**Appendix A. Descriptives, interaction models and alternative specifications.**

Table A1. Descriptives (at quarterly level).

|  |  |  |  |
| --- | --- | --- | --- |
|  | United Kingdom |  | Norway |
| Variable | Mean | St. dev | Min | Max |  | Mean | St. dev | Min | Max |
| News visibility | 10.98 | 41.92 | 0 | 2214 |  | 17.11 | 46.50 | 0 | 1400 |
| Gender (Women=1) | 0.21 | 0.40 | 0 | 1 |  | 0.38 | 0.48 | 0 | 1 |
| Age | 52.35 | 10.02 | 17 | 86 |  | 48.77 | 10.34 | 21 | 75 |
| Electoral safety | 8256 | 5321 | 0 | 69249 |  | -0.76 | 0.32 | -1 | -0.06 |
| Legislative speeches | 20.75 | 26.05 | 0 | 569 |  | 13.57 | 12.77 | 0 | 158 |
| Legislative experience | 11.15 | 8.91 | 0 | 56 |  | 7.01 | 5.49 | 0 | 32 |
| Party size (seat share) | 42.77 | 17.16 | 0.15 | 63.58 |  | 22.27 | 10.97 | 0.59 | 39.39 |
| Party in cabinet | 0.58 | 0.49 | 0 | 1 |  | 0.44 | 0.50 | 0 | 1 |
| Party L-R extremity | 1.31 | 0.85 | 0.64 | 3.3 |  | 2.26 | 1.14 | 0.15 | 3.76 |
| Cabinet size (seat share) | 57.99 | 3.52 | 54.95 | 63.58 |  | 45.33 | 6.50 | 25.45 | 51.48 |
| Cabinet color (right=1) | 0.32 | 0.47 | 0 | 1 |  | 0.42 | 0.49 | 0 | 1 |
| District size (pop.) | 69205 | 7976 | 21576 | 109902 |  | 216231 | 103311 | 52900 | 435146 |
| District size (in seats) |  |  |  |  |  | 10.25 | 4.09 | 4 | 19 |
| Distance to capital | 0.37 | 0.25 | 0 | 1 |  | 0.23 | 0.25 | 0 | 1 |
| Turnout | 62.81 | 6.94 | 34.08 | 82.24 |  | 76.58 | 2.46 | 69.4 | 82.0 |

Table A2. Testing additional observable implications of the theoretical argument about electoral systems. Dependent variable: quarterly news visibility.

|  |  |  |
| --- | --- | --- |
|  | UK: Fem X Distance to capital | Norway: Fem X District size (seats) |
| Women | 0.333\*\* | -0.458 |
| (0.152) | (0.304) |
| Age | 0.179\*\*\* | 0.077\*\*\* |
| (0.012) | (0.024) |
| Age2 | -0.002\*\*\* | -0.001\*\*\* |
| (0.000) | (0.000) |
| Electoral safety Note 1 | 0.000\*\*\* | 0.310\*\*\* |
| (0.000) | (0.085) |
| Legislative speeches | 0.010\*\*\* | 0.014\*\*\* |
| (0.000) | (0.002) |
| Legislative experience | 0.071\*\*\* | 0.095\*\*\* |
| (0.005) | (0.009) |
| Party size (seat share) | -0.010\*\*\* | -0.028\*\*\* |
| (0.002) | (0.004) |
| Party in cabinet | 0.293\*\*\* | 0.043 |
| (0.037) | (0.040) |
| Party L-R extremity | 0.061 | 0.025 |
| (0.048) | (0.052) |
| Cabinet color | 0.049\*\*\* | -0.017\*\* |
| (0.009) | (0.007) |
| Seat share, cabinet | -0.436\*\*\* | -0.097 |
| (0.092) | (0.072) |
| District size (*UK: population, NO: seats*) | -0.000 | 0.063\*\*\* |
| (0.000) | (0.017) |
| Distance to capital | -0.200 | -0.571\*\* |
| (0.158) | (0.253) |
| Turnout | 0.003 | 0.003 |
| (0.003) | (0.014) |
| Time counter | 0.022\*\*\* | -0.010\*\*\* |
| (0.004) | (0.002) |
| Election period | 0.326\*\*\* | -0.128\*\* |
| (0.032) | (0.056) |
| Months since prev election | -0.003\*\*\* | -0.003\*\* |
| (0.001) | (0.001) |
| Committee leadership |  | 0.334\*\*\* |
|  | (0.046) |
| Committee, «hard» |  | -0.323\*\*\* |
|  | (0.058) |
| Fem X Distance to capital | -0.941\*\*\* |  |
| (0.324) |  |
| Fem X District size in seats |  | -0.002 |
|  | (0.027) |
| Constant | -9.691\*\*\* | 3.603\*\*\* |
| (1.285) | (1.283) |
| Ln Alpha | 0.166\*\*\* | 0.054\*\* |
| (0.010) | (0.022) |
| MP var const | 1.430\*\*\* | 1.256\*\*\* |
| (0.067) | (0.101) |
| N | 36025 | 7469 |
| No. of groups | 1065 | 406 |
| Log likelihood | -97358 | -23492 |

