive payments
- The questionnaire, focusing in particular on changes for Wave 5 and any areas which required a refresher
- Importance of explaining confidentiality and privacy
- Importance of recording recommendations for the next wave approach
- Recording any errors or corrections for the office
- Interviewer pay and timesheets

The face-to-face interviewers receive support from Team 1800. Team 1800 assists interviewers by advising on sample member's change in contact details, CAPI technical support, handling safety calls for interviewers in difficult areas, providing emotional support, advising on fieldwork protocols, assisting in locating service providers and if needed, advising on duty of care issues with the involvement of the project management team. A total of 28 Team 1800 members were trained on the Journeys Home project for wave 5. Fifteen of them had worked on the project in previous fieldwork periods. All team members received one full day of training.

2.4 Pre-field approach

As a strategy to encourage participation, and thereby maximise the response rate, a considerable effort was made to inform the sample members (that is those who participated in wave 1 and were to be re-attempted for wave 5) of the study prior to its commencement.

The 'keep in touch' activities were conducted in late July to early August 2013. Contact was attempted with respondents being approached for wave 5 via multiple channels, including SMS, email and mailing out a letter. All of these communications emphasised the scope of the survey (over 1,650 wave 1 respondents and approximately 90% participating again the follow-up waves), thanked them for their participation, informed them the survey has been successful and is being extended for two more waves, what the incentive would be, survey length and that it was shorter than wave 1, new questions on personality and diet and food security would be asked, and provided the Journeys Home 1800 number and/or email address to contact should their details change or should they have any questions. The aim was to:

- Re-contact as many respondents as possible
- Maximise respondents' ongoing interest in the study
- Obtain and process the updated contact details from respondents

The sample to be re-approached for wave 5 were sent 'keeping in touch' materials which varied depending on whether they participated in wave 4 (W4 respondent) or did not (W4 non-respondent).

Approximately 2 weeks prior to the beginning of fieldwork all the wave 5 sample to be re-approached were sent a Primary Approach Letter (PAL) and brochure outlining the survey, and for the first time a newsletter on the survey findings. The addresses mailed out to were the last known address for respondents.

The PAL for wave 5 was designed to inform respondents that they would be approached again to participate in the fifth wave, and to encourage them to participate. It was personalised with the individual's respondent ID, name and contact number (if provided) and provided them the opportunity to contact Roy Morgan Research via the 1800 number or email should they have any questions or wish to provide up-to-date contact details. The letter emphasised the scope of the survey by mentioning the approximate number of people who participated in wave 1 and subsequent waves.

The brochure accompanying the PAL outlined the survey in more detail. Additional information included how they were selected to be invited to participate, details on confidentiality and voluntary participation. The brochure adhered to The Melbourne University's Ethics Committee's Plain English Statement requirements.

The newsletter, a new document created for wave 5 thanked respondents for their participation, gave a brief summary of the Journeys Home findings to date, informed respondents that the survey has been extended for two more waves, and encouraged respondents towards Melbourne Institute's website to view more findings.

Interviewer and Team 1800 feedback was that the letter / brochure continue to contribute towards respondents' willingness to participate again, though of course not all were received. Respondent mobility and incomplete address information appeared to be the main reasons why letters were returned to the office or not received by the respondent. Relatively little feedback in regards to the newsletter was provided by respondents, but when it was the response appeared to be positive.

2.5 Sample Updates from DEEWR

DEEWR provided 5 sample updates for wave 5, which were extracted from the Research and Evaluation Database (RED) on the following dates:

- 2 August 2013 (pre-fieldwork)
- 30 August 2013
- 20 September 2013
- 11 October 2013
- 25 October 2013

These updates were used in locating respondents, particularly if they had proven difficult to find. The information provided includes:

- The most recent contact information available and a flag indicating when each piece of contact information was changed, known as a date of effect;
- Flags for respondents who are Deceased, Overseas, or In Prison (in some cases the prison address was also provided).

2.6 *Tracking and making contact*

Interviewers were instructed to following these call protocols in locating their sample:

- Review the previous re-approach suggestions and comments in planning their call strategies
- Approach respondents who would be hard to locate early in field (e.g. those with no fixed address, or known to move around)
- Utilise all available contact information to find a respondent, keeping in mind the respondents' preferred method of contact communicated in the previous wave, or in between waves
- If a respondent has moved follow up with current residents, neighbours, and their personal contacts provided previously
- If an email is available request this be sent by Team 1800 to the respondent
- Make enquiries with any service providers which may be of assistance, as either provided by the respondent and proved to be helpful previously;
- Utilise the DEEWR updates and Deceased, In Prison, and Overseas flags provided during fieldwork
- If they still remained untraceable, the sample to the office for Team 1800 to track.

Most of the above strategies proved to be useful in tracking respondents down. The exception was service providers, who across all waves of Journeys Home have proven helpful in some instances but also restricted in the assistance they were able to provide due to confidentiality. As with previous waves, while the DEEWR updates appeared to be one of the most effective methods of tracking respondents the feedback from interviewers and Team 1800 was that they are becoming less productive as waves continue. This is likely because the experience of locating sample members accumulated over time by the interviewers and team 1800 is making them less reliant on Centrelink address updates.

Feedback from interviewers and Team 1800 was that the most common reasons that respondents could not be found were moves to unknown addresses from the previous wave address and personal numbers being disconnected or not answered. Furthermore, if they did have some alternative contacts it was not uncommon that these people also did not know where the respondent had gone.

