

S8 Table. Mean Square Error (MSE) on the estimation of vote intention with unequal selection probabilities for the convenience sample based on the logistic formula with a sine transformation.

| Method | | Parameters | | Convenience (Internet) sample sizes, in thousands of respondents | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---------|------------|------|--|------|------|------|------|------|-------|-----------------------|-------|------|-------|------|-------|-------|-----------------------|-------|-------|-------|-------|-------|-------|--|--|--|--|--|--|--|--|--|
| | | | | Estimates for Party 1 | | | | | | | Estimates for Party 2 | | | | | | | Estimates for Party 3 | | | | | | | | | | | | | | | |
| | | | | 0.5 | 0.75 | 1 | 2 | 5 | 7.5 | 10 | 0.5 | 0.75 | 1 | 2 | 5 | 7.5 | 10 | 0.5 | 0.75 | 1 | 2 | 5 | 7.5 | 10 | | | | | | | | | |
| No adjustment | | 1.8 | 1.3 | 0.9 | 0.4 | 0.2 | 0.1 | 0.1 | 58.0 | 57.5 | 55.3 | 52.7 | 50.1 | 47.6 | 45.1 | 215.7 | 218.5 | 211.6 | 208.9 | 205.4 | 202.7 | 199.7 | | | | | | | | | | | |
| Logistic regression | | 2.9 | 2.0 | 1.4 | 0.9 | 0.5 | 0.3 | 0.3 | 7.5 | 5.7 | 4.0 | 1.9 | 1.1 | 1.0 | 0.8 | 111.4 | 110.9 | 104.2 | 101.1 | 98.6 | 98.7 | 98.8 | | | | | | | | | | | |
| C4.5 | M | CP | 2.8 | 2.1 | 1.4 | 0.7 | 0.2 | 0.1 | 0.1 | 16.3 | 13.7 | 15.6 | 50.4 | 49.6 | 47.3 | 45.1 | 134.0 | 127.2 | 127.2 | 203.7 | 205.0 | 201.4 | 198.5 | | | | | | | | | | |
| | 0.005 | 0.1 | 3.2 | 2.2 | 1.7 | 0.8 | 0.2 | 0.1 | 0.1 | 13.6 | 13.6 | 11.0 | 43.2 | 49.6 | 47.7 | 45.4 | 124.1 | 123.6 | 119.5 | 185.9 | 204.3 | 202.4 | 199.5 | | | | | | | | | | |
| | 0.005 | 0.25 | 3.6 | 2.3 | 2.1 | 0.8 | 0.2 | 0.1 | 0.1 | 10.9 | 11.1 | 10.1 | 23.7 | 49.7 | 47.4 | 44.8 | 114.6 | 120.0 | 111.3 | 147.1 | 204.8 | 202.0 | 197.8 | | | | | | | | | | |
| | 0.01 | 0.1 | 2.7 | 2.1 | 1.5 | 0.6 | 0.2 | 0.1 | 0.1 | 15.3 | 14.3 | 14.2 | 51.8 | 50.0 | 47.1 | 45.1 | 128.2 | 127.3 | 125.6 | 206.1 | 206.2 | 201.3 | 199.3 | | | | | | | | | | |
