



Computer-assisted web interviewing (CAWI) in the Swiss Household Panel: demographics, participation and data quality

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Introduction

In recent years survey researchers are facing a general trend of declining response rates in survey research, due to both social and technological changes. Telephone-based surveys might be the most threatened ones. Landline telephone coverage is sharply decreasing and, even when a landline is available in the household, it has become more difficult to reach people (Groves and Couper, 1998; Roberts, 2007). Bearing in mind the fact that those who can and cannot be reached by telephone differ in their demographical characteristics (de Leeuw, Hox, & Dillman, 2008; Martin, 2011), it is clear that conducting research by using only one mode of data collection, computer-assisted telephone interviewing (CATI), might induce bias and endanger data quality. Mixing modes in surveys has been proposed as a strategy to overcome abovementioned problems, to reduce coverage error and to prevent attrition. Especially mixed-mode surveys that include the web have grown considerably in the last ten years (Dex & Gummy, 2011).

Challenged by the same problem (Voorpostel & Ryser, 2011), the Swiss Household Panel (SHP), whose main mode of data collection is CATI, needs to envision strategies for the future and evaluate the potential to introduce computer-assisted web interviewing (CAWI) as a main mode of data collection for the planned third refresher. Currently, the SHP offers CAWI and Computer Assisted Personal Interviewing (CAPI) only to respondents who are reluctant to participate in a telephone interview.

In this paper we investigate what can be concluded from the use of CAWI as an alternative mode in the SHP. In order to draw conclusions for future data collection in the SHP, available mixed mode data were analyzed in terms of the following questions:

1. *Are there demographical differences between respondents who used different modes?*
2. *To what extent do respondents switch modes between waves?*
3. *What are characteristics of CAWI respondents regarding wave-nonresponse and item-nonresponse?*

Theoretical Background

What are mixed mode surveys?

A survey can be conducted using different modes of data collection, such as telephone, Internet, face-to-face or pen-and-paper questionnaires. Recently researchers have recognized the advantages of using more than one mode in the surveys, the practice being called mixed mode or multimode surveys. Mixed mode surveys entail using different modes of data collection in a research process either to collect data or to establish contact with sample members. Based on the purpose of mixing modes, De Leeuw distinguishes between *data collection mixtures* and *mixtures of means of communication* (De Leeuw, 2005). In this paper, by mixed modes we refer to mixing modes of data collection, where different respondents complete a survey in different modes.

As a main reason to opt for a mixed-modes approach De Leeuw emphasizes the potential of combining modes to offset the weaknesses of each individual mode and to do so at affordable cost (ibid). Hence, in the literature the most highlighted advantages of mixing modes are their potential to overcome issues related to under-coverage and to reduce non-

response rates and non-response bias (Couper, 2011) by capturing demographically different groups.

Survey modes in the SHP

Initially, the SHP had unimodal CATI design (1999-2009). In 2010, the SHP switched to sequential mixed mode design where CATI remained the main mode of data collection and CAWI and CAPI were introduced as follow-up modes for those respondents who initially refused to participate. In this paper, we focus on comparing different modes of data collection used in the SHP although the only way to do so is to look who in a sequential mixed mode design completed the survey in which mode. Therefore, while comparing modes used in the SHP, it is impossible to completely disentangle mode effects from respondents' initial motivation to participate – those who completed questionnaire using CAWI or CAPI mode were initially less willing to participate and they completed the questionnaire after initial refusal.

Survey mode and characteristics of respondents

As already mentioned above, given their different nature, it is expected that different modes reach different people (Hox, De Leeuw & Zijlmans, 2015). Since mixed mode data collection is employed to reduce coverage errors and nonresponse rates (Sala & Lynn, 2009), it is necessary to know what can be expected from different modes when it comes to sample composition. Of the primal interest for our study is the difference among CATI and CAWI modes of data collection. Experience of other studies tells us that web questionnaires are

more likely to be completed by urban residents, men, more educated and younger people (Chang & Krosnick, 2009). In addition, Lustig (2011) found that the respondents in the CATI sample in his study were more often single, less often employed and on a lower income than the web sample. This study verifies whether data available from Swiss Household Panel are in line with the findings presented here.