2.7 *Managing Sample Movement*

The movement of the sample was managed on a daily basis throughout fieldwork. Interviewers were each provided with a list of ‘in-scope suburbs’ for their interviewing area/s and were instructed to ‘return to office’ any sample which moved outside of their area. The new address or location that the respondent moved to was then reviewed by the Journeys Home project team and either:

- If within scope for another cluster area (or just near the boundary) the sample was reassigned to the face-to-face interviewer in that area, unless the respondent had requested a phone interview;
- If outside of all cluster areas the sample was reassigned for approach via telephone by Team 1800. In some instances sample was assigned to a face-to-face interviewer (who had previously interviewed the respondent) to conduct a telephone interview;
- In some instances where the sample moved just outside of the boundary of the cluster area the sample was left assigned to the interviewer who was instructed to still approach the respondent face-to-face and gain an interview if possible.

2.8 *Incentives*

All sample members are offered a \$40 incentive each time they agree to be interviewed. In the case of face-to-face interviews, the incentive is provided as cash and paid immediately after the sample member agreed to participation. Cash incentives were provided in ‘thank-you’ envelopes. In the case of telephone interviews, the incentive is sent by mail, in cheque form or gift card to the respondent after completion of the interview. All respondents are given the option to decline payment.

2.9 *Interview length and duration between Interviews*

Additional questions and sections were added to the survey instrument. The length of the survey increased from 31.6 minutes to 38.1 minutes. The interview times ranged from 11.5 to 124.8 minutes. Table 1 shows the distribution of interview times. A majority of interview were within 20 to 49 minutes (85.3%). Coupled with some respondents having a lot of changes in their lives and the additional questions, the proportion of long interviews in wave 5 is larger than at wave 4.

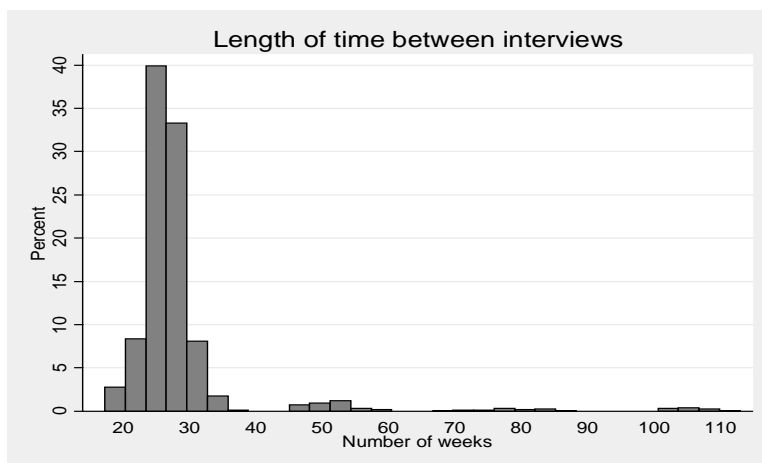
Table 1: Distribution of interview lengths

<i>Length of interview</i>	<i>Proportion (%)</i>	<i>Total (n)</i>
less than 20 minutes	1.1	15
20 to 29 minutes	22.7	323
30 to 39 minutes	40.0	568
40 to 49 minutes	22.7	323
50 to 59 minutes	8.4	119
60 to 69 minutes	3.6	51
70 to 79 minutes	1.1	15
80+ minutes	0.5	7
Total	100.0	1421 (N)

Notes: Respondents that did not complete interview are excluded

Interviewers were encouraged to approach sample members approximately six months after the last interview. For those who were interviewed in wave fieldwork their wave 5 interview was on average 26.3 weeks (approximately 6 months) from the wave 4 interview, with the gaps ranging from 17.3 to 36.6 weeks. As the survey progresses the gap between interviews for some sample members is quite wide participate after a prolonged period non-participation as shown in Figure 1. This ranges from 45.3 weeks (11.3 months) to 113 weeks (2.2 years) depending whether their last interview was in wave 1, 2 or 3. For some questions in the survey instrument we able to capture information about the whole period between the last and current interview, and for some questions we capture information going back six months from the date they are interviewed during fieldwork.

Figure 1: Distribution of duration between interviews



3 Response and Sample Characteristics

3.1 Response Rates

As mentioned in the previous section, 1,631 were to be re-approached for a wave 5 interview. A summary of the wave 5 fieldwork response outcomes is provided in Table 2. The final of in-scope sample is 1,633. Of those out of scope 21 are deceased, 9 are overseas and 18 are in prison. Of those in scope 1,421 completed an interview and 4 terminated their interview prior to completion. In total 1,425 sample members responded in wave 5. This resulted in a response rate for wave 5 of 87.3 per cent (1,425 out of 1,633) and an achievement rate of 84.7 per cent (1,425 out of 1,682). This is great achievement given this wave is an extension of the survey. A majority of the non-participation is attributed to refusals to participate (4.1%) and contact being made, but not resulting in participation (3.4 %).