| | 0.01 | 0.25 | 3.5 | 2.0 | 1.6 | 0.7 | 0.2 | 0.1 | 0.1 | 12.0 | 13.2 | 12.5 | 47.1 | 50.0 | 47.4 | 45.3 | 122.4 | 124.9 | 122.2 | 194.2 | 205.3 | 200.7 | 199.5 | | | | | | | | | | |
| | 0.01 | 0.5 | 3.4 | 2.3 | 1.7 | 0.7 | 0.2 | 0.1 | 0.1 | 12.0 | 10.4 | 10.6 | 32.0 | 49.6 | 47.5 | 45.0 | 113.1 | 115.5 | 118.9 | 162.8 | 204.8 | 201.3 | 199.2 | | | | | | | | | | |
| | 0.05 | 0.1 | 3.0 | 1.8 | 1.6 | 0.4 | 0.2 | 0.1 | 0.1 | 16.5 | 13.5 | 14.1 | 52.0 | 50.4 | 47.2 | 45.2 | 135.4 | 125.6 | 124.4 | 206.9 | 204.4 | 201.8 | 199.2 | | | | | | | | | | |
| | 0.05 | 0.25 | 2.8 | 2.0 | 1.5 | 0.5 | 0.2 | 0.1 | 0.1 | 13.9 | 13.9 | 13.7 | 51.2 | 49.9 | 47.4 | 45.5 | 125.9 | 126.7 | 123.8 | 206.6 | 205.1 | 202.6 | 199.1 | | | | | | | | | | |
| | 0.05 | 0.5 | 3.3 | 1.8 | 1.5 | 0.5 | 0.2 | 0.1 | 0.1 | 11.4 | 11.7 | 11.5 | 47.5 | 49.8 | 47.4 | 45.1 | 116.4 | 118.7 | 119.5 | 199.7 | 204.3 | 201.5 | 199.5 | | | | | | | | | | |
| | C5.0 | M | CP | 2.6 | 1.9 | 1.3 | 0.5 | 0.2 | 0.1 | 0.1 | 14.0 | 16.2 | 23.9 | 54.2 | 49.3 | 48.2 | 45.7 | 130.7 | 135.2 | 144.9 | 211.2 | 205.4 | 202.4 | 199.9 | | | | | | | | | |
| 0.005 | | 0.1 | 3.0 | 1.9 | 1.3 | 0.5 | 0.2 | 0.1 | 0.1 | 14.6 | 17.7 | 24.7 | 53.6 | 50.4 | 47.6 | 45.7 | 130.2 | 139.3 | 146.9 | 208.1 | 205.8 | 201.3 | 200.2 | | | | | | | | | | |
| 0.005 | | 0.25 | 3.1 | 1.8 | 1.4 | 0.5 | 0.2 | 0.1 | 0.1 | 13.0 | 18.7 | 28.5 | 54.2 | 49.0 | 47.6 | 45.4 | 123.6 | 132.0 | 154.3 | 206.6 | 204.0 | 203.2 | 199.7 | | | | | | | | | | |
| 0.01 | | 0.1 | 2.8 | 1.9 | 1.5 | 0.5 | 0.2 | 0.1 | 0.1 | 15.2 | 16.2 | 24.2 | 55.8 | 49.4 | 47.8 | 44.9 | 130.9 | 132.3 | 143.5 | 213.2 | 203.7 | 202.9 | 199.3 | | | | | | | | | | |
| 0.01 | | 0.25 | 2.7 | 1.8 | 1.2 | 0.5 | 0.2 | 0.1 | 0.1 | 13.8 | 17.8 | 27.5 | 53.2 | 49.9 | 47.6 | 45.2 | 127.0 | 133.6 | 150.4 | 208.5 | 206.6 | 202.8 | 199.3 | | | | | | | | | | |
| 0.01 | | 0.5 | 3.0 | 2.0 | 1.3 | 0.5 | 0.2 | 0.1 | 0.1 | 14.7 | 19.9 | 29.5 | 53.3 | 49.8 | 47.8 | 45.5 | 125.4 | 138.5 | 154.7 | 208.2 | 205.3 | 203.1 | 199.6 | | | | | | | | | | |
