

A description of the necessary adjustments to YouGov polling figures with respect to the question:

In hindsight, do you think Britain was right or wrong to vote to leave the European Union?

Three elements are considered here, all of which under-represent the Remain majority. (1) YouGov only sample from the GB, but the referendum included Northern Ireland and Gibraltar, (2) YouGov present figures as Leave, Remain and Don't know, but the referendum discounts don't knows, and (3) YouGov have over weighted the voters and underweighted the non-voters in their figures. The non-voters (within the electorate) have a majority of about 29% in favour of remain, so underweighting the non-voters depresses the Remain figures.

Let

T_R be the percentage estimate of the UK+Gibraltar electorate that now think leaving the EU is wrong

T_L be the percentage estimate of the UK+Gibraltar electorate that now think leaving the EU is right

T'_R and T'_L be the YouGov percentage estimate of T_R and T_L for Great Britain, respectively

W_R and W_L be the proportion of electors that voted in the referendum to remain and leave respectively

W_D be the proportion of electors that did not vote in the referendum

W'_R and W'_L be the YouGov weightings for remain and leave respectively

W'_D be the consequent YouGov weighting for those who did not vote

R_R and L_L be the proportion of electors who voted remain and leave respectively, and have not changed their minds.

R_L and L_R be the proportion of electors who voted remain and leave respectively, but who have changed their preference to leave and remain respectively.

D_R and D_L be the proportion of electors who did not vote, but now express a preference for remain or leave respectively.

Note that $W_R + W_L + W_D = 1$ and $W'_R + W'_L + W'_D = 1$ but $T'_R + T'_L \leq 1$ and $T_R + T_L \leq 1$

$$T_R = W_R R_R + W_L L_R + W_D D_R \text{ and } T_L = W_R R_L + W_L L_L + W_D D_L$$

but D_R and D_L are not provided by YouGov, so have to be calculated from:

$$T'_R = W'_R R_R + W'_L L_R + W'_D D_R \text{ and } T'_L = W'_R R_L + W'_L L_L + W'_D D_L$$

$$\text{giving } D_R = \frac{1}{W'_D} (T'_R - W'_R R_R - W'_L L_R) \text{ and } D_L = \frac{1}{W'_D} (T'_L - W'_R R_L - W'_L L_L)$$

and

$$T_R = W_R R_R + W_L L_R + \frac{W_D}{W'_D} (T'_R - W'_R R_R - W'_L L_R) \text{ and } T_L = W_R R_L + W_L L_L + \frac{W_D}{W'_D} (T'_L - W'_R R_L - W'_L L_L)$$

For comparison with the 3.8% referendum leave majority figure, we are interested in

$$\frac{100}{T_R + T_L} (T_R - T_L) = \frac{100}{T_R + T_L} \left\{ \left(W_R - \frac{W'_R W_D}{W'_D} \right) (R_R - R_L) + \left(W_L - \frac{W'_L W_D}{W'_D} \right) (L_R - L_L) + \frac{W_D}{W'_D} (T'_R - T'_L) \right\}$$

For all the YouGov polls to date, apart from those in October 2017, the set of weights has been consistent, (underweighting the non-voters who no express a preference by about 10%), so as a percentage of those expressing a preference, the figure for the majority of Remain preference over Leave preference is:

$$\frac{100}{T_R + T_L} (T_R - T_L) = \frac{100}{T_R + T_L} \{-0.26(R_R - R_L) + 0.285(L_R - L_L) + 1.54(T'_R - T'_L)\}$$

And, for example, for 10th November 2017 figures (where YouGov figures were Leave:42%, Remain:46%)

$$= \frac{100}{85} \{-0.221 + 0.217 + 0.062\} = \frac{0.573}{0.85} = 6.74\%$$

which is a 68% increase in the headline majority for remain, from 4% to 6.74%.