Table 2: Wave 5 fieldwork call outcomes

<i>Sample outcome</i>	<i>Number</i>	<i>% of Total sample</i>	<i>% of In-scope sample</i>
Starting sample (w1 respondents)	1682		
Less out-of-scope	49	2.6	
Total in-scope sample	1633	97.4	
Completed interviews	1421	84.5	87.0
Terminations	4	0.2	0.2
Incapable	2	0.1	0.1
In institution	2	0.1	0.1
Refusal	69	4.1	4.2
<i>Other non-response</i>			
Contact made	57	3.4	3.5
Non-contact & all calls made	42	2.5	2.6
Moved to unknown address	36	2.1	2.2

An important part of this survey is interviewing sample members every fieldwork period. Sample members participating every wave allows for the longitudinal aspect of the data to be exploited to look at dynamics.

In Table 3 we analyse the transitions of response status from wave 4 to wave 5. Amongst the wave 4 respondents, 92.2 per cent responded in wave 5. Figure 2 shows that this re-interview rate (i.e. the proportion of people who respond in the current fieldwork period given they

responded in the previous fieldwork period and are not out of scope in the current fieldwork period remained in line with previous waves. Of those who were contacted in wave 4 but did not participate, 44.4 per cent participated in wave 5. Those in the non-response category 54.8 per cent from wave 4 responded this fieldwork period.

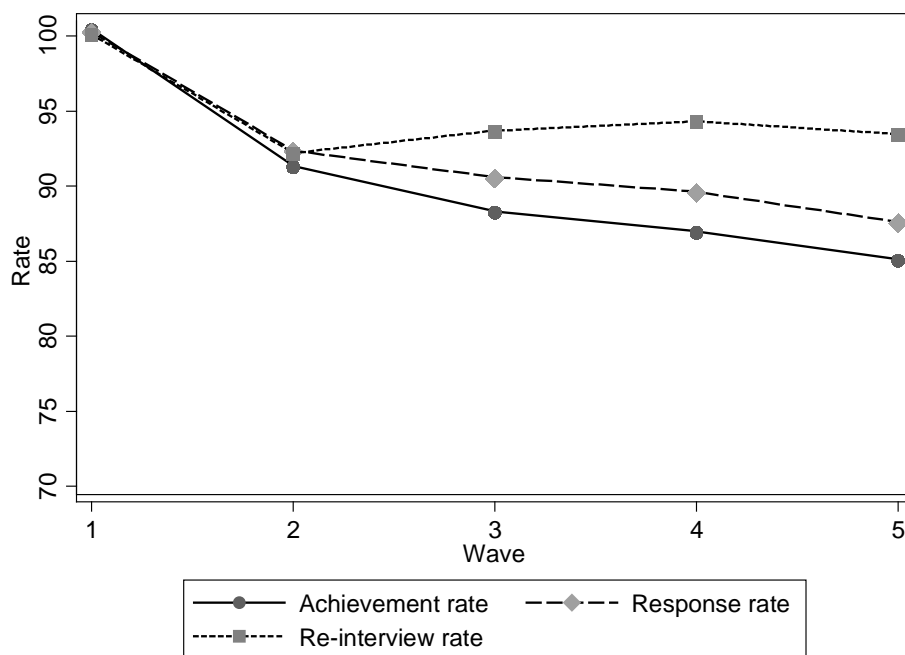
The conversion of wave 4 refusals to participation was quite low with only 8 per cent choosing to participate. However a majority of these refusals were hard refusals therefore would not have been approached for an interview. We had 30.2 per cent of those considered out of scope during wave 4 fieldwork participating in wave 5. These respondents were either released from prison or had returned from overseas.

Table 3: Response transitions for Wave 5

<i>Wave 4 Response Status</i>	<i>Responded</i>	<i>Incapable</i>	<i>Refusal</i>	<i>Contact made - but no response</i>	<i>Non-response</i>	<i>Out of scope</i>	<i>Total (n)</i>
Responded	92.2	0.0	1.2	3.0	2.3	1.2	1456
Incapable	0.0	66.7	33.3	0.0	0.0	0.0	3
Refusal	8.0	0.0	80.0	8.0	4.0	0.0	50
Contact made-non-response	44.4	0.0	8.3	19.4	22.2	5.6	36
Non-response	54.8	0.0	8.3	3.6	29.8	3.6	84
Out of scope	30.2	0.0	0.0	0.0	17.0	52.8	53
Total	84.7	0.1	4.1	3.4	4.6	3.0	1682 (N)

Figure 2 summaries the trends of the achievement, response and re-interview rate, over the 5 waves. The response and achievement rates have declined steadily in line with expectations. Whilst the re-interview has somewhat remained steady following on from wave 4. This gives some evidence that with the addition of wave 5 sample members participation and engagement with the survey has remained positive.

Figure 2: Achievement, response and re-interview rate trends



3.2 Sample Characteristics and response bias

Here we compare the respondents characteristics (measured at wave 1) of the wave 5 and the wave 1 respondents. The characteristics of the wave 1 and wave 5 respondents are quite similar. Despite the proportion of those who have responded in all five waves being 73.9 per cent of wave 1 respondents (1,243 out of 1,682), the characteristics of those who have responded all five waves (continuing respondents) are very similar to the wave 1 respondents.