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 Note 1: UK – Margin of votes. NO – List position (inverted).

Table A3. Marginal effect of district size by gender, Norway. Based on Norwegian interaction model reported in Table A2. All covariates held constant at their mean.

|  |  |  |
| --- | --- | --- |
|  | Marginal effect | Std. error |
| Men | 1.37\*\*\* | 0.43 |
| Women | 0.83\*\* | 0.33 |
| Ratio | 1.65 |  |

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A4. Retesting interaction model of Norwegian data in Table A2 after excluding influential observations. Dependent variable: quarterly news visibility.

|  |  |
| --- | --- |
|  | Norway: Fem X District size (seats) |
| Women | -0.420 |
| (0.352) |
| Age | 0.037 |
| (0.027) |
| Age2 | -0.001\*\*\* |
| (0.000) |
| Electoral safety | 0.258\*\*\* |
| (0.091) |
| Legislative speeches | 0.016\*\*\* |
| (0.002) |
| Legislative experience | 0.096\*\*\* |
| (0.010) |
| Party size (seat share) | -0.023\*\*\* |
| (0.004) |
| Party in cabinet | 0.059 |
| (0.045) |
| Party L-R extremity | 0.021 |
| (0.057) |
| Cabinet color | -0.019\*\* |
| (0.008) |
| Seat share, cabinet | -0.066 |
| (0.080) |
| District size | -0.225 |
| (0.258) |
| Distance to capital | 0.021 |
| (0.016) |
| Turnout | -0.011\*\*\* |
| (0.003) |
| Time counter | -0.117\* |
| (0.061) |
| Election period | -0.004\*\*\* |
| (0.001) |
| Months since prev election | 0.283\*\*\* |
| (0.051) |
| Committee leadership | -0.390\*\*\* |
| (0.063) |
| Committee, «hard» | 0.056\*\* |
| (0.023) |
| Fem X District size in seats | -0.010 |
| (0.036) |
| Constant | 3.036\*\* |
| (1.423) |
| Ln Alpha | 0.054\*\* |
| (0.024) |
| MP var const | 1.203\*\*\* |
| (0.108) |
| N | 6149 |
| No. of groups | 330 |
| Log likelihood | -18698 |

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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Figure A1: The effect of district size (in seats) on news visibility by gender, Norway. Predicted values estimated based on model reported in Table A4, where influential observations were excluded. All other covariates held constant at their mean.

