

# Are mixed electoral systems the best choice for Central and Eastern Europe or the reason for defective party systems?

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## Online Appendix

### Replication of the model with non-lagged control variables

Dependent variable: **party fractionalisation**

|                                  | (1)      |       | (2)      |       | (3)      |       |
|----------------------------------|----------|-------|----------|-------|----------|-------|
|                                  | Coef.    | RSE   | Coef.    | RSE   | Coef.    | RSE   |
| <b>mean function</b>             |          |       |          |       |          |       |
| constant                         | 0.759    | 0.366 | 1.286    | 0.163 | 1.217    | 0.150 |
| mixed system                     | -0.143   | 0.122 | -0.075   | 0.118 | -0.074   | 0.125 |
| majority vote                    | -0.095   | 0.761 | -0.036   | 0.451 | -0.387   | 0.351 |
| nr of election                   | -0.029   | 0.037 | 0.018    | 0.032 | 0.039    | 0.033 |
| ln(gdp) lag                      | 0.095**  | 0.046 |          |       |          |       |
| unempl lag                       |          |       | 0.002    | 0.005 |          |       |
| growth lag                       |          |       |          |       | 0.003    | 0.005 |
| <b>variance function</b>         |          |       |          |       |          |       |
| constant                         | 2.191    | 1.449 | -1.252   | 0.546 | -1.335   | 0.581 |
| mixed system                     | 0.802**  | 0.386 | 0.842**  | 0.387 | 0.791**  | 0.402 |
| majority vote                    | 1.776**  | 0.808 | 1.230    | 0.751 | 0.782    | 0.949 |
| nr of election                   | -0.075   | 0.159 | -0.285** | 0.120 | -0.151   | 0.147 |
| ln(gdp) lag                      | -0.516** | 0.203 |          |       |          |       |
| unempl lag                       |          |       | 0.016    | 0.014 |          |       |
| growth lag                       |          |       |          |       | -0.047*  | 0.029 |
| N                                | 83       |       | 87       |       | 80       |       |
| Pseudo R <sup>2</sup>            | 0.2618   |       | 0.1684   |       | 0.1938   |       |
| VWLS R <sup>2</sup>              | 0.0686   |       | 0.0139   |       | 0.0437   |       |
| χ <sup>2</sup> mean function     | 6.88     |       | 1.01     |       | 4.18     |       |
| χ <sup>2</sup> variance function | 24.31*** |       | 16.12*** |       | 14.55*** |       |

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Dependent variable: **disproportionality**

|                                  | (4)      |        | (5)       |          | (6)      |       |
|----------------------------------|----------|--------|-----------|----------|----------|-------|
|                                  | Coef.    | RSE    | Coef.     | RSE      | Coef.    | RSE   |
| <b>mean function</b>             |          |        |           |          |          |       |
| constant                         | 14.025   | 3.876  | 7.468     | 1.247    | 6.585    | 1.649 |
| mixed system                     | 6.005*** | 1.586  | 4.940***  | 1.737    | 6.520*** | 1.772 |
| majority vote                    | 17.622*  | 10.467 | 27.849*** | 4.517    | 6.916    | 7.005 |
| nr of election                   | -0.043   | 0.481  | 0.009     | 0.236    | -0.020   | 0.378 |
| ln(gdp) lag                      | -0.926   | 0.642  |           |          |          |       |
| unempl lag                       |          |        | 0.066***  | 0.021    |          |       |
| growth lag                       |          |        |           |          | -0.081** | 0.038 |
| <b>variance function</b>         |          |        |           |          |          |       |
| constant                         | 4.441    | 1.966  | 3.710     | 1.051    | 3.060    | 0.892 |
| mixed system                     | 1.447*** | 0.550  | 1.567***  | 0.611    | 1.595*** | 0.561 |
| majority vote                    | 2.689*** | 0.867  | 2.451***  | 0.943    | 3.437*** | 0.911 |
| nr of election                   | -0.091   | 0.293  | -0.091    | 0.230    | -0.231   | 0.232 |
| ln(gdp) lag                      | -0.223   | 0.334  |           |          |          |       |
| unempl lag                       |          |        | 0.079***  | 0.016    |          |       |
| growth lag                       |          |        |           |          | 0.065**  | 0.033 |
| N                                | 83       |        | 84        |          | 79       |       |
| Pseudo R <sup>2</sup>            | 0.1325   |        | 0.1475    |          | 0.128    |       |
| VWLS R <sup>2</sup>              | 0.2452   |        | 0.3814    |          | 0.2152   |       |
| χ <sup>2</sup> mean function     | 30.99*** |        | 61.40***  | 30.99*** |          |       |
| χ <sup>2</sup> variance function | 22.78*** |        | 63.30***  | 22.78*** |          |       |

Dependent variable: **volatility**

|                                  | (7)      |       | (8)    |       | (9)      |       |
|----------------------------------|----------|-------|--------|-------|----------|-------|
|                                  | Coef.    | RSE   | Coef.  | RSE   | Coef.    | RSE   |
| <b>mean function</b>             |          |       |        |       |          |       |
| constant                         | 37.450   | 7.350 | 19.410 | 4.608 | 16.354   | 4.098 |
| mixed system                     | 2.698    | 2.153 | 3.668  | 2.343 | 1.776    | 2.341 |
| majority vote                    |          |       |        |       |          |       |
| nr of election                   | 0.717    | 0.799 | -0.459 | 0.917 | -0.081   | 0.851 |
| 2 <sup>nd</sup> election         | 1.640    | 2.500 | 1.231  | 3.580 | 1.130    | 3.690 |
| ln(gdp) lag                      | 3.022*** | 0.825 |        |       |          |       |
| unempl lag                       |          |       | -0.098 | 0.068 |          |       |
| growth lag                       |          |       |        |       | -0.030   | 0.067 |
| <b>variance function</b>         |          |       |        |       |          |       |
| constant                         | 8.625    | 1.746 | 5.061  | 1.184 | 3.783    | 0.783 |
| mixed system                     | 0.465    | 0.447 | 0.333  | 0.417 | 0.648    | 0.406 |
| majority vote                    |          |       |        |       |          |       |
| nr of election                   | 0.169    | 0.202 | -0.160 | 0.230 | 0.147    | 0.187 |
| 2 <sup>nd</sup> election         | -0.902   | 0.697 | -0.683 | 0.714 | -0.920   | 0.719 |
| ln(gdp) lag                      | 0.684*** | 0.228 |        |       |          |       |
| unempl lag                       |          |       | -0.021 | 0.019 |          |       |
| growth lag                       |          |       |        |       | 0.123*** | 0.041 |
| N                                | 70       |       | 70     |       | 68       |       |
| Pseudo R <sup>2</sup>            | 0.0476   |       | 0.0163 |       | 0.0294   |       |
| VWLS R <sup>2</sup>              | 0.1995   |       | 0.0877 |       | 0.0219   |       |
| χ <sup>2</sup> mean function     | 26.66*** |       | 8.21*  |       | 2.24     |       |
| χ <sup>2</sup> variance function | 13.44*** |       | 3.54   |       | 12.74**  |       |

Table A2: Variance model, parameter estimates for the mean model and the variance model, and robust standard errors (RSE). Non-lagged control variables.

\* p<0.1; \*\* p<0.05; \*\*\* p<0.01