Table 4: Sample Characteristics

<i>Characteristic</i>	<i>Wave 1 respondents (n=1682)</i>	<i>Wave 5 respondents (n=1425)</i>	<i>Wave 5 continuing respondents (n=1243)</i>	<i>Wave 5 Achievement rate (%)</i>
<i>Gender</i>				
Male	54.6	54.2	52.9	84.3
Female	45.4	45.8	47.1	85.7
<i>Age group</i>				
15-17	9.5	9.7	10.5	86.9
18-20	16.6	16.3	16.4	83.9
21-24	12.6	12.4	12.1	83.5
25-34	21.7	21.0	20.2	82.2
35-44	20.0	20.4	20.1	86.6
45-54	14.0	14.5	15.0	88.1
55+	5.6	5.7	5.7	85.3
<i>Indigenous status</i>				
Non-Indigenous	80.3	81.8	82.9	86.6
Indigenous	19.7	18.2	17.1	78.3
<i>Marital status</i>				
Single	82.7	83.3	83.3	85.6
Partnered	17.2	16.6	16.7	81.7
Unknown	0.1	0.1	-	-
<i>Dependent children</i>				
No	80.0	79.4	78.5	84.3
Yes	19.8	20.4	21.3	87.4
Unknown	0.2	0.2	0.2	-
<i>Country of birth</i>				
Australia	87.5	87.4	87.9	88.0
Main English Speaking Country	5.8	6.0	6.0	90.8
Non-main English Speaking Country	6.7	6.6	6.1	83.9
<i>Education level</i>				
Less than Year 10	20.3	20.1	19.4	84.2
Year 12	48.6	49.2	49.4	85.9
Trade certificate or Apprenticeship (if undefined certificate level)	21.3	21.3	21.7	84.7
University	8.6	8.3	8.6	81.9
Unknown	1.2	1.2	0.9	85.0
<i>Consented to Centrelink data linkage</i>				
No	6.5	6.2	6.0	80.0
Yes	93.5	93.8	94.0	85.3
<i>Benefit type</i>				
Not on IS	9.0	8.8	8.8	83.4

Newstart Allowance	33.9	33.8	33.0	84.7
Youth Allowance	19.8	19.5	19.9	83.8
Disability Support Pension	23.1	23.3	23.1	85.8
Parenting Payment	10.9	11.2	11.8	87.4
Other	3.0	2.9	3.1	84.0
Unknown	0.4	0.4	0.3	-

Notes:

- 1) Characteristics are based on wave 1 information.
- 2) The 4 terminated cases in wave 5 fieldwork are included as respondents.
- 3) Dependent children are those under 18 years living with the respondent all or most of the time.
- 4) Achievement rate and telephone interview rate are not reported for cells with less than 15 observations.

There are differences in achievement rates by characteristics. We find females are more likely to respond than males. Those who are partnered are less likely to respond than those who are not partnered. Those with dependent children have a higher achievement compared to those do not have dependent children. Having a University level education is associated with a lower achievement rate. Not giving consent to link administrative data is associated with a lower achievement rate. Those of indigenous origin had a lower achievement rate. The difference is statistically significant at a 1% level.

3.3 Response rate by geographical area

Most geographical locations saw a decline in their achievement rates, with the exceptions of Sydney, Tasmania and the Northern Territory. Sydney had small increase of 0.2 per cent. Tasmania saw its achievement rate go from 92.9 per cent to 97.1 percent (a 4.5 percentage point increase as shown in Table 5). The Northern Territory's achievement improved from 77.3 per cent to 81.3 per cent (a 5.2 percentage point increase) which brought the achievement rate above the benchmark of 80 per cent. The increase was mainly due to those who could not be contacted or had moved to an unknown address being found, resulting in participation. For those outside the interview regions we saw a marked decline in the achievement rate of 5.6 percentage points. A majority of these sample members were contacted but did not participate in the survey.

Table 5: Response by geographical region

<i>Geographical area</i>	<i>Wave 4 achievement rate</i>	<i>Wave 5 achievement rate</i>	<i>Difference in achievement rate</i>
Sydney	89.6	89.8	0.2
Rest of NSW*includes ACT	86.4	84.2	-2.5
Melbourne	87.3	85.7	-1.8
Rest of VIC	89.1	88.9	-0.2
Brisbane	93.2	91.7	-1.6
Rest of QLD	89.9	89.0	-1.0
SA	92.5	92.3	-0.2
WA	87.8	85.6	-2.5
TAS	92.9	97.1	4.5
NT	77.3	81.3	5.2
Outside interview areas	80.0	75.5	-5.6
Overseas		0.0	
Unknown		14.3	

Notes:

1) Geographical region is based on the sample member's last known location.

2) Rest of New South Wales includes the Australian Capital Territory

Looking at whether the geographical area was in a metropolitan area or not we find metropolitan areas had higher achievement rates compared to regional areas. Metropolitan areas had an achievement rate of 88.6 per cent whilst regional areas had an achievement rate of 86.8 per cent. We tested and found this difference not to be statistically different.

3.4 Item non-response

Respondents are able to opt whether or not to answer questions relating to violence and sexual violence as has been the case since wave 1. As has been since wave 2, they were only asked about their experiences in the last six months. The proportion of wave 5 respondents who opted to answer questions on experiences of violence in the last six months is, 97 per cent (1,378 out of 1,421). A Further ten opted not to answer questions on experiences of sexual violence, which brought the item response rate to 96.2 per cent (1,368 out of 1,421).

In wave 5, Questions on personality, mobile phone usage, and diet and food security were added to the survey instrument. The questions on mobile phone usage, diet and food security had a low item non-response rate. Very few respondents refused to answer the 19 item personality inventory. However, there were substantial numbers of respondents answered

“Don’t Know” to those words that were less commonly used. In total, only 72.6 per cent of respondents provided answers for all the 19 items.