Survey modes and data quality

Survey modes and non-response error. It is debated whether data quality differs when different modes are employed. An often used indicator of data quality is item-nonresponse (Kwak & Radler, 2002). In general, a small number of questions left unanswered is regarded as an indicator of good survey quality (ibid). In their experimental study De Leeuw, Hox and Scherpenzeel (2011) showed that CAWI and CATI modes differ significantly in terms of “don’t know” answers. Namely, in the CATI group respondents more often spontaneously stated “don’t know”. On the contrary, when “don’t know” was explicitly offered as a response, it was chosen more often in the CAWI group. A study based on the UK Understanding Society panel found that a mixed-mode design (CAWI followed by CAPI mode) was characterized by 65% higher levels of item nonresponse (i.e. non-substantive responses “don’t know” and refusals) compared to the CAPI group (Jäckle, Lynn & Burton, 2015). However, the overall item nonresponse rates were low for both groups - less than 2% of questions stayed unanswered (ibid). It is informative to know to what extent item-nonresponse is related to survey mode in the Swiss Household Panel.

Survey modes and measurement error. Measurement error refers to bias in the recorded value of the respondent (Roberts, 2007). Modes of data collection differ in various aspects such as whether items are presented sequentially or simultaneously, whether it is self-administered or interviewer-administered. Each of these aspects can induce measurement error in the survey. For example, presence of an interviewer could result in interviewer effects or could stimulate the respondent's tendency to present oneself in more favourable light and give social desirable answers (Dillman, 2000, de Leeuw, 2005). In an extensive study of mode effects on data quality, Dillman and his colleagues (2009) showed that telephone respondents are more likely than web respondents to choose more positive categories. It would be useful to test whether there is measurement effect in the Swiss Household Panel as well.

Mixed modes in longitudinal surveys

So far, little is known about mixed modes in longitudinal surveys. Although not the most recent, a nice overview of experiences with mixing modes of data collection in large-scale surveys where web is offered as one of the modes is presented by Dex and Gumy (2011). The authors evaluate eight longitudinal mixed-mode surveys of the general population available at the time, including the SHP (ibid). One of the rare cases of a longitudinal survey using mixed modes containing CAWI is a recent quasi-experiment carried out in the Innovation Panel of the UK Understanding Society (Bianchi, Biffignandi & Lynn, 2016). While the fourth wave of the survey was a unimodal CAPI survey, in the fifth wave two thirds of the sample were allocated to the web-CAPI sequential mixed mode design and one third of the households was allocated to the CAPI group and therefore completed the questionnaire using

the same mode as in the previous wave. The experiment was continued using the same treatment allocation at waves 6 and 7. The study showed that response rates for mixed modes (CAWI followed by CAPI) are as high as those for a unimodal CAPI approach. After three waves, the decrease in participation, although not statistically significant, was smaller for the mixed-mode group: in the first wave the percentage of respondents in the mixed-mode group was lower than in the CAPI group by 2.6%, while three waves afterwards there were 3% more participants in the mixed-mode group. However, here it is not completely clear what is the exact impact of the CAWI mode in the mixed-modes group since the information on how many completed the questionnaire in the CAPI-follow-up procedure and how many participated initially by CAWI is not available. Although the UK Understanding Society is also a large-scale household panel study, comparable to the SHP, the implications of the findings of the CAWI experiment for the SHP are limited, because the main mode of interview for the SHP is CATI. Bearing in mind everything stated so far, it is useful to check what can be concluded from SHP data five years since the alternative modes of CAWI and CAPI were offered.

