

Initial Performance Review of YouGov's MRP for the 2019 UK General Election

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- First internal estimates produced on 07 Nov; last internal estimates produced on 11 Dec.
- Final published estimates released on 10 Dec based on data collected from 04 Dec to 10 Dec
 - 105612 respondents choosing between parties and candidates for their constituency
 - 167 per constituency, on average
- The assessment in this slide deck is of the final published estimates from 10 December.

National Predictions

GB VOTE SHARES

	Con	Lab	LD	Brexit	Green	SNP	PC	Other
Predicted	42.6	33.8	12.4	2.9	2.8	3.4	0.5	1.6
Actual	44.7	32.9	11.8	2.1	2.8	4.0	0.5	1.2
Error	-2.2	0.9	0.5	0.9	0.1	-0.6	0.0	0.3

- All national vote shares within 95% interval estimate for that party
- Key miss on Con-Lab margin: predicted 8.8% vs 11.8% actual.

GB SEAT TOTALS

	Con	Lab	LD	Brexit	Green	SNP	PC	Other
Predicted	339	231	15	0	1	41	4	1
Actual	365	202	11	0	1	48	4	1
Error	-26	29	4	0	0	-7	0	0

- All seat totals in published 95% intervals, except Lab total, which was just outside.
- Error on Con-Lab of -3.1%
 - Roughly translates to -16 seats.
 - National vote miss accounts for 16 seats of the 26 seat underprediction of Conservative seats.

Seat Predictions

PERCENT CORRECTLY PREDICTED

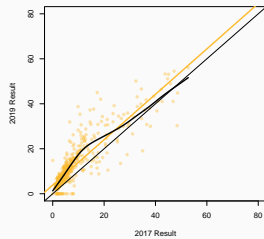
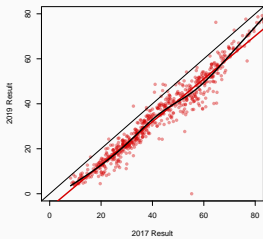
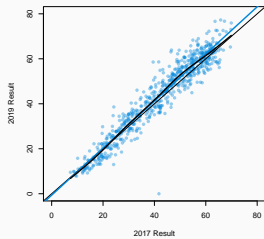
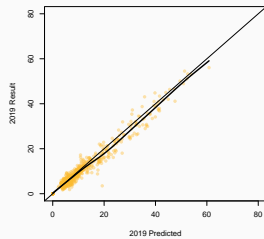
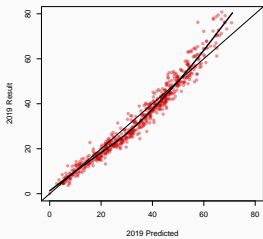
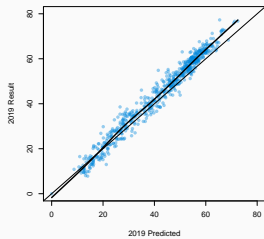
	% Correctly Predicted
2019 YouGov	93.5
2019 UNS	92.6
2017 YouGov	92.9
2017 UNS	91.8

- For predicting the constituency winners, we
 - outperformed uniform national swing applied at the level of England, Scotland and Wales, using the *correct* national swings in each country.
 - outperformed our 2017 performance by the same metric.

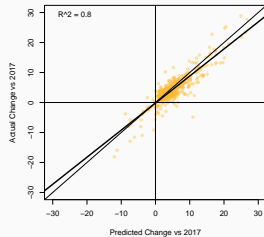
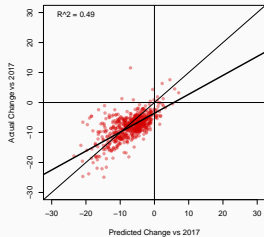
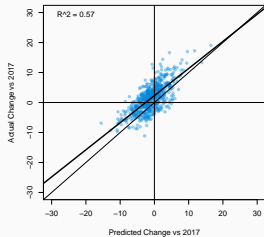
	Con	Lab	LD	Brexit	Green	SNP	PC	Other
2019 YouGov	4.0	3.9	2.3	2.8	0.9	5.0	2.0	2.0
2019 UNS	5.0	4.9	4.5	6.2	1.6	5.3	3.3	7.0
2017 YouGov	4.4	4.7	2.5	2.4	0.9	3.3	3.6	1.6
2017 UNS	5.4	4.1	3.8	4.3	2.0	3.8	2.9	1.9