3.5 Interviewer observations

After the completion of an interview, the interviewer provided an assessment of the interview. Interviewers provided responses to questions on problems that may have influenced the respondent’s answers. This includes respondent’s understanding of questions, presence of other people, health issues and communication problems (hearing, reading and speaking). The respondents understanding of questions remained quite high only 1.5 per cent of respondents being indicated as having poor or very poor understanding of the questions. Respondent’s willingness to co-operate is very high, with 99.5 per cent being rated as having excellent, good or fair willingness to co-operate. Only 1.6 per cent of respondents were recorded as being suspicious of the survey.

The proportion of respondents with at least one problem when they were interviewed is 9.8 per cent, with the most common problem being mental illness (4.1%). Other problems which included poor eyesight, language problems, reading difficulties, incoherence, confusion on the part of the respondent and hearing problems each only represented one to two per cent of the sample. The proportion of respondents under the influence of alcohol or drugs at the time of the interview is 3 per cent. It is possible that those interviewed while under the influence of some sort of substance were still able to respond reasonably and their impairment would have negligible impact on responses. For those respondents who were severely influenced by drugs and /or alcohol and not able to give sensible answers, the interview would have been rescheduled for another time.

At times other adults would be present during an interview. The presence of other adults has the potential to affect the responses of the respondent especially if the topic is sensitive. Among the 14.6 per cent of interviews other adults were present, only 15 per cent (n=31 out of 207) of cases did interviewers feel the other adult may have influenced the respondent’s answers.

4 Weighting

Weights are generated to take into account the unequal probability of inclusion into the final responding sample. Three types of weight are provided in the data set.

- Design weight adjusts for the probability of selection into wave 1 sample. The design weight remains unchanged for wave 5.
- Response weight adjusts for the differential probability of response.
- Population weight adjusts for design and response factors.

Details of how the response weight and population weight were created are given below.

4.1 Response weight

Response weights correct for the differential probability of response among the sample that was activated, excluding individuals who were recorded as deceased prior the last information update provided by DEEWR during wave 1 fieldwork (28 October 2011). Two types of response weights are produced. The wave 5 response weight is defined as the wave 1 response weight multiplied by the inverse probability of wave 5 response given response in wave 1:

$$W_{resp}^{wave5} = \frac{W_{resp}^{wave1}}{P(Resp^{wave5} = 1 | Resp^{wave1} = 1)}$$

The wave 5 balanced-panel response weight is defined as the wave 1 response weight multiplied by the inverse probability of response to waves 2, 3, 4 and 5 given response in wave 1:

$$W_{resp}^{BPwave5} = \frac{W_{resp}^{wave1}}{P((Resp^{wave2} = 1 \& Resp^{wave3} = 1 \& Resp^{wave4} = 1 \& Resp^{wave5} = 1) | Resp^{wave1} = 1)}$$

The probabilities of wave 5 response and of response to waves 2 to 5 are created by estimating logistic regression models with variables from the administrative dataset (RED) extracted on 10 January 2014 and from wave 1 survey data. The probability of response in both models is capped at 0.2. That is the probability of response is set to 0.2 when the predicted probability is lower than 0.2.

The response weights are then rescaled so that the sums of the weights are equal to the size of the responding samples (i.e., 1,243 for response to waves 2 to 5 and 1,425 for wave 5 response).

For the purposes of weighting, a case is considered a ‘response’ if a person is interviewed or has been identified as overseas or deceased (through either DEEWR information updates or other reliable sources), and a ‘non-response’ is all other outcomes.¹

A complication in estimating the response probabilities is that not all wave 1 respondents provided consent to the Centrelink data linkage. For those who did not provide consent, we can only use either wave 1 survey data or RED data but not both. To fully utilize the available information, four separate models were estimated to obtain the predicted probabilities of response. We first estimate two logistic models using variables derived from RED for the entire sample (n=1,682) to obtain the predicted probabilities of wave 5 response and waves 2 to 5 response for those individuals who did not provide data linkage consent.² Next, variables from wave 1 survey response data are added to the models after restricting the sample to those individuals who provided consent (n=1,654) to obtain the predicted probabilities based on full information.

In general, the explanatory variables in the balance panel model includes individuals’ information at wave 1 and between wave 1 and 5 and the variables for wave 5 response model includes information at wave 1, start of wave 5 fieldwork and the period between wave 4 and wave 5 interview periods. Variable definitions and summary statistics are presented in Appendix table A1. The following summarise the explanatory variables from RED and survey administration data used in the final model.³

- demographic variables;

¹ In wave 1, deceased sample members were excluded from the analysis instead of counted as response. It is because initial sample were drawn from income support recipients. Wave 1 survey period is not far from sampling reference period so it is unlikely that sample members moved off income support prior the time of death. Therefore, we assume all deaths were known and thus excluded from the analysis. However, in subsequent waves, the same assumption is unlikely to hold (there may be some sample members who passed away after moving off income support and therefore their death may not be captured in Centrelink data base). To allow for this uncertainty, death is counted as response in the logistic regression model.

² We compared regression results from survey data only model and RED only model. RED only model has better explanatory power and therefore was applied for the non-consent cases.