Method and data

The SHP started in 1999 as a nationwide survey that follows a random sample of households on an annual basis. The survey data are gathered at two levels: at the level of the household where a household reference person completes the household grid and the household questionnaire (including a proxy questionnaire), and at the level of individual where each household member older than 14 years is approached to complete an individual questionnaire (a detailed description of the data is available in Voorpostel, Tillmann, Lebert,

Kuhn, Lipps, Ryser, Schmid, Antal, Monsch & Wernli, 2016). The SHP consists of three samples; the first sample (SHP I) was recruited in 1999, the second sample (SHP II) started in 2004 and the third sample (SHP III) in 2013. The main mode of data collection for all the samples is computer-assisted-telephone-interviewing (CATI). In 2010, as an attempt to minimize attrition, along with CATI, computer-assisted-web-interview (CAWI) and computer-assisted-personal-interview (CAPI) were offered as alternative modes to those who initially refused to participate. In order to answer the research questions, data from the 12th to the 17th wave (year 2010 to 2015) were used.

Results

Who are CAWI users in SHP in 2015?

To assess the characteristics of the CAWI sample members, we use the 17th wave (2015). This wave is the most recent and has the largest number of CAWI interviews. In the 17th wave (2015) of the Swiss Household Panel, 10906 individuals, belonging to one of the three samples, completed their questionnaire using computer-assisted telephone interviewing (CATI). Those who refused to participate were re-approached: 206 of them completed their questionnaire using CAWI and 57 did so using CAPI. At the end, 2646 of the household members eligible at that wave did not participate in the survey. For the analysis we selected only those individuals for whom the information was available on all the variables of interest: 10809 CATI respondents, 206 CAWI respondents, 56 CAPI respondents and 2458 non-respondents¹.

¹ For nonrespondents data were available from grid questionnaire.

In order to identify certain distinctive characteristics of different mode users, various demographic characteristics of both participants in different modes and non-participants were analyzed. Descriptive statistics are presented in Table 1.

Due to the rather small number of participants who completed a face-to-face interview (CAPI, n=56), we focus on the comparison of those who completed their interview by CATI or CAWI mode, or did not complete their interview.

When it comes to the *sex*, it was noticeable that men are less likely to participate in the survey compared to women, therefore leaving a higher share of female respondents who completed their questionnaire using CATI mode. On the other hand, there is no difference between the sexes when it comes to completing the questionnaire using CAWI. As the share of male respondents in the CAWI group is relatively higher compared to the share of male respondents among CATI group, CAWI seems to be useful in terms of increasing the share of male respondents in the sample.

As for the *age*, the share of individuals of age 55 or older is higher for CATI than for CAWI mode of data collection. Looking among those who completed the interview by CATI in 2015, 42.6% were individuals older than 55 years, while the same group accounts for less than one third of CAWI questionnaires. The share of younger individuals, up to the age of 25, is higher among those who complete the questionnaire using CAWI compared to CAPI, which might be a good indication of the potential of the CAWI mode to capture those who are the second most frequent non-response group (the youngest age group accounts for almost one fourth of non-response, precisely 23.5%).

More *educated* individuals are somewhat more likely to participate in the 17th wave of the SHP survey, since the highest share of non-response accounts for those less educated. It seems that more educated refusals are more likely to opt for CAWI mode - 23.8% of CAWI

completed questionnaires was completed by respondents with a tertiary level of education (matura), while this group accounts for 19.8% of CATI-completed questionnaires. On the contrary, there is no difference between CATI and CAWI modes on lower levels of education. However, despite very small frequencies, there is some indication that the CAPI mode is favored by those who completed only compulsory education, especially if they are older people.

Occupation is an additional characteristic whose relation with modes was analyzed. The advantage to participate in the survey at one's convenience, offered by CAWI, seems to be favored by employed people and those who are still in school or training. Among CAWI participants, 40.3% were full-time employed and 19.4% were in school or training, while the same groups account for the share of 31% and 12.2% among CATI participants, respectively. On the contrary, the share of those retired is higher among CATI mode.

