

Let

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

T_L be the percentage estimate of the UK+Gibraltar population that 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.

Then

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

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

For all the 39 YouGov polls, apart from those in October 2017, the set of weights has been consistent, 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%.