Table A5. Testing alternative model specifications. Dependent variable: quarterly news visibility.

|  |  |  |
| --- | --- | --- |
|  | United Kingdom | Norway |
|  | Main model | AR-term | Robust SEs | Main model | AR-term | Robust SEs |
| Women | -0.017 | -0.012 | -0.017 | -0.478\*\*\* | -0.385\*\*\* | -0.478\*\*\* |
| (0.093) | (0.082) | (0.097) | (0.123) | (0.114) | (0.125) |
| Age | 0.179\*\*\* | 0.130\*\*\* | 0.179\*\*\* | 0.077\*\*\* | 0.039\* | 0.077\* |
| (0.012) | (0.011) | (0.027) | (0.024) | (0.024) | (0.045) |
| Age2 | -0.002\*\*\* | -0.002\*\*\* | -0.002\*\*\* | -0.001\*\*\* | -0.001\*\*\* | -0.001\*\* |
| (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Electoral safety Note 1 | 0.000\*\*\* | 0.000\*\*\* | 0.000\*\*\* | 0.310\*\*\* | 0.395\*\*\* | 0.310\* |
| (0.000) | (0.000) | (0.000) | (0.085) | (0.084) | (0.171) |
| Legislative speeches | 0.010\*\*\* | 0.010\*\*\* | 0.010\*\*\* | 0.014\*\*\* | 0.013\*\*\* | 0.014\*\*\* |
| (0.000) | (0.000) | (0.001) | (0.002) | (0.002) | (0.003) |
| Legislative experience | 0.071\*\*\* | 0.059\*\*\* | 0.071\*\*\* | 0.094\*\*\* | 0.074\*\*\* | 0.094\*\*\* |
| (0.005) | (0.005) | (0.007) | (0.009) | (0.008) | (0.011) |
| Party size (seat share) | -0.010\*\*\* | -0.011\*\*\* | -0.010\*\*\* | -0.027\*\*\* | -0.036\*\*\* | -0.027\*\*\* |
| (0.002) | (0.002) | (0.004) | (0.004) | (0.004) | (0.006) |
| Party in cabinet | 0.296\*\*\* | 0.304\*\*\* | 0.296\*\*\* | 0.044 | 0.117\*\*\* | 0.044 |
| (0.037) | (0.035) | (0.076) | (0.040) | (0.041) | (0.065) |
| Party L-R extremity | 0.056 | 0.059 | 0.056 | 0.020 | 0.028 | 0.020 |
| (0.048) | (0.042) | (0.076) | (0.052) | (0.048) | (0.049) |
| Cabinet color | 0.049\*\*\* | 0.040\*\*\* | 0.049\*\*\* | -0.014\*\* | -0.008 | -0.014 |
| (0.009) | (0.009) | (0.018) | (0.007) | (0.008) | (0.011) |
| Seat share, cabinet | -0.434\*\*\* | -0.352\*\*\* | -0.434\*\* | -0.073 | -0.108 | -0.073 |
| (0.092) | (0.092) | (0.194) | (0.072) | (0.079) | (0.115) |
| District size (population) | -0.000 | -0.000\* | -0.000 | 0.000\*\*\* | 0.000\*\*\* | 0.000\*\*\* |
| (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Distance to capital | -0.406\*\*\* | -0.491\*\*\* | -0.406\* | -0.431\* | -0.562\*\* | -0.431 |
| (0.142) | (0.126) | (0.235) | (0.260) | (0.243) | (0.283) |
| Turnout | 0.003 | -0.003 | 0.003 | -0.002 | -0.034\*\* | -0.002 |
| (0.003) | (0.003) | (0.007) | (0.015) | (0.015) | (0.026) |
| Time counter | 0.022\*\*\* | 0.019\*\*\* | 0.022\*\*\* | -0.012\*\*\* | -0.009\*\*\* | -0.012\*\*\* |
| (0.004) | (0.004) | (0.007) | (0.002) | (0.002) | (0.004) |
| Election period | 0.326\*\*\* | 0.450\*\*\* | 0.326\*\*\* | -0.126\*\* | -0.105\* | -0.126\* |
| (0.032) | (0.037) | (0.039) | (0.056) | (0.055) | (0.065) |
| Months since prev election | -0.003\*\*\* | -0.002\*\* | -0.003 | -0.002\* | -0.003\*\* | -0.002 |
| (0.001) | (0.001) | (0.002) | (0.001) | (0.001) | (0.002) |
| Committee leadership |  |  |  | 0.336\*\*\* | 0.310\*\*\* | 0.336\*\*\* |
|  |  |  | (0.046) | (0.046) | (0.089) |
| Committee, «hard» |  |  |  | -0.325\*\*\* | -0.331\*\*\* | -0.325\*\*\* |
|  |  |  | (0.058) | (0.058) | (0.108) |
| Lagged news visibility |  | 0.009\*\*\* |  |  | 0.006\*\*\* |  |
|  | (0.000) |  |  | (0.001) |  |
| Constant | -9.563\*\*\* | -6.889\*\*\* | -9.563\*\*\* | 4.114\*\*\* | 6.806\*\*\* | 4.114\* |
| (1.285) | (1.276) | (2.614) | (1.297) | (1.291) | (2.245) |
| Ln Alpha | 0.166\*\*\* | 0.100\*\*\* | 0.166\*\*\* | 0.053\*\* | -0.002 | 0.053 |
| (0.010) | (0.010) | (0.022) | (0.022) | (0.023) | (0.053) |
| MP var const | 1.440\*\*\* | 1.073\*\*\* | 1.440\*\*\* | 1.254\*\*\* | 1.051\*\*\* | 1.254\*\*\* |
| (0.067) | (0.052) | (0.079) | (0.101) | (0.092) | (0.121) |
| N | 36025 | 34864 | 36025 | 7469 | 7044 | 7469 |
| No. of groups | 1065 | 1062 | 1065 | 406 | 406 | 406 |
| Log likelihood | -97362 | -93751 | -97362 | -23492 | -22043 | -23492 |