When it comes to civil status, in the CAWI group the share of single (never married) respondents is larger, while on the other hand, among CATI the share of married people is larger. However, the fact might be explained by age, since younger people are more often single or never married.

Regarding the *type of the household*, among CAWI the highest share has been recorded for households consisting couple with children (53.4%), probably because CAWI is a convenient mode for this group given their parental duties. It is worth mentioning that exactly this group has the highest non-response rate, which can be an additional indicator that offering another mode of data collection can be useful in terms of stimulating individuals who otherwise would not participate. Among CATI participants, the highest share has been recorded for one-person-households; probably because one-person-households are most likely to be occupied by individuals older than 55 (64.3% of one-person households are

inhabited by a 55+ year old person) who, again, do not tend to complete the questionnaire using CAWI mode, as already seen.

Table 1: SHP W15 mode of data collection by demographic characteristics (SHP_I, SHP_II and SHP_III)

	CATI n=10899		CAWI n=206		CAPI n=56		Non-response n=2458	
	Freq	%	Freq	%	Freq	%	Freq	%
Sex								
Men	4990	45.8	103	50.0	23	41.1	1390	56.6
Women	5909	54.2	103	50.0	33	58.9	1068	43.4
Age								
14-24	1584	14.5	50	24.3	3	5.4	577	23.5
25-34	1060	9.7	26	12.6	15	26.8	320	13.0
35-44	1409	12.9	30	14.6	13	23.2	261	10.6
45-54	222	20.2	41	19.9	7	12.5	408	16.6
55+	4644	42.6	59	28.6	18	32.1	892	36.3
Education								
Compulsory school	2097	19.2	41	19.9	19	33.9	749	30.5
Upper secondary (vocational)	3793	34.8	66	32.0	19	33.9	912	37.1
Upper secondary (matura)	1193	10.9	24	11.7	4	7.1	208	8.5
Tertiary level (vocational)	1661	15.2	26	12.6	5	8.9	258	10.5
Tertiary level (matura)	2155	19.8	49	23.8	9	16.1	331	13.5
Region								
Lake Geneva	1975	18.1	38	18.4	13	23.2	389	15.8
Middleland	2720	25.0	56	27.2	9	16.1	592	24.1
North-west Switzerland	1543	14.2	22	10.7	5	8.9	361	14.7
Zurich	1756	16.1	35	17.0	17	30.4	390	15.9
East Switzerland	1376	12.6	25	12.1	7	12.5	350	14.2
Central Switzerland	1073	9.8	20	9.7	0	0	273	11.1
Ticino	456	4.2	10	4.9	5	8.9	103	4.2
Civil status								
Single, never married	3185	29.2	85	41.3	22	39.3	952	38.7

Married	5993	55.0	100	48.5	24	42.9	1332	54.2
Separated	139	1.3	1	0.5	0	0	18	0.7
Divorced	985	9.0	14	6.8	6	10.7	104	4.2
Widower/Widow	565	5.2	6	2.9	4	7.1	49	2.0
Other	32	0.3	0	0	0	0	3	0.1
Household type								
One person household	1728	15.9	7	3.4	12	21.4	74	3.0
Couple without children	3673	33.7	65	31.6	16	28.6	849	34.5
Couple with children	4579	42.0	110	53.4	21	37.5	1275	51.9
One parent with children	712	6.5	18	8.7	6	10.7	174	7.1
Other	207	1.9	6	2.9	1	1.8	86	3.5
Occupation								
Full-time employed	3387	31.1	83	40.3	27	48.2	921	37.5
Part-time employed	2624	24.1	45	21.8	10	17.9	413	16.8
School/training	1325	12.2	40	19.4	3	5.4	444	18.1
At home	560	5.1	8	3.9	2	3.6	110	4.5
Retired	2755	25.3	25	12.1	12	21.4	493	20.1
Unemployed	148	1.4	5	2.4	1	1.8	34	1.4
Other	100	0.9	0	0	1	1.8	43	1.7

It seems that there is correspondence between non-response and CAWI mode when it comes to occupation and household type. On these variables, those groups that are most absent are those who complete CAWI most (except for retired people who are the second most absent group, but prefer CATI), which might indicate that the reason for non-response on these variables is offset by CAWI to a certain extent. Also, CAWI seems to be useful for attracting younger and more educated individuals. When it comes to the CAPI mode, it was employed quite rarely therefore leaving rather low frequencies for comparison. However, there is some indication that it can be a good alternative for elderly people, those with only compulsory education and, surprisingly, those who are full time employed.