³ Many other variables were also tested that can potentially explain the response, such as education, mental health, etc. Due to the small number of non-response observations, inclusion of too many variables may run into degree of freedom problem and yield to results where many variables have large coefficients and large standard errors. As a result the final model only includes basic demographic variables and variables that are statistically significant at 10 per cent (with only a couple of exceptions) to avoid introducing large amount of noise in the probability estimates.

- proportion of time on income support in between wave 1 and wave 5 and in between wave 4 and wave 5;
- living arrangement (type of accommodation and numbers of moves in between wave 4 and 5 interview periods) while on income support;
- whether the individual was ever recorded as an ex-offender (since 1998) and whether the record was recent (i.e. after wave 2 interview period);
- whether the individual is assigned an interviewer that is different from the previous wave and whether the interviewer is a new interviewer to the survey;
- geographical area at start of the survey periods of waves 2 to 5 (three categories are distinguished— within survey clusters in major capitals, within clusters in regional area, or outside survey clusters)

Explanatory variables from survey response data include:

- homeless status at wave 1 interview;
- whether mobile phone numbers are provided by respondent at wave 1 interview;
- self-reported health at wave 1 interview.

Table 8 presents results of two logistic regressions for the probability of response to waves 2, 3, 4 and 5 (i.e. balanced-panel model). As noted above, one uses administrative data (RED) only while the other uses both RED and survey data. Similarly, Table 9 presents results of two logistic regressions for the probability of response to wave 5 only. The results in Tables 8 and 9 show a large degree of consistency. Although not all control variables are significant in both tables, those that are significant in both tables are of the same sign and there is a large degree of consistency with the results for the probability of response to previous waves (see Wave 2, 3 and 4 Technical Reports). The results are summarised as follows:

- Demographics do not play a large role. Only those between 21 and 24 years of age and indigenous Australians/Torres Strait Islanders are less likely to respond.
- Those who were on income support 100 per cent of the time between interview periods are more likely to respond.
- Those who were recorded as ex-offender, and more particularly those who were recently recorded as ex-offender, are less likely to respond.

- Not being in the rent tables increases the response probability in the balance-panel model. Those who are not in the rent tables are those who did not apply for rent assistance. They may be home owners or have other living arrangements that do not require rent assistance. Hence, they are more likely to have stable housing and are more likely to respond.
- Those paying no rent, and to some extent those in lodgings, are less likely to respond to wave 5 than those in private (or government) housing (Table 9).
- Those who were outside interview regions in at least one wave are also less likely to respond to waves 2 to 5, whereas those who moved but always stayed in the interview regions and those who stayed in a major capital city are more likely to respond. This is in comparison to those who were in regional areas in all waves (the reference group). Likewise, those who were outside the interview regions are less likely to respond to wave 5.
- The more often one is assigned a different (continuing) interviewer, the less likely he/she is likely to respond. However, being assigned to one of the new interviewers increases response probabilities.
- Those who moved between waves 4 and 5 are less likely to respond to wave 5.
- Those who were homeless in wave 1 (according to survey data) are less likely to respond (Table 8), whereas those who provided mobile phone contact are more likely to respond (Tables 8).
- Those who assessed their health as excellent in wave 1 are less likely to respond than those with fair, good or very good health.

Table 8: Logistic regression results for probability of response in waves 2, 3, 4 and 5

<i>Variable</i>	<i>Administrative data model</i>		<i>Survey and administrative data model</i>	
	<i>Coeff.</i>	<i>Std. Err.</i>	<i>Coeff.</i>	<i>Std. Err.</i>
Female	0.004	0.147	-0.086	0.152
Indigenous	-0.567**	0.165	-0.497**	0.171
<i>Country of Birth (Australia)</i>				
Main English speaking countries	-0.046	0.307	-0.140	0.307
Other non-main English speaking countries	-0.388	0.261	-0.183	0.278
<i>Age (15-20)</i>				
21-24	-0.699**	0.228	-0.762**	0.232
24-35	-0.353	0.225	-0.365	0.230
34-44	-0.377	0.240	-0.401	0.249
45-54	-0.357	0.258	-0.265	0.270
55+	-0.196	0.336	-0.032	0.348
Always on Income support between middle of wave 1 and middle of wave 5	0.441**	0.144	0.468**	0.148
Recent ex-offender	-1.018**	0.303	-1.139**	0.314
Ever an ex-offender	-0.433*	0.193	-0.350#	0.200
<i>Rent payment type between middle of wave 2 and middle of wave 5 (Private or Government)</i>				
Other type	-0.137	0.188	-0.039	0.195
Not in rent table	0.960**	0.351	0.779*	0.356
Changed rent type	0.173	0.178	0.225	0.182
<i>Geographical location (Regional area all waves)</i>				
Major capital city all waves	0.476**	0.179	0.457*	0.184
Outside interview region at the start of one wave	-0.849**	0.170	-0.911**	0.174
Changed location between waves, never outside interview regions	0.720*	0.361	0.695#	0.368
<i>Change in interviewer (None)</i>				
Change in 1 wave	-1.458**	0.208	-1.460**	0.211
Change in 2 waves	-2.326**	0.214	-2.323**	0.218
Change in 3 waves	-3.257**	0.269	-3.305**	0.274
Change in all 4 waves	-3.610**	0.439	-3.652**	0.449
New interviewer in at least one wave	1.701**	0.226	1.741**	0.232
Homeless at wave 1 interview			-0.516**	0.162
Had mobile phone at wave 1 interview			0.437*	0.184

