Weight calculations

A) Survey weights

Survey weights were calculated as the inverse probability for taking the survey, calculated for 18 strata per country. These 18 strata were defined by the variables sex (male, female), age (18-34, 35-54, ≥55) and education (lower, middle, higher). The actual population distribution of these strata was obtained from EUROSTAT. [1] For the Russian Federation, data was taken from the Russian census in 2010[2] which was adapted to the total population estimate from 2019. The same procedure was applied to the Ukraine considering the most recent census data from 2001[3] and population estimates from 2020.[4] In the case of Albania, the average population distribution in strata of sex, age and education of the four neighboring countries (Greece, Montenegro, North Macedonia and Serbia) was applied to the country's total population in 2019.[5]

Strata were collapsed within each sex if the resulting weight exceeded 10. Out of all 38 country-sex combinations, no stratum was collapsed in 7 cases due to weights in all strata not exceeding 10. For the other country-sex combinations, the best fitting solution in collapsing strata was selected from the following options:

- First-order: collapsing concerned stratum with 1 direct stratum neighbor; e.g. A with D or D
- Second-order: collapsing concerned stratum with 3 stratum neighbors; e.g. A with B, D and E
- Third-order: collapsing concerned stratum with 6 stratum neighbors; e.g. A with B, D, E, G and H

	Education 1	***Education 2***	***Education 3***
Age 1	A	B	C
Age 2	D	E	F
Age 3	G	H	I

For country-sex combinations for which only 1 stratum had to be collapsed, the best fitting solution was a first-order collapse with the resulting weight being lower than 10. If multiple first-order collapses had a weight below 10, the lowest was chosen. If no first-order collapse had a weight lower 10, a second-order and subsequently a third-order solution was considered. The same criteria (a weight lower 10 and choosing the solution with the lowest weight for multiple collapses) were applied in determining the best fitting solution.

For country-sex combinations for which more than 1 stratum had to be collapsed, the overlap of best-fitting strata collapses had to be considered. The most economical solution was chosen, i.e. order 2 was preferred over order 3 combinations. In addition, collapsing 2 (or 3) age groups was preferred over

[1] EUROSTAT. "DATASET: Population by Educational Attainment Level, Sex and Age (%) - Main Indicators [Edat_lfse_03]," 2020. https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=edat_lfse_03&lang=en.

[2] https://www.gks.ru/free_doc/new_site/perepis2010/croc/perepis_itogi1612.html
[3] http://2001.ukrcensus.gov.ua/eng/results/
[4] https://www.cia.gov/library/publications/the-world-factbook/geos/up.html
[5] http://www.instat.gov.al/en/themes/demography-and-social-indicators/population/

collapsing 2 (or 3) education groups. If this allowed several options, the smaller weight was chosen. Third order solutions have to be applied in 9 country-sex combinations (Albania – Females, Denmark – Males, France – Males, Greece – Females, Poland – Females, Portugal – Males, Slovakia – Males, Ukraine – Males and Ukraine – Females).

B) Population weights

Population weights were calculated using the same procedure as described for survey weights. There are two differences:

i) Population weights were calculated as the inverse probability for taking the survey, taking into account the respective country population. In other words, the weights were calculated to arrive at estimates representing the population of the 21 European countries.

ii) The weight selection procedure was slightly adapted: The weight threshold was elevated to 30 to enable weights to be applied taking into account the total population. For strata in which populations weights exceeded the prior threshold 10, at least 10 observations have to exist. This procedure allowed to provide weights below 30 for all strata with the exception of Russian Men (population weight: 34.78). Third order solutions have to be applied in 8 country-sex combinations (France – Males, France – Females, Poland – Females, Russia – Males, Russia – Females, Slovakia – Males, Ukraine – Males and Ukraine – Females).