Participation and survey mode

Transition between modes in the third sample of the SHP. Table 2 presents the participation in 2014 and 2015 of the third sample of the SHP, along with the data collection mode used. The reason for taking only the third-sample members into account is because for those members, the waves of interest were the second and third waves of their participation. Such a selection allowed us to eliminate the possibility that “being used to the mode” in previous waves influences the mode employed afterwards. Table 2 shows that the great majority of individuals, namely 4077, used computer assisted telephone interview (CATI) for both interviews, which accounts for 75.1% of the sample when those who participated in either wave are considered. Among those who participated in both waves, the most noticeable switch, although still very low, is from CATI to CAWI. Namely, 62 individuals (1,1%) changed from CATI in 2014 to CAWI mode in 2015.

Table 2. SHP_III sample: mode and participation in 2014 and 2015

	Frequencies	Percentages
CATI - CATI	4077	75.1
CAPI - CAPI	38	0.7
CAWI - CAWI	0	0
CATI - CAPI	3	0.1
CATI - CAWI	62	1.1
CAPI - CATI	4	0.1
CAPI - CAWI	1	0
CAWI - CATI	0	0
CAWI - CAPI	0	0
CATI - NR	982	18.1
CAPI - NR	48	0.9
CAWI - NR	4	0.1

NR - CATI	173	3.2
NR - CAPI	9	0.2
NR - CAWI	26	0.5
Total	5575	100

As it can be seen from the table, CAWI is rather underused as a mode of data collection – no respondent used it in both waves of interest, neither those who chose it as a mode in 2014 participated in the following wave, 4 respondents that used CAWI in 2014 did not stay in the following wave due to household refusal. However, in year 2015 CAWI was more employed – beside those who switched from CATI as already mentioned, 27 more respondents completed their questionnaire using CAWI, 89 individuals in total (of those, 26 were non-respondents in 2014).

Regularity of participation. In order to check whether there is a difference between modes of data collection when it comes to regularity of participation, participation scores were calculated based on participation in 2010 to 2015, conditional on being a member of one of the two first samples of the SHP (a table with participation frequencies is presented in the Appendix). Mean number of waves a respondent participated is presented in Table 3. As it can be seen from the table, between 2010 and 2015, CATI users were present in 5 waves on average, CAWI users were present in 3-4 waves on average, while for CAPI it was almost 5 waves on average.

Table 3. Average participation of W15 participants in previous waves 2010-2015

	Freq	Mean participation	Standard deviation
CATI	6557	5.38	1.28
CAWI	110	3.80	2.01
CAPI	4	4.50	1.73

Oneway ANOVA revealed significant difference between participation rates. $F(2, 271.8)=80.804, p<.001$. CAWI users have a shorter history of participation in the SHP compared to CATI users.

Participation history of individuals from SHP_I and SHP_II who completed by CAWI in 2015.

Table 4. (in Appendix) shows the participation history of SHP sample I and II members who completed their questionnaire using CAWI mode in 2015. Of those who completed the questionnaire using CAWI in 2015 (n=110), 42 individuals participated in all previous waves starting from 2010 (27 from SHP_I and 15 from SHP_II). In all previous waves they used CATI and switched to CAWI only in 2015. Table 4 shows that less than 50% of the CAWI participants in 2015 also participated in 2014 – 49 individuals completed questionnaire by CATI and 5 did so by CAWI. They were most present in 2012, when 70 people participated, 62 by CATI and 8 by CAWI. It can be seen that in previous waves CAWI was rather an occasional mode of data collection, while its usage increased in the last wave.