*Health status at wave 1 interview
(Fair/Good/Very Good)*

Poor			-0.072	0.222
Excellent			-0.501*	0.226
Constant	3.002**	0.315	2.836**	0.362
Sample size		1682		1654
Log-likelihood		-703.671		-676.390

p<0.10, * p<0.05, ** p<0.01

Table 9: Logistic regression results for probability of response in wave 5

<i>Variable</i>	<i>Administrative data model</i>		<i>Survey and administrative data model</i>	
	<i>Coeff.</i>	<i>Std. Err.</i>	<i>Coeff.</i>	<i>Std. Err.</i>
Female	-0.067	0.156	-0.114	0.160
Indigenous	-0.515**	0.177	-0.534**	0.179
<i>Country of Birth (Australia)</i>				
Main English speaking countries	0.075	0.380	0.019	0.382
Other non-main English speaking countries	-0.364	0.298	-0.148	0.326
<i>Age (15-20)</i>				
21-24	-0.409#	0.242	-0.445#	0.243
24-35	-0.230	0.240	-0.184	0.245
34-44	-0.104	0.254	-0.089	0.260
45-54	0.105	0.286	0.194	0.301
55+	0.288	0.397	0.244	0.402
Always on Income support between middle of wave 4 to middle of wave 5	0.717**	0.161	0.706**	0.165
Recent ex-offender	-0.612*	0.259	-0.651*	0.265
<i>Rent payment at start of wave 5 fieldwork (Private)</i>				
Government Lodgings	0.859	0.745	0.843	0.747
No rent/Other	-0.370#	0.210	-0.337	0.216
Not in rent table	-0.483**	0.182	-0.455*	0.186
	0.224	0.273	0.170	0.276
<i>Geographical Location (Regional area)</i>				
Major Capital city area	0.162	0.176	0.150	0.181
Outside interview region	-0.707**	0.190	-0.743**	0.193
<i>Moves between middle of wave 4 and middle of wave 5 (None)</i>				
One or more	-0.327*	0.157	-0.363*	0.161

*Health status at wave 1 interview
(Fair/Good/Very Good)*

Poor			-0.104	0.242
Excellent			-0.454#	0.233
Constant	2.075**	0.273	2.203**	0.282
Sample size	1682		1654	
Log-likelihood	-615.999		-591.870	

p<0.10, * p<0.05, ** p<0.01

4.2 Population Weight

The wave 5 population weight is the wave 1 population weight adjusted for the probability of response in wave 5, while the wave 5 balanced-panel weight is the wave 1 population weight adjusted for the probability of response in waves 2 to 5. That is, the wave 1 population weight is multiplied by the inverse probability of responding in wave 5 (or in waves 2 to 5 for the balanced-panel weight), with group specific rescaling factors so that the sum of the weights across all cases that had an acceptable outcomes in each of the ‘homeless’, ‘at risk’ and ‘vulnerable’ group equals the size of population in that group. The acceptable outcomes include all respondents, persons overseas during the survey period or person deceased after 28 October 2011. The population here refers to the initial Journeys Home population in clusters that were not undersize (i.e., Journey Home survey population) excluding those who were deceased prior 28 October 2011⁴. The size of population is 22,568 for the ‘homeless’ group; 13,101 for the ‘at-risk’ group; and 74,682 for the ‘vulnerable’ group.

The sum of the weights for the wave 5 responding sample is 107,998 (‘homeless’ 22,198; ‘at risk’ 12,868; ‘vulnerable’ 72,932). The sum of the weights for the responding balanced-panel sample is 107,264 (‘homeless’ 22,230; ‘at risk’ 12,707; ‘vulnerable’ 72,327).

We also include another population weight in the data set — the population weight rescaled so the sum of the weights equals the size of the responding sample (i.e., 1,425 for wave 5 and 1,243 for the balanced panel).

⁴ To be eligible for inclusion in the final sample of Journey Home survey, a cluster in a major city had to have at least 45 flagged persons (that is, persons flagged as either homeless or at risk) and a cluster in a regional or rural centre at least 65 flagged persons. More details on the sample design is described in the Journey Home wave 1 technical report.

4.3 *On the use of weights*

Wave 5 weights should be used when the analysis focuses on wave 5 only (or wave 1 and wave 5 as all wave 5 respondents also responded wave 1). More generally, wave-specific weights are designed to be used when the analysis focuses on one particular wave or wave 1 and that specific wave (as we only follow wave 1 respondents), whereas for balanced-sample analyses, it is recommended to use the balanced-panel weights.

As mentioned earlier, response weights adjust for the differential probability of response but not taking into account the design factors, while population weights account for both differential response and sampling probabilities. Population weights should be used to derive population-representative statistics. However, it is important to keep in mind that the population here refers to the Journey Home survey population only, not the Australian population or income support population. The Journeys Home population is a very specific group of income support recipients that were flagged by Centrelink as 'homeless' or 'at risk' of homelessness as of May 2011 or in a 'vulnerable' group defined by the Melbourne Institute. The vulnerable group were those who were not flagged by Centrelink and the predicted probability of being flagged was at top 2 per cent among all income support recipients. See Wooden *et al.* (2012) or Wave 1 Technical Report for further details on the definition of Journeys Home population.