- For predicting the constituency vote shares of each party, measured by RMSE we
 - outperformed uniform national swing applied at the level of England, Scotland and Wales, using the *correct* national swings in each country, for every party.
 - outperformed our 2017 performance for every party except the SNP

PREDICTED VS ACTUAL

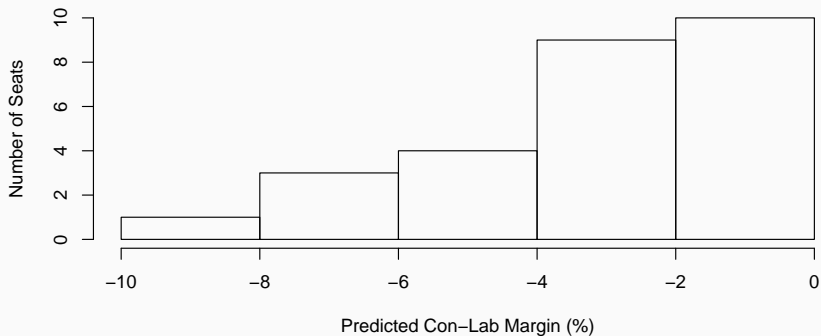


GOOD PREDICTION OF VARIATION IN PARTY SWINGS



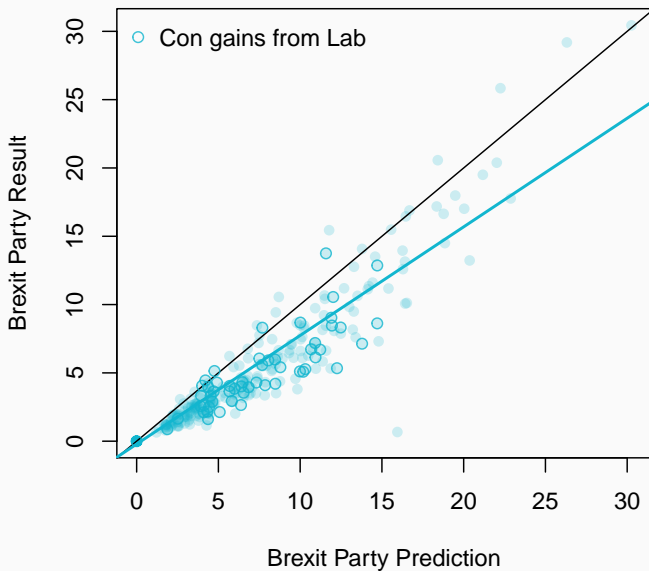
- We predicted a substantial fraction of the *non-uniformity* in swings vs 2017.

UNEXPECTED CONSERVATIVE GAINS FROM LABOUR WERE NOT THAT UNEXPECTED

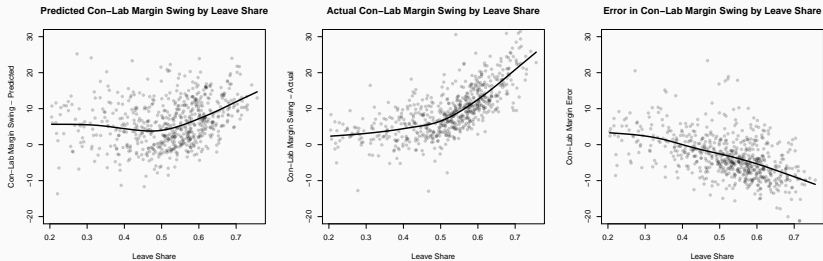


- Of the 27 “surprise” Conservative gains from Labour, we had predicted
 - a Labour win by less than 4% in 19 of them.
 - a Labour win by less than 8% in 26 of them.