| 0.05 | | 0.1 | 3.3 | 1.8 | 1.3 | 0.5 | 0.2 | 0.1 | 0.1 | 14.9 | 16.1 | 23.6 | 51.6 | 50.3 | 47.8 | 45.6 | 126.8 | 130.0 | 142.4 | 206.1 | 206.5 | 201.1 | 200.1 | | | | | | | | | | |
| 0.05 | | 0.25 | 2.9 | 1.8 | 1.3 | 0.5 | 0.2 | 0.1 | 0.1 | 14.8 | 17.7 | 25.3 | 52.7 | 50.0 | 48.1 | 45.5 | 128.4 | 138.1 | 147.0 | 209.0 | 204.7 | 203.4 | 199.6 | | | | | | | | | | |
| 0.05 | | 0.5 | 2.9 | 1.9 | 1.2 | 0.5 | 0.2 | 0.1 | 0.1 | 16.0 | 18.4 | 26.2 | 53.8 | 49.6 | 47.5 | 45.2 | 134.0 | 138.7 | 150.8 | 209.4 | 203.3 | 202.1 | 198.7 | | | | | | | | | | |
| CART | | M | CP | 2.5 | 1.5 | 1.0 | 0.5 | 0.2 | 0.1 | 0.1 | 12.0 | 26.5 | 51.5 | 54.7 | 50.3 | 47.5 | 45.4 | 130.0 | 153.6 | 205.7 | 211.9 | 203.9 | 202.5 | 199.1 | | | | | | | | | |
| | 0.005 | 0.1 | 1.8 | 1.2 | 0.9 | 0.4 | 0.2 | 0.1 | 0.1 | 56.6 | 53.9 | 53.9 | 52.8 | 49.8 | 47.7 | 45.1 | 211.7 | 208.8 | 208.1 | 207.6 | 205.4 | 202.1 | 199.0 | | | | | | | | | | |
| | 0.005 | 0.25 | 1.8 | 1.3 | 1.0 | 0.5 | 0.2 | 0.1 | 0.1 | 58.4 | 58.1 | 55.2 | 53.8 | 50.0 | 48.2 | 45.4 | 216.1 | 217.9 | 212.6 | 211.2 | 206.1 | 202.6 | 199.3 | | | | | | | | | | |
| | 0.01 | 0.1 | 2.4 | 1.3 | 1.1 | 0.4 | 0.2 | 0.1 | 0.1 | 12.6 | 28.3 | 51.6 | 53.7 | 50.2 | 47.1 | 45.1 | 126.9 | 156.5 | 205.7 | 209.2 | 205.5 | 200.5 | 199.2 | | | | | | | | | | |
| | 0.01 | 0.25 | 2.0 | 1.2 | 1.0 | 0.4 | 0.2 | 0.1 | 0.1 | 58.6 | 55.2 | 53.0 | 52.4 | 50.2 | 47.6 | 45.3 | 214.8 | 210.9 | 211.4 | 208.0 | 205.2 | 202.7 | 199.5 | | | | | | | | | | |
| | 0.01 | 0.5 | 1.8 | 1.3 | 1.0 | 0.5 | 0.2 | 0.1 | 0.1 | 56.7 | 55.9 | 55.4 | 52.4 | 49.9 | 47.8 | 45.1 | 210.2 | 210.4 | 214.4 | 208.3 | 204.2 | 201.7 | 199.2 | | | | | | | | | | |
| | 0.05 | 0.1 | 2.6 | 1.4 | 0.9 | 0.5 | 0.2 | 0.1 | 0.1 | 12.7 | 30.3 | 52.1 | 53.0 | 49.5 | 47.5 | 45.7 | 128.2 | 157.7 | 206.5 | 209.1 | 205.1 | 202.2 | 199.8 | | | | | | | | | | |
| | 0.05 | 0.25 | 1.8 | 1.1 | 0.8 | 0.4 | 0.2 | 0.1 | 0.1 | 55.7 | 52.9 | 54.4 | 52.7 | 50.1 | 47.5 | 45.4 | 212.8 | 205.8 | 208.1 | 207.9 | 206.2 | 201.7 | 199.9 | | | | | | | | | | |
| | 0.05 | 0.5 | 1.8 | 1.1 | 0.9 | 0.4 | 0.2 | 0.1 | 0.1 | 57.7 | 52.7 | 55.0 | 54.1 | 49.8 | 47.8 | 44.9 | 215.1 | 214.9 | 210.8 | 210.8 | 205.4 | 202.9 | 199.4 | | | | | | | | | | |