Survey mode and item-nonresponse

In order to assess the quality of the data gathered by the two different modes of data collection, the number of item non-responses in the CAWI and CATI group was compared. Whenever the respondent refused to answer or said he/she does not know, the item was calculated as a nonresponse. The average number of item non-responses was 3.19 in the CATI group and 13.84 in the CAWI group. Only 6.3% of the CAWI questionnaires did not have any item-nonresponse, while this was the case for 31.1% of CATI questionnaires.

It is difficult to tell whether the observed difference can be attributed to differences between the modes. In both modes there are respondents with a high number of item nonresponse. However, given the differences in sample sizes, the CAWI group is more affected by this than the CATI group. Also, the initial respondents' motivation might play a confounding role here. Given that CAWI respondents are those who initially refused to participate and who were re-approached they might have been less motivated to fill in the questionnaire anyway. So even when CAWI interviews may improve the overall composition of the sample, the quality of the data may be lower.

Survey mode and measurement effect

In order to assess the extent to which responses on potentially sensitive questions are influenced by the change of the mode employed, several regression analyses were performed.

In each analysis change of the mode from 2014 to 2015 was treated as independent variable, while dependent variables were change in: interest in politics, position on left-right scale, satisfaction with life in general, satisfaction with health, frequency of experiencing depression and anxiety, satisfaction with financial situation, income. For all the variables the score reported in 2014 was subtracted from the score reported in 2015; therefore positive scores mean that in 2015 people are more satisfied, more depressive, more interested in politics, more on the right side of the left-right scale or that they have higher income. Average change scores for those who switched to CAWI in 2015 and those who employed the same mode as before are presented in Table 4, together with the coefficients of regression analysis.

Table 4. Regression coefficients and average change in satisfaction, political attitudes and income for those who did and did not change mode in 2015 compared to 2014

	The same mode in 2015	Switched to CAWI in 2015	Regression coefficient
Change in interest in politics	0.193 (n=109)	0.165 (n=9940)	-0.028
Change in left – right scale position	0.055 (n=72)	0.264 (n=8215)	0.209
Change in satisfaction with health	-0.131 (n=112)	-0.420 (n=10251)	-0.289**
Change in satisfaction with finances	-0.034 (n=110)	-0.436 (n=10225)	-0.402**
Change in satisfaction with life	-0.070 (n=112)	-0.384 (n=10262)	-0.314***
Change in depressive symptoms	0.143 (n=110)	0.445 (n=10247)	0.302*
Change in income	-600 (n=112)	-2724 (n=10245)	-2124

*, ** and *** indicate significance at the 90%, 95% and 99% level, respectively.

Switching to CAWI in 2015 resulted in reporting significantly less satisfaction with life in general, less satisfaction with health and less satisfaction with finances. Also, upon switching to CAWI, respondents reported that they experience depressive symptoms more often compared to the previous year when they filled in the questionnaire using CATI, which was not the case with those who filled in their questionnaire using CATI both times.

Those who changed the mode in 2015 reported decrease in income of -2723.7 units in average, while those who did not change the mode reported the decrease of -599.86 units in average. However, the difference was not statistically significant. Significant difference was not detected either when it comes to self-placement on left-right scale, although the trend of placing oneself more on the right side on the scale upon changing the mode could be noticed. The reason for not detecting the difference might be the lack of statistical power, given that only 75 participants who switched to CAWI mode provided an answer on the left-right scale. Here it can be assumed that although using CAWI mode can result in an increase of nonresponse error, as it was shown before, it can also result in a decrease of measurement error. The absence of the interviewer might have liberated people from social pressure and

might have offered an opportunity to freely disclose lower levels of satisfaction, more depressive symptoms and, plausibly, lower income and more conservative attitudes.