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 Note 1: UK – Margin of votes. NO – List position (inversed).

Table A6. Testing a pooled model, Norway and UK data stacked. Dependent variable: quarterly news visibility.

|  |  |
| --- | --- |
|  |  |
| Women | -0.527\*\*\* |
| (0.130) |
| Age | 0.159\*\*\* |
| (0.010) |
| Age2 | -0.002\*\*\* |
| (0.000) |
| Legislative speeches | 0.010\*\*\* |
| (0.000) |
| Legislative experience | 0.079\*\*\* |
| (0.004) |
| Party size (seat share) | -0.004\*\* |
| (0.001) |
| Party in cabinet | 0.184\*\*\* |
| (0.027) |
| Party L-R extremity | 0.068\* |
| (0.036) |
| Seat share, cabinet | -0.011\*\*\* |
| (0.002) |
| Cabinet color | 0.157\*\*\* |
| (0.023) |
| District size (population) | 0.000\*\*\* |
| (0.000) |
| Distance | -0.405\*\*\* |
| (0.124) |
| Turnout | -0.010\*\*\* |
| (0.002) |
| Time counter | -0.003\*\*\* |
| (0.001) |
| Election period | 0.179\*\*\* |
| (0.027) |
| Months since prev election | 0.004\*\*\* |
| (0.000) |
| UK dummy | -0.349\*\*\* |
| (0.134) |
| Fem X UK dummy | 0.489\*\*\* |
| (0.159) |
| Constant | -0.213 |
| (0.384) |
| Ln Alpha | 0.162\*\*\* |
| (0.009) |
| MP var const | 1.481\*\*\* |
| (0.060) |
| N | 43510 |
| No. of groups | 1471 |
| Log likelihood | -121138 |

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A7. Predicted news visibility of MPs by gender, United Kingdom and Norway. Based on pooled model in Table A5.

|  |  |  |
| --- | --- | --- |
|  | United Kingdom | Norway |
| Men | 12.2 | 17.3 |
| Women | 11.8 | 10.2 |
| Difference | 0.4 | 7.1\*\*\* |