BREXIT PARTY MISPREDICTION



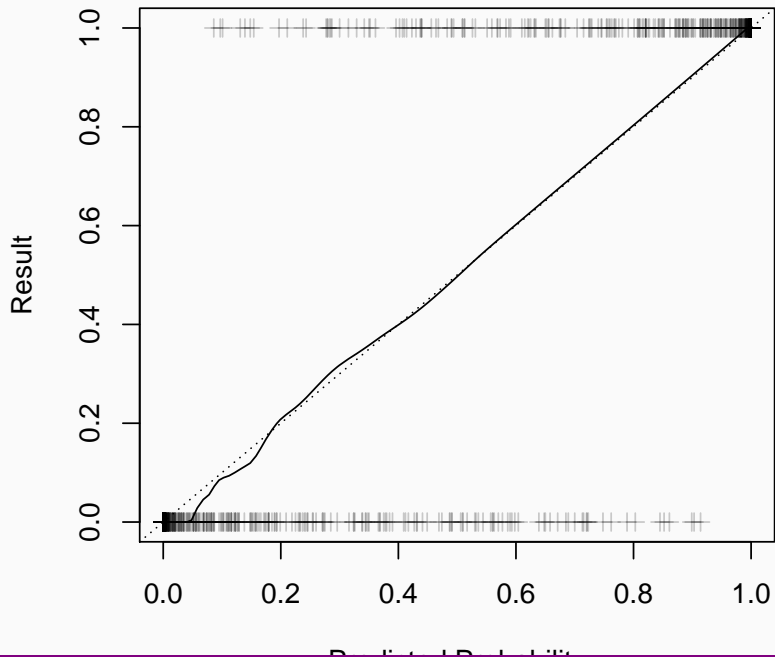
CON-LAB MISPREDICTION BY LEAVE SHARE



- Our estimates reflected the pattern of Con-Lab changes by constituency Leave share, but the relationship was substantially stronger than we predicted.

Statistical Performance

SEAT PROBABILITY CALIBRATION WAS VERY GOOD



INTERVAL COVERAGE WAS AS ADVERTISED

	Con	Lab	LD	Brexit	Green	SNP	PC	Other
Interval Coverage %	92.7	92.2	96.9	89.5	98.6	98.3	100	91.7

- Overall, across all standing parties in all seats, 94.2% of our 95% intervals included the true vote share.

- Our Brier Score in 2019 was 20% better (lower) than in 2017:
 - 2019: 0.085
 - 2017: 0.106

Individual Seats

MOST SURPRISING SEAT RESULT

- The most surprising result from the perspective of our model was the defeat of Tom Brake (LD) in Carshalton and Wallington, which the model put at a probability of 8.6%

	Con	Lab	LD	Brexit	Green	SNP	PC	Other
Predicted	37.9	7.0	47.6	4.1	1.7	0	0	1.7
Actual	42.4	12.4	41.1	2.1	1.5	0	0	0.4
Error	-4.5	-5.4	6.5	2.0	0.2	0	0	1.3

LARGEST VOTE SHARE ERROR

- The worst vote share prediction for any non-independent was an underprediction of the Labour candidate in Bradford West.

	Con	Lab	LD	Brexit	Green	SNP	PC	Other
Predicted	20.0	57.7	6.2	8.5	3.5	0	0	4.1
Actual	15.2	76.2	3.0	3.5	1.8	0	0	0.2
Error	4.8	-18.5	3.1	5.0	1.7	0	0	3.9

- The 2017 independent candidacy of Salma Yaqoob (13.9%) in this constituency meant that the 2017 Labour vote share was depressed versus otherwise similar constituencies.

TOP-TWO PARTY PREDICTION

- The top two parties changed between 2017 and 2019 in 73 of 632 GB seats.
 - Among those seats where the top two parties were unchanged, we correctly predicted the top two parties in 541 and incorrectly predicted the top two parties in 18
 - Among those seats where the top two parties changed, we correctly predicted the top two parties in 61 and incorrectly predicted the top two parties in 12
- Of the 30 seats where we incorrectly predicted the top two parties, there was only one seat (Ynys Mon) where the final margin of victory was less than 10 percentage points. This is also the only GB seat where the party we predicted to come third won the seat.

	Con	Lab	LD	Brexit	Green	SNP	PC	Other
Prediction	28	33	0	8	0	0	30	0
2019 Result	35	30	0	6	0	0	29	0
2017 Result	28	42	1	2	0	0	27	0

Possible Diagnoses

- Our published estimates on 10 Dec used data up to 48 hours before polls opened.
- On 11 Dec, our internal estimates went up from 339 to 348
 - Last data in these estimates was still 24 hours short of polls opening.
 - This is some evidence of late swing, we will know more once we have complete recontact surveys.

- We overpredicted the Brexit Party
 - Small nationally, but consequential for seat prediction because they were concentrated in Con-Lab marginals.
 - Did we ask the wrong people how they would vote (a problem with the representativeness of our sample and/or weighting) or did we ask them at the wrong time (late swing)?
 - Again, we will know more once we have complete recontact surveys.

- Individual leave vote and constituency leave share were both in the model, but we nonetheless underestimated the swings to Con in the most Leave constituencies.
 - Wrong kinds of Leave supporters in the sample?
 - Differential turnout or mismodelling of relative turnout rates for Leave vs Remain supporters?
 - Late swing?