Conclusion and discussion

In this paper we analyzed SHP data collected in different modes in order to see what can be learnt regarding respondents' demographic characteristics, participation and data quality. We tried to compare different modes of data collection although they were employed in sequential mixed mode design where those who initially refused to participate by CATI were offered alternative CAWI or CAPI mode. Therefore, we draw our conclusions bearing in mind the fact that it was not possible to exclude the potential effect of initial respondents' motivation from mode effects.

When it comes to demographic characteristics, the SHP experience is in line with findings from previous studies. Namely, on certain criteria, such as sex, age, education, employment, household type, it seems that CATI and CAWI compensate each other's disadvantages. Certain groups, such as men, younger people, couples with children, full-time employed respondents, seem to be more likely to be recruited for the survey if the CAWI mode was offered. Therefore, offering alternative modes of data collection, namely CAWI and CAPI, along with the main CATI mode, carries the potential of engaging less motivated individuals to participate. For a new sample in the SHP, it might be a good solution to use CATI as a follow up of CAWI. At the final stage, CAPI might also be employed as an attempt to convert the most difficult refusals.

As for the relation between mode of interview and data quality operationalized as item-nonresponse, we have shown that web surveys produce data with a higher number of

item-nonresponse, which is in line with experiences from the UK Understanding Society study, reported by Jäckle et al. (2015). Although it is not sure whether higher item non-response is the effect of the mode or the initial motivation for respondents, it would be useful to think of strategies to keep respondents engaged in completing the online questionnaire once they have started to do so. Maybe asking respondents to try to think about the question once again before offering them possibility to say that they do not know or refuse to answer might be a good option. The additional possibility is to contact again those respondents who did not completely fill in the questionnaire and remind them to do so. Despite the fact that web surveys are threatened by nonresponse error, they can reduce the measurement error by offering a more inviting environment to the respondents to disclose themselves in a less favourable way.

When it comes to participation across waves, low frequencies for CAWI and CAPI modes do not leave a lot of space for discussion. The majority of the respondents completed their questionnaire using the same mode as they did in 2014 – CATI – which is not surprising given that it was the main mode of data collection. It seems that the respondents stay loyal to the first mode they employ. However, it would be difficult to say whether the same could be said about the CAWI mode since it was underused in 2014 and no respondent participated in both waves using CAWI. In 2015 CAWI was employed 89 times, of those 26 respondents did not participate in 2014, 1 respondent completed CAPI and 62 switched from CATI. Since the CAWI mode was offered only to those who were initial refusals, it is difficult to judge the potential of CAWI to keep respondents to participate in the following waves. However, given the experience from other surveys, such as Understanding Society, in the long run, CAWI mode with an alternative mode follow-up, might be a promising solution.

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Appendix

Table 4. SHP_I and SHP_II W15 CAWI respondents: mode of data collection and participation in 2010-2015

	2010			2011			2012			2013			2014			2015		
	CATI	CAWI	Total	CATI	CAWI	Total	CATI	CAWI	Total	CATI	CAWI	Total	CATI	CAWI	Total	CATI	CAWI	Total
SHP_I	36	2	38	39	4	43	40	8	48	34	-	34	33	4	37	-	69	69
SHP_II	24	0	24	24	0	24	22	0	22	21	-	21	16	1	17	-	41	41
Total	60	2	62	63	4	67	62	8	70	55	-	55	49	5	54	-	110	110

Table 5: SHP 2015 participants: participation in previous waves by mode of data collection in 2015

	CATI n=6557		CAWI n=110		CAPI n=4	
	Freq	%	Freq	%	Freq	%
Participation from 2010 to 2015						
Participated in 1 wave	201	3.1	27	24.5	0	0
Participated in 2 waves	222	3.4	11	10.0	1	25.0
Participated in 3 waves	283	4.3	4	3.6	0	0
Participated in 4 waves	421	3.9	18	16.4	0	0
Participated in 5 waves	504	4.6	15	13.6	2	50
Participated in 6 waves	4926	45.2	35	31.8	1	25.0