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A8. Testing with monthly and annual observations. Dependent variable: monthly /annual news visibility.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | UK: months | UK: years | NO: months | NO: years |
| Women | -0.004 | -0.021 | -0.503\*\*\* | -0.426\*\*\* |
| (0.095) | (0.091) | (0.125) | (0.120) |
| Age | 0.194\*\*\* | 0.153\*\*\* | 0.102\*\*\* | 0.076\*\*\* |
| (0.010) | (0.015) | (0.019) | (0.028) |
| Age2 | -0.002\*\*\* | -0.002\*\*\* | -0.002\*\*\* | -0.001\*\*\* |
| (0.000) | (0.000) | (0.000) | (0.000) |
| Electoral safety Note 1 | 0.000\*\*\* | 0.000\*\*\* | 0.294\*\*\* | 0.377\*\*\* |
| (0.000) | (0.000) | (0.067) | (0.111) |
| Legislative speeches | 0.013\*\*\* | 0.005\*\*\* | 0.015\*\*\* | 0.015\*\*\* |
| (0.001) | (0.000) | (0.002) | (0.001) |
| Legislative experience | 0.072\*\*\* | 0.066\*\*\* | 0.093\*\*\* | 0.093\*\*\* |
| (0.005) | (0.005) | (0.009) | (0.009) |
| Party size (seat share) | -0.012\*\*\* | -0.008\*\*\* | -0.029\*\*\* | -0.025\*\*\* |
| (0.002) | (0.002) | (0.003) | (0.005) |
| Party in cabinet | 0.363\*\*\* | 0.208\*\*\* | 0.009 | 0.391\*\*\* |
| (0.031) | (0.050) | (0.031) | (0.059) |
| Party L-R extremity | 0.113\*\* | 0.066 | 0.012 | 0.056 |
| (0.047) | (0.048) | (0.053) | (0.051) |
| Cabinet size | 0.033\*\*\* | -0.035\*\*\* | -0.023\*\*\* | 0.001 |
| (0.007) | (0.007) | (0.006) | (0.007) |
| Cabinet color | -0.183\*\*\* | 0.255\*\*\* | -0.175\*\*\* | -0.061 |
| (0.067) | (0.072) | (0.060) | (0.067) |
| District size (population) | 0.000 | 0.000 | 0.000\*\*\* | 0.000\*\*\* |
| (0.000) | (0.000) | (0.000) | (0.000) |
| Distance to capital | -0.341\*\* | -0.316\*\* | -0.491\* | -0.431\* |
| (0.135) | (0.146) | (0.262) | (0.261) |
| Turnout | -0.002 | -0.013\*\*\* | -0.004 | -0.005 |
| (0.002) | (0.003) | (0.012) | (0.021) |
| Time counter (months or years) | 0.001\*\*\* | -0.055\*\*\* | -0.000\*\*\* | -0.068\*\*\* |
| (0.000) | (0.012) | (0.000) | (0.008) |
| Election period | 0.625\*\*\* | -0.007 | 0.070 | -0.329\*\*\* |
| (0.039) | (0.030) | (0.066) | (0.062) |
| Months since prev election | -0.001 | 0.004\*\*\* | -0.005\*\*\* | 0.010\*\*\* |
| (0.001) | (0.001) | (0.001) | (0.002) |
| Committee leadership |  |  | 0.317\*\*\* | 0.403\*\*\* |
|  |  | (0.035) | (0.061) |
| Committee, «hard» |  |  | -0.327\*\*\* | -0.261\*\*\* |
|  |  | (0.046) | (0.076) |
| Constant | -124.597\*\*\* | 111.791\*\*\* | 71.450\*\*\* | 137.768\*\*\* |
| (22.374) | (24.015) | (17.433) | (17.034) |
| Ln Alpha | 0.594\*\*\* | -0.250\*\*\* | 0.525\*\*\* | -0.275\*\*\* |
| (0.007) | (0.016) | (0.015) | (0.033) |
| MP var const | 1.524\*\*\* | 1.295\*\*\* | 1.350\*\*\* | 1.107\*\*\* |
| (0.070) | (0.063) | (0.105) | (0.095) |
| N | 96424 | 9882 | 22397 | 2868 |
| No. of groups | 1065 | 1065 | 406 | 406 |
| Log likelihood | -178875 | -39305 | -48063 | -11616 |

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 Note 1: UK – Margin of votes. NO – List position (inverted).