Also note that the population weights for sample in the 'vulnerable' group are much higher than those in the other two groups because of the low sampling rate (much lower than the other two groups). If a researcher would like the statistics to be influenced more evenly from the three groups, one may like to consider using the response weight or re-scale the population weight by group-specific scaling factors using the sum of population by 'homeless', 'at risk' and 'vulnerable' groups listed in section 4.2 to lower the effects of the unequal sampling rate.

5 References

Scutella R., Johnson G., Moschion J., Tseng Y. and Wooden M., 2012, Wave 1 findings, Journeys Home Research Report No.1.

Wooden, M., Bevitt, A., Chigavazira, A., Greer, N., Johnson, G., Killackey, E., Moschion, J., Scutella, R., Tseng, Y., Watson, N. (2012) 'Introducing Journeys Home', Australian Economic Review, 45(3): 368-78

6 Appendix

Table A1 Variable Description and Summary Statistics

		All Sample (n=1682)		Sample that gave data linkage consent (n=1654)	
Variable	Categories	Frequency (n)	Proportion (%)	Frequency (n)	Proportion (%)
Gender	Male	919	54.6	901	54.5
	Female	763	45.4	753	45.5
Indigenous status	No	1350	80.3	1325	80.1
	Yes	332	19.7	329	19.9
Country of birth	Australia	1472	87.5	1449	87.6
	Main English Speaking Country (these include UK, Ireland, Canada, New Zealand, USA and South Africa)	98	5.8	97	5.9
	Non-main English Speaking Country	112	6.7	108	6.5
Age category reported at start of wave 5 fieldwork	15-20	280	16.6	279	16.9
	21-24	294	17.5	292	17.7
	25-34	376	22.4	369	22.3
	35-44	347	20.6	338	20.4
	45-54	260	15.5	254	15.4
	55+	125	7.4	122	7.4
Always on Income Support between the middle of wave 4 fieldwork and the middle of wave 5 fieldwork	No	412	24.5	401	24.2
	Yes	1270	75.5	1253	75.8
Always on income Support between the middle of wave 1 fieldwork to the middle of wave 5 fieldwork	No	656	39	643	38.9
	Yes	1026	61	1011	61.1

Recent ex-offender That is released from prison between mid- point of wave 1 fieldwork and the midpoint of wave 5 fieldwork	No	1582	94.1	1556	94.1
	Yes	100	5.9	98	5.9
Ever ex-offender. That is ever been prison prior to wave 1 up to the middle of wave 5 fieldwork	No	1316	78.2	1297	78.4
	Yes	366	21.8	357	21.6
Rent payment type at the start of wave 5 fieldwork	Private	657	39.1	646	39.1
	Government	48	2.9	47	2.8
	Lodgings	306	18.2	302	18.3
	No rent/Other (includes: Mooring fees, site fees, Other housing organisation, net rent being assessed and other)	441	26.2	435	26.3
	Not in rent table	230	13.7	224	13.5
Rent payment type at start of wave 2 fieldwork and start of wave 5 fieldwork	Private or government	416	24.7	407	24.6
	Other type (includes: Mooring fees, site fees, Other housing organisation, net rent being assessed, lodgings and other	503	29.9	496	30.0
	Not in rent table	122	7.3	119	7.2
	Changed rent type	641	38.1	632	38.2

Homeless status. Homeless status derived from wave 1 survey data, using the Melbourne Institute definition ¹ . Any classified as primary, secondary or tertiary homeless under the Melbourne Institute homeless definition is in the homeless category.	Not Homeless	1286	76.5	1261	76.2
	Homeless	396	23.5	393	23.8
Provided mobile number in wave 1	No	283	16.8	274	16.6
	Yes	1399	83.2	1380	83.4
Self reported health status at wave 1 interview	Poor	221	13.1	216	13.1
	Fair/Good/Very Good	1301	77.3	1280	77.4
	Excellent	160	9.5	158	9.6
Location of respondent using last known location at the start of wave 5 fieldwork	Major capital city area	724	43.0	705	42.6
	Regional area	669	39.8	662	40.0
	Outside interview region	289	17.2	287	17.4
Number of moves from the middle of wave 4 fieldwork to the middle of wave 5 fieldwork	No moves	1198	71.2	1176	71.1
	1 move or more	484	28.8	478	28.9
Change in geographical location between wave 2 and 5, measured at the start of fieldwork for wave 2, 3, 4 and 5 fieldwork	Regional area all waves	587	34.9	581	35.1
	Major capital city all waves	604	35.9	586	35.4
	Outside interview region at the start of one wave	432	25.7	429	25.9

	Changed location between waves but never outside interview regions	59	3.5	58	3.5
Change in interviewer between wave 2 and 5. This is a change to different continuing interviewer, which is one who has done wave 1 interviews.	No Change	533	31.7	527	31.9
	Change in 1 wave	557	33.1	550	33.3
	Change in 2 waves	408	24.3	397	24.0
	Change in 3 waves	152	9.0	150	9.1
	Change in all 4 waves	32	1.9	30	1.8
New interviewer. If respondent has been interviewed by an interviewer who did not do interviews during wave 1 fieldwork	No	1407	83.7	1381	83.5
	Yes	275	16.3	273	16.5

1) Scutella R., Johnson G., Moschion J., Tseng Y. and Wooden M., 2012, Wave 1 findings, Journeys Home Research Report No.1