

Northern Ireland Assembly Election Study 2022

User Guide: Weights

January 2023

Background

Weights are widely used in survey data analysis. Post-stratification weights adjust for certain demographic variables for which the true distribution is known. These are calculated for the main NIAES22 dataset, allowing us to correct for the over- and under-representation of certain groups in the sample. Applying weights to survey data analysis allows us to generate more precise estimates.

Description of Weights

In the NIAES22 main dataset, post-stratification weights were calculated using an iterative proportional fitting (or ‘raking’) process, as provided by the `ipfweight` command in Stata 17. The raking process was run a maximum of 25 times; weights were trimmed at 4, meaning that no single respondent receives a weight in excess of 4.

Three post-stratification weights are included in the main NIAES22 dataset:

1. `wt_dem` – adjusts for gender, age group, and geographical location;
2. `wt_vote` – adjusts for turnout and first preference vote in the May Assembly election;
3. `wt_dem_vote` – adjusts for gender, age group, geographical location, as well as turnout and first preference vote in the May Assembly election.

Table 1, overleaf, summarises the unweighted distribution of the sample along with the targets used to construct the post-stratification weights.

Notes:

1. Targets were derived from the official 2020 Mid-Year Population Estimates (NISRA, 2021). This is in line with the latest British Election Studies, which used (most recent) ONS population estimates rather than (older) 2011 Census data (Moon *et al.* 2017; Ipsos MORI, 2020). While some 2021 Census data is now publicly available, as of January 2023 it does not yet cover all variables of interest (i.e. includes sex and age group, but not geographical location).
2. Targets for turnout and first preference vote shares were derived from the official data published by the Electoral Office of Northern Ireland (EONI, 2022). There are no missing responses for the three variables used to construct the demographic weight (`wt_dem`). For vote choice (A5), 34 respondents (1.7%) answered ‘can’t remember’ and 51 respondents (2.6%) refused to answer, while 12 respondents (0.6%) reported that they were ineligible to vote at the time of the May 2022 election (derived from responses to A10); these 97 respondents in total are treated as missing for the purpose of constructing `wt_vote` and `wt_dem_vote`.
3. Our decision to weight for age, gender, and geographical location is in line with the 2019 British Election Study (Ipsos MORI, 2020). We do not weight for community background (religion-brought-up-in). As of December 2022, this data is not yet available from the 2021 Census for the adult population or from any official mid-year estimates. Moreover, the sample distribution for community background appears to be in line with where we would expect it to be, based on what we know from the 2021 Census *vis-à-vis* the full population.

Table 1: Unweighted sample structure and population targets

| | | Unweighted sample (%) | Target (%) |
|---------------------|--------------------------|------------------------------|-------------------|
| Gender | Male | 48.0 | 48.7 |
| | Female | 52.0 | 51.3 |
| Age group | 18-29 | 20.5 | 18.9 |
| | 30-44 | 27.0 | 25.4 |
| | 45-59 | 24.0 | 26.2 |
| | 60+ | 28.6 | 29.5 |
| Constituency | Belfast East | 5.3 | 5.9 |
| | Belfast North | 5.1 | 5.5 |
| | Belfast South | 6.1 | 5.8 |
| | Belfast West | 5.1 | 5.6 |
| | East Antrim | 4.5 | 6.0 |
| | East Londonderry | 5.3 | 5.7 |
| | Fermanagh & South Tyrone | 6.1 | 5.3 |
| | Foyle | 6.2 | 5.5 |
| | Lagan Valley | 5.2 | 5.5 |
| | Mid Ulster | 5.1 | 5.4 |
| | Newry & Armagh | 6.4 | 5.0 |
| | North Antrim | 5.8 | 5.5 |
| | North Down | 4.9 | 6.0 |
| | South Antrim | 6.4 | 5.5 |
| | South Down | 6.9 | 5.2 |
| | Strangford | 4.8 | 6.0 |
| | Upper Bann | 6.0 | 5.0 |
| | West Tyrone | 5.1 | 5.7 |
| | Vote | Did not vote | 30.0 |
| DUP | | 11.4 | 13.5 |
| SF | | 19.4 | 18.4 |
| UUP | | 7.6 | 7.1 |
| SDLP | | 7.8 | 5.8 |
| Alliance | | 12.6 | 8.6 |
| TUV | | 3.5 | 4.8 |
| Other party | | 7.7 | 5.3 |

References

Electoral Office of Northern Ireland (EONI) (2022) 'Elections 2022'.

<https://www.eoni.org.uk/Elections/Election-results-and-statistics/Election-results-and-statistics-2003-onwards/Elections-2022> [Accessed 15/11/22].

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