Table A9. Testing with routine times and election periods separately. Dependent variable: monthly news visibility.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | UK: routine | UK: election | NO: routine | NO: election |
| Women | -0.020 | 0.179 | -0.507\*\*\* | -0.327\* |
| (0.096) | (0.151) | (0.123) | (0.177) |
| Age | 0.193\*\*\* | 0.127\*\*\* | 0.111\*\*\* | -0.047 |
| (0.010) | (0.042) | (0.018) | (0.058) |
| Age2 | -0.002\*\*\* | -0.002\*\*\* | -0.002\*\*\* | 0.000 |
| (0.000) | (0.000) | (0.000) | (0.001) |
| Electoral safety Note 1 | 0.000\*\*\* | 0.000\*\*\* | 0.336\*\*\* | 0.920\*\*\* |
| (0.000) | (0.000) | (0.061) | (0.210) |
| Legislative speeches | 0.013\*\*\* | 0.065\*\*\* |  |  |
| (0.001) | (0.013) |  |  |
| Legislative experience | 0.072\*\*\* | 0.091\*\*\* | 0.089\*\*\* | 0.073\*\*\* |
| (0.005) | (0.009) | (0.009) | (0.015) |
| Party size (seat share) | -0.011\*\*\* | -0.022\*\*\* | -0.031\*\*\* | -0.026\*\*\* |
| (0.002) | (0.005) | (0.003) | (0.007) |
| Party in cabinet | 0.352\*\*\* | 0.124 | -0.014 | -0.562\*\*\* |
| (0.031) | (0.129) | (0.028) | (0.114) |
| Party L-R extremity | 0.113\*\* | -0.171\*\* | 0.012 | 0.023 |
| (0.048) | (0.083) | (0.053) | (0.076) |
| Cabinet size | 0.032\*\*\* | -0.007 | -0.019\*\*\* | 0.077\*\*\* |
| (0.007) | (0.013) | (0.005) | (0.027) |
| Cabinet color | -0.176\*\*\* | 0.478\*\*\* | -0.148\*\*\* | 0.777\*\*\* |
| (0.067) | (0.105) | (0.056) | (0.233) |
| District size (population) | -0.000 | -0.000 | 0.000\*\*\* | 0.000\* |
| (0.000) | (0.000) | (0.000) | (0.000) |
| Distance to capital | -0.381\*\*\* | -0.513\*\* | -0.542\*\* | -0.056 |
| (0.136) | (0.248) | (0.259) | (0.445) |
| Turnout | -0.002 | 0.009 | -0.003 | 0.006 |
| (0.002) | (0.011) | (0.011) | (0.063) |
| Time counter (years) | 0.001\*\*\* | 0.000 | -0.000\*\*\* | -0.001\*\*\* |
| (0.000) | (.) | (0.000) | (0.000) |
| Months since prev election | -0.000 |  | -0.004\*\*\* |  |
| (0.001) |  | (0.001) |  |
| Committee leadership |  |  | 0.326\*\*\* | 0.544\*\*\* |
|  |  | (0.032) | (0.129) |
| Committee, «hard» |  |  | -0.358\*\*\* | -0.498\*\*\* |
|  |  | (0.042) | (0.149) |
| Constant | -119.579\*\*\* | -0.875 | 77.717\*\*\* | 265.749\*\*\* |
| (22.496) | (1.543) | (16.837) | (71.006) |
| Ln Alpha | 0.596\*\*\* | 0.229\*\*\* | 0.577\*\*\* | 0.047 |
| (0.007) | (0.073) | (0.013) | (0.076) |
| MP var const | 1.533\*\*\* | 1.725\*\*\* | 1.338\*\*\* | 1.582\*\*\* |
| (0.070) | (0.163) | (0.102) | (0.199) |
| Observations | 94659 | 1765 | 28491 | 1213 |
| No. of groups | 1065 | 960 | 406 | 339 |
| Log likelihood | -175090 | -4006 | -60426 | -2901 |

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 Note 1: UK – Margin of votes. NO – List position (inverted).

