

# Continuous Household Survey 2022/23

## Technical Report

### 1.1 The Sample

The sample for the survey consisted of a systematic random sample of addresses selected from the NISRA Address Register. The NISRA Address Register is maintained by Census Branch and is created by merging the POINTER database with additional records, and removing duplicates and communal establishments. The survey samples 9,000 addresses throughout the survey year (1 April 2022 – 31 March 2023). The NISRA Address Register provides a good sampling frame of addresses, but contains no information about the number of people living at an address.

Each interview begins with the interviewer listing all members of the household. Anyone aged 16 or over is eligible to take part in the survey and there can be multiple respondents at each household.

### 1.2 The Questionnaire

The questionnaire has two distinct parts; a household schedule and an individual schedule. One person on behalf of the entire household answers the household schedule, while all participating adults in the household answer the individual schedule.

In a change to previous 2 years, the questionnaire returned to a split sample. This means that depending on the serial number of the questionnaire (even or odd) the respondents would be exposed to a different set of questions for part of the questionnaire. This was implemented to reduce survey length.

### 1.3 Survey Methodology

During to the coronavirus pandemic face-to-face interviewing, or CAPI (Computer Assisted Personal Interviewing), was put on hold. This was replaced by telephone interviewing, or CATI (Computer assisted Telephone Interviewing). Changing methodology to CATI meant that showcards could no longer be used and therefore required the removal and/or editing of questions. The questionnaire was reduced to a manageable size in order to ensure that it was compatible with CATI.

With the lifting of some restrictions, from the month of April 2022, CSU implemented the knock to nudge method. This meant that Interviewers could once again call at sampled address to encourage people to participate in the survey while adhering to the COVID health and safety advice/restrictions (social distancing/PPE). Interviewers were not permitted to enter the property, only to collect contact

information to complete the survey using CATI (Computer assisted Telephone Interviewing) at an agreed time.

From July 2022 onwards, CSU reinstated the use of face-to-face interviewing, or CAPI (Computer Assisted Personal Interviewing). This meant that the survey became dual-modality – as both Telephone and Face-to-Face interviewing were carried out. The showcards remained out but more questions were reintroduced.

#### 1.4 The Fieldwork

Fieldwork starts on 1 April 2022 and ends on the 31 March 2023. Addresses are split across the 12 months, with approximately a 10% reduction in allocations in July, August and December to allow for reduced interviewer availability in these months. The full schedule for fieldwork in 2022/23 is detailed in Table A.

**Table A – Fieldwork schedule**

Month	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
Number of address sampled	780	780	780	650	680	780	780	780	650	780	780	780

In 2022/23, 4,272 households took part in the survey. When ineligible addresses are discounted from the sampling frame this gives a survey response rate of 51.3%. Within those 4,272 households, a total of 4960 individuals took part in the survey (1.2 individuals per household).

#### 1.5 Representativeness of the sample

In any survey there is a possibility of non-response bias. Non-response bias arises if the characteristics of non-respondents differ from those of respondents in such a way that they are reflected in the responses given in the survey. Accurate estimates of non-response bias can be obtained by comparing characteristics of the achieved sample with the distribution of the same characteristics in the population at the time of sampling. Such comparisons are usually made to the current Census of Population data. To assess how accurately the Continuous Household Survey sample reflects the population of Northern Ireland the sample has been compared with characteristics of the Northern Ireland population from Mid-Year Population Estimates (Table B).

**Table B – Mid-Year Estimates and CHS respondents**

	Mid-Year Population estimates 2021	CHS 2019/20 (all respondents)	CHS 2020/21 (all respondents)	CHS 2021/22 (all respondents)	CHS 2022/23 (all respondents)
<b>Age</b>					
16 - 24	13%	5%	7%	4%	4%
25 - 34	16%	14%	11%	11%	12%
35 - 44	17%	16%	14%	15%	18%
45 - 54	17%	17%	18%	17%	17%
55 - 64	16%	19%	21%	20%	19%
65 and over	22%	29%	29%	32%	30%
<b>Gender</b>					
Male	49%	45%	44%	42%	42%
Female	51%	55%	56%	58%	58%
<b>Base = 100%</b>	1,516,387	5,918	1,885	4,103	4,960

### 1.6 Weighting for age and gender

As is clear from Table B, the age profile of the participating respondents varies from that observed in the mid- year population estimates. Consequently, we have included a variable called ‘W3’ to compensate for this. This weight should be used in general analysis to help correct for any non-response bias.

We have also included ‘W1’ and ‘W2’ variables. W1 should be used if analysing responses by age, and W2 should be used if analysing responses by sex.

### 1.7 Sampling Error

No sample is likely to reflect precisely the characteristics of the population it is drawn from because of both sampling and non-sampling errors. An estimate of the amount of error due to the sampling process can be calculated. For a simple random sample design, in which every member of the sampled population has an equal and independent chance of inclusion in the sample, the sampling error of any percentage, p, can be calculated by the formula:

$$\text{s.e. (p)} = \sqrt{p*(100 - p)/n}$$

where n is the number of respondents on which the percentage is based. The sample for the Continuous Household Survey is drawn as a random sample, and thus this formula can be used to calculate the sampling error of any percentage estimate from the survey. A confidence interval for the population percentage can be calculated by the formula

$$95 \text{ per cent confidence interval} = p \pm 1.96 * \text{s.e. (p)}$$

If 100 similar, independent samples were chosen from the same population, 95 of them would be expected to yield an estimate for the percentage, p, within this confidence interval. The absence of

design effects in the survey, and therefore of the need to calculate complex standard errors, means that standard statistical tests of significance (which assume random sampling) can be applied directly to the data.

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