| | k-NN | k | | 3.9 | 2.9 | 2.2 | 1.3 | 0.6 | 0.5 | 0.4 | 11.4 | 8.1 | 6.4 | 3.8 | 1.9 | 1.6 | 1.4 | 116.6 | 104.5 | 100.2 | 89.6 | 87.7 | 85.4 | 87.1 | | | | | | | | | |
| 3 | | | 3.4 | 2.7 | 2.2 | 1.2 | 0.6 | 0.5 | 0.4 | 9.9 | 7.1 | 6.3 | 3.7 | 1.9 | 1.7 | 1.5 | 105.9 | 97.3 | 90.5 | 86.7 | 85.0 | 86.3 | 84.4 | | | | | | | | | | |
| 5 | | | 3.1 | 2.4 | 2.1 | 0.9 | 0.6 | 0.5 | 0.4 | 9.6 | 7.3 | 5.6 | 3.3 | 2.1 | 1.4 | 1.5 | 94.7 | 91.8 | 92.3 | 86.0 | 83.8 | 85.4 | 83.8 | | | | | | | | | | |
| 7 | | | 3.3 | 2.3 | 1.6 | 1.1 | 0.5 | 0.4 | 0.4 | 8.5 | 6.8 | 5.5 | 3.1 | 2.0 | 1.6 | 1.3 | 96.9 | 93.3 | 90.1 | 84.7 | 81.9 | 85.5 | 85.5 | | | | | | | | | | |
| 9 | | | 3.2 | 2.1 | 1.6 | 0.9 | 0.5 | 0.4 | 0.3 | 9.0 | 6.6 | 5.2 | 2.9 | 2.0 | 1.4 | 1.5 | 91.2 | 91.1 | 88.7 | 89.3 | 84.2 | 85.3 | 85.3 | | | | | | | | | | |
| 11 | | | 3.6 | 1.9 | 1.5 | 0.9 | 0.5 | 0.4 | 0.4 | 9.4 | 6.8 | 4.9 | 2.7 | 1.8 | 1.6 | 1.4 | 94.8 | 88.4 | 88.9 | 84.7 | 84.5 | 84.0 | 84.9 | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Naive Bayes | laplace | | 5.7 | 3.0 | 2.2 | 1.2 | 0.5 | 0.4 | 0.4 | 15.6 | 11.1 | 8.2 | 5.6 | 3.8 | 2.9 | 2.0 | 75.6 | 75.1 | 71.7 | 69.0 | 70.4 | 71.8 | 75.3 | | | | | | | | | | |
| | 0 | | 3.9 | 3.3 | 2.1 | 1.1 | 0.5 | 0.4 | 0.4 | 15.2 | 10.1 | 9.1 | 5.3 | 2.9 | 2.7 | 2.2 | 72.8 | 71.4 | 68.5 | 69.9 | 71.7 | 72.5 | 75.4 | | | | | | | | | | |
| | 1 | | 5.1 | 2.5 | 2.3 | 1.2 | 0.5 | 0.4 | 0.3 | 14.8 | 10.4 | 8.4 | 5.9 | 3.4 | 2.7 | 2.3 | 76.5 | 70.4 | 68.8 | 69.2 | 71.2 | 72.7 | 74.4 | | | | | | | | | | |
| | 2 | | 5.1 | 2.8 | 2.0 | 1.1 | 0.5 | 0.4 | 0.3 | 16.7 | 11.1 | 8.7 | 5.6 | 3.0 | 2.5 | 2.0 | 74.3 | 70.1 | 70.6 | 69.2 | 71.3 | 73.9 | 75.2 | | | | | | | | | | |
| | 5 | | 4.3 | 3.0 | 2.2 | 1.3 | 0.5 | 0.4 | 0.3 | 17.0 | 10.7 | 9.7 | 4.8 | 2.9 | 2.3 | 1.8 | 74.7 | 72.0 | 67.7 | 72.2 | 72.2 | 75.6 | 77.1 | | | | | | | | | | |
| Random Forest | mtry | | 11.0 | 9.0 | 7.6 | 13.2 | 8.0 | 3.8 | 2.2 | 49.4 | 112.1 | 117.0 | 42.7 | 21.4 | 12.1 | 11.6 | 38.9 | 19.6 | 21.4 | 82.3 | 89.3 | 104.8 | 130.2 | | | | | | | | | | |