Note 2: To get a better proxy of election context in Norway, we had to drop the legislative speech variable. The reason is that Norwegian elections are held in September, a period which has no legislative activity.

**Appendix B: Selection of news sources and corpus construction**

Our news corpus consists of all content published on paper by six newspapers in Norway and the UK from 2000 until 2015/16. There are obviously practical reasons why data collection was limited to newspapers. Our ambition has been to track news and politics continuously over a long period, capturing a great number of MPs and election cycles within the two countries. This means that collecting and coding data from other outlets (broadcast news, online news and social media) is practically impossible. It would require enormous resources, and for some types of outlets long time-series are not available. Besides, the literature on intermedia agenda-setting suggests that individual news sources often mimic each other (Vliegenthart and Walgrave 2019, 271-272), and that traditional media still play a leading role vis-à-vis emerging media (Su and Xiao 2021). We are therefore confident that our news corpus constitutes a valid basis from which to measure the news visibility of MPs, and that it is reflective of the information available to the public via the media in both countries

The original selection of newspapers included the leading left-leaning broadsheet, the leading right-leaning broadsheet and one mass-market newspaper in each country, mimicking a recent comparative analysis of political journalism (de Vreese et al 2016). The three UK papers selected were thus The Guardian, The Times and The Sun. In the Norwegian case, there are however arguably no strong candidates for a left-leaning broadsheet with a sizeable and national circulation. The left-leaning broadsheet Dagsavisen, which was part of the Norwegian sample in de Vreese et al. (2017), has a limited circulation which amounts to less than 10% of the leading right-leaning broadsheet Aftenposten. Furthermore, nearly all of its readers are located in the capital region (Høst 2019). We have therefore replaced Dagsavisen with Dagbladet, meaning that we capture a substantially larger share of the national news market. Although clearly not a left-leaning newspaper in the same way as Dagsavisen, Dagbladet has over time moved to the left as illustrated by their editorial warnings against incumbent conservative coalitions in the period we study here (e.g., Pettersen 2009). In sum, we thus have Norwegian news data from Aftenposten, Dagbladet and VG. For each of these six sources, the corpus contains all news published in the period 2000 until 2015/16, summing to a total of 3.2 million news articles. Note that this excludes three types of news items.

First, items with a word count below 30 have been removed from the corpus, because they nearly always refer to longer articles on other pages in the newspaper. Second, the newspapers from Norway and the UK contained a varying number of duplicate articles (within the same day). To increase the validity of comparisons, duplicate entries have been removed based on the cosine similarity of article pairs published on the same day by the same newspaper. When article pairs have a similarity of 0.85 or above, one of the articles is (at random) removed from the dataset. These similarity scores have been based on the first 300 words of each article. This cutoff was chosen to reduce computational complexity, and to make comparisons between short and long articles more equal. We for example encountered cases where one article contained more words than the other, but where the articles were still clearly duplicates of each other. Had we used the full article text of both documents, their cosine similarity might not have been high enough to detect them as duplicates.