| | 1 | | 13.7 | 11.8 | 10.5 | 9.4 | 9.6 | 7.2 | 5.8 | 133.6 | 149.3 | 137.1 | 63.4 | 44.2 | 31.1 | 19.5 | 34.7 | 19.2 | 18.3 | 33.6 | 44.7 | 59.4 | 69.0 | | | | | | | | | | |
| | 2 | | 27.5 | 23.8 | 15.6 | 10.7 | 10.1 | 12.5 | 11.1 | 87.5 | 72.1 | 80.1 | 86.8 | 115.8 | 76.5 | 51.2 | 144.0 | 107.8 | 94.2 | 41.5 | 25.8 | 35.6 | 49.2 | | | | | | | | | | |
| GBM | ID | LR | 2.7 | 2.4 | 1.6 | 1.0 | 0.4 | 0.3 | 0.3 | 9.1 | 6.0 | 4.6 | 2.7 | 1.4 | 1.2 | 1.1 | 101.8 | 98.5 | 94.6 | 90.4 | 91.2 | 91.0 | 90.7 | | | | | | | | | | |
| | 4 | 0.1 | 1.8 | 1.4 | 1.1 | 0.5 | 0.2 | 0.1 | 0.1 | 16.5 | 14.5 | 13.8 | 12.1 | 12.0 | 11.7 | 11.7 | 143.7 | 143.2 | 142.8 | 136.0 | 137.4 | 136.9 | 135.8 | | | | | | | | | | |
| | 4 | 0.001 | 1.7 | 1.2 | 0.9 | 0.4 | 0.2 | 0.1 | 0.1 | 49.8 | 48.1 | 46.9 | 46.2 | 43.2 | 41.2 | 39.5 | 202.4 | 199.3 | 199.4 | 198.8 | 194.5 | 193.1 | 189.5 | | | | | | | | | | |
| | 4 | 0.1 | 3.6 | 2.3 | 1.8 | 1.1 | 0.5 | 0.4 | 0.3 | 8.8 | 6.3 | 4.5 | 2.7 | 1.6 | 1.3 | 1.2 | 98.9 | 100.8 | 96.0 | 94.0 | 91.3 | 90.5 | 90.4 | | | | | | | | | | |
| | 6 | 0.01 | 1.8 | 1.3 | 0.9 | 0.5 | 0.2 | 0.2 | 0.1 | 16.8 | 13.6 | 12.7 | 11.7 | 10.5 | 10.4 | 9.9 | 146.6 | 140.6 | 138.8 | 136.9 | 133.8 | 134.3 | 132.8 | | | | | | | | | | |
| | 6 | 0.001 | 1.9 | 1.2 | 0.9 | 0.5 | 0.2 | 0.1 | 0.1 | 49.0 | 47.9 | 48.0 | 45.6 | 42.1 | 40.9 | 39.1 | 204.6 | 202.5 | 199.7 | 198.7 | 194.5 | 191.6 | 189.4 | | | | | | | | | | |
| | 8 | 0.1 | 3.3 | 2.4 | 1.8 | 1.1 | 0.5 | 0.4 | 0.3 | 8.9 | 6.0 | 5.0 | 2.8 | 1.6 | 1.4 | 1.1 | 101.9 | 100.8 | 98.0 | 90.8 | 92.3 | 91.0 | 91.9 | | | | | | | | | | |
| | 8 | 0.01 | 2.1 | 1.4 | 1.0 | 0.5 | 0.2 | 0.2 | 0.1 | 14.8 | 13.9 | 13.3 | 11.2 | 9.7 | 9.6 | 9.4 | 145.3 | 142.3 | 140.0 | 136.1 | 132.0 | 132.2 | 131.8 | | | | | | | | | | |
| | 8 | 0.001 | 1.9 | 1.2 | 0.9 | 0.5 | 0.2 | 0.1 | 0.1 | 47.7 | 47.3 | 48.0 | 44.8 | 41.9 | 40.7 | 38.2 | 202.6 | 201.8 | 201.3 | 199.2 | 193.9 | 191.9 | 188.8 | | | | | | | | | | |