Third, before querying the corpus for the presence of MPs, we also removed news stories that deal mainly with sports and entertainment. To remove these stories, first a sample of around 6,000 Norwegian and 12,000 English articles has been coded by student assistants. The number of articles differs per language, because of the need to obtain similar performance in both languages, which required more human-labeled data in English. These articles have been classified into the following categories: “Culture/art events and entertainment,” “Sporting events and athletes” and “Miscellaneous.” If articles fall into any of these three categories, they are considered irrelevant. The miscellaneous category contains all articles that cannot be classified in any of the other categories in the codebook. The hand-coded articles are then used as input for a multinomial Naive Bayes classifier. To classify the articles as (ir)relevant, they have first been parsed using Natural Language Processing (NLP). This has been implemented using the R package UDPipe (Straka & Straková, 2017) in combination with version 2.3 of the English EWT and Norwegian Bokmål Universal Dependencies (Nivre et al., 2018). This process results in lemmatized (dictionary-form) words, which were combined with the Universal Part-of-speech (UPOS) tags also provided by the NLP procedure. These two elements (the lemma of a word, and its UPOS tag) have been combined to construct features (“words” in a broad sense) in the format lemma\_UPOS. These features have been weighted using the TF-IDF weighting scheme (Jones, 1972). Then, a 3 by 5 nested cross-validation procedure has been conducted to get the best performing Naive Bayes model for both languages. The 3 outer folds have been used for performance estimation of the final model, and the 5 inner folds of each outer fold for parameter optimization. In this case, parameter optimization consists of only a single parameter, for feature selection. Features are selected based on the chi2 measure to determine which features are most and least strongly associated with the irrelevant topics. Using the absolute chi2 values, the top x-th percentile of features are kept to construct a model. Through the nested cross-validation procedure described above, the optimum cutoff values for feature selection are determined to be 0.994 for both English and Norwegian. Using these parameters, the final models achieve a precision of 0.93 for Norwegian and 0.94 for English. Precision is used as optimization measure to avoid as much as possible that relevant articles are classified as irrelevant, allowing for some irrelevant articles to remain among the final set of documents used for the analyses in the paper.

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**Appendix C: Committee leadership and “soft vs hard” committees**

As explained in the manuscript, two aspects of parliamentary committees were included in the modelling of the Norwegian MPs’ news visibility. The first simply distinguishes between regular committee members (0) and committee leaders (1). The second variable relates to the distinction in the literature between soft vs hard, or masculine vs feminine, policy areas (eg. Krook and O’Brien, 2012; Bäck and Debus, 2019). We have tried to follow the categorization applied in previous research, where social welfare, health, education as well as arts and culture usually are defined as soft or feminine policy areas. Education is handled by a joint education and science committee, which makes this the only policy area deviating from previous categorizations. Note that the overlapping committee names below reflect changes in the committee structure within our period of investigation.

|  |  |
| --- | --- |
| Transport- og kommunikasjonskomiteen (transport, communications) | Hard |
| Familie- kultur- og administrasjonskomiteen (family, culture, administration) | Soft |
| Kommunal- og forvaltningskomiteen (local government, public administration) | Hard |
| Næringskomiteen (business, industry) | Hard |
| Utenrikskomiteen (foreign affairs) | Hard |
| Kirke- utdannings- og forskningskomiteen (education, research) | Hard |
| Kontroll- og konstitusjonskomiteen (scrutiny, constitutional affairs) | Hard |
| Justiskomiteen (justice) | Hard |
| Arbeids- og sosialkomiteen (labour, social affairs) | Soft |
| Den utvidede utenrikskomité (foreign affairs) | Hard |
| Familie- og kulturkomiteen (family, cultural affairs) | Soft |
| Kommunalkomiteen (local government) | Hard |
| Energi- og miljøkomiteen (energy, environment) | Hard |
| Samferdselskomiteen (transport, communications) | Hard |
| Forsvarskomiteen (defence) | Hard |
| Sosialkomiteen (social affairs) | Soft |
| Utenriks- og forsvarskomiteen (foreign affairs, defence) | Hard |
| Finanskomiteen (finance, economic affairs) | Hard |
| Helse- og omsorgskomiteen (health, care services) | Soft |
| Den utvidede utenriks- og forsvarskomité (foreign affairs, defence) | Hard |

*References appendix C*

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