**Supplementary Materials**

Figure A1: Distribution of the proportion of women on the ballots

0

.05

.1

.15

Probability Density

.1

.2

.3

.4

.5

Proportion of Women on the Ballot

Figure A2: Average performance of the party lists (proportion of votes), by gender composition of the list (proportion of female candidates)

Figure A2a: The European United Left-Nordic Green Left

0

.1

.2

.3

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

Closed List

Open List

Panachage

Proportion of votes for GUE/NGL

Proportion of female candidates on list

Figure A2b: The Progressive Alliance of Socialists and Democrats

0

.1

.2

.3

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

Closed List

Open List

Panachage

Proportion of votes for S&D

Proportion of female candidates on list

Figure A2c: The Greens/European Free Alliance

0

.1

.2

.3

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

Closed List

Open List

Panachage

Proportion of female candidates on list

Proportion of votes for Greens/EFA

Figure A2d: The Alliance of Liberals and Democrats for Europe

0

.1

.2

.3

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

Closed List

Open List

Panachage

Proportion of female candidates on list

Proportion of votes for ALDE

Figure A2e: The European People’s Party

0

.1

.2

.3

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

0

.1

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.3

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.5

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.7

Closed List

Open List

Panachage

Proportion of votes for EPP

Proportion of female candidates on list

Figure A2f: The European Conservatives and Reformists

0

.1

.2

.3

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

0

.1

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.7

Closed List

Open List

Panachage

Proportion of votes for ECR

Proportion of female candidates on list

Figure A2g: The Europe of Freedom and Direct Democracy

0

.1

.2

.3

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

0

.1

.2

.3

.4

.5

.6

.7

Closed List

Open List

Panachage

Proportion of votes for EFDD

Proportion of female candidates on list

Note: The horizontal axis displays the proportion of female candidates on the list; the vertical axis shows the performance of the party list (proportion of votes). To construct this figure, we kept only the cases for which we have at least 100 observations (see Table A2 for detailed information about the distribution of gender composition by party).

Table A1: Summary Statistics

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Mean | Std. Dev. | Min | Max | Obs |
| Female | 0.27 | 0.44 | 0 | 1 | 1810 |
| Ideology (0–10 scale) | 3.94 | 2.14 | 0 | 10 | 1755 |
| Vote Closed List: European United Left-Nordic Green Left | 0.18 | 0.38 | 0 | 1 | 1810 |
| Vote Closed List: Progressive Alliance of Socialists and Democrats | 0.24 | 0.43 | 0 | 1 | 1810 |
| Vote Closed List: Greens/European Free Alliance | 0.23 | 0.42 | 0 | 1 | 1810 |
| Vote Closed List: Alliance of Liberals and Democrats for Europe | 0.16 | 0.36 | 0 | 1 | 1810 |
| Vote Closed List: European People’s Party | 0.10 | 0.30 | 0 | 1 | 1810 |
| Vote Closed List: European Conservatives and Reformists | 0.03 | 0.18 | 0 | 1 | 1810 |
| Vote Closed List: Europe of Freedom and Direct Democracy | 0.06 | 0.24 | 0 | 1 | 1810 |

Table A2: Average vote share received by each list under each system (in percentage), by gender composition of the list

|  |  |  |
| --- | --- | --- |
|  | **Gender composition of the list: % female candidates** |  |
|  | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | Total |
| **List: European United Left-Nordic Green Left**  |
| Closed | 23.08 | 15.76 | 16.63 | 18.20 | 18.16 | 17.12 | 28.57 | 0.5 | / | / | / | 17.84 |
| Open | 20.51 | 12.15 | 17.05 | 17.85 | 16.80 | 16.44 | 28.57 | 50 | / | / | / | 17.40 |
| Panachage | 20.38 | 15.74 | 16.97 | 17.92 | 17.37 | 18.46 | 24.63 | 37.5 | / | / | / | 17.63 |
| # of obs. | 39 | 165 | 475 | 577 | 369 | 146 | 35 | 4 | 0 | 0 | 0 | 1810 |
| (% of obs.) | 2.15 | 9.12 | 26.24 | 31.88 | 20.39 | 8.07 | 1.93 | 0.22 | 0 | 0 | 0 | 100 |
| Mean composition | 29.23 |
| **List: Progressive Alliance of Socialists and Democrats** |
| Closed | 0 | 4.55 | 22.02 | 19.75 | 27.41 | 25.24 | 25.19 | 26.55 | 9.09 | 0 | / | 23.87 |
| Open | 0 | 4.55 | 22.02 | 20.38 | 29.12 | 25.73 | 25.19 | 23.01 | 9.09 | 0 | / | 24.31 |
| Panachage | 20 | 6.67 | 20.10 | 18.84 | 23.64 | 24.36 | 25.13 | 23.87 | 6.07 | 5 | / | 22.22 |
| # of obs. | 2 | 44 | 168 | 314 | 467 | 412 | 266 | 113 | 22 | 2 | 0 | 1810 |
| (% of obs.) | 0.11 | 2.43 | 9.28 | 17.35 | 25.80 | 22.76 | 14.70 | 6.24 | 1.22 | 0.11 | 0 | 100 |
| Mean composition | 43.26 |
| **List: Greens/European Free Alliance** |
| Closed | 0 | 0.11 | 26.67 | 17.51 | 24.63 | 20.71 | 24.20 | 31.54 | 30.43 | 28.57 | / | 23.09 |
| Open | 0 | 0.11 | 26.67 | 18.29 | 24.38 | 20.51 | 25.07 | 31.54 | 32.61 | 42.86 | / | 23.37 |
| Panachage | 25 | 13.33 | 24.09 | 19.09 | 26.17 | 23.96 | 26.7 | 28.58 | 26.78 | 24.64 | / | 24.45 |
| # of obs. | 2 | 18 | 75 | 257 | 406 | 507 | 343 | 149 | 46 | 7 | 0 | 1810 |
| (% of obs.) | 0.11 | 0.99 | 4.14 | 14.2 | 22.43 | 28.01 | 18.95 | 8.23 | 2.54 | 0.39 | 0 | 100 |
| Mean composition | 47.67 |
| **List: Alliance of Liberals and Democrats for Europe** |
| Closed | 50 | 13.04 | 20.67 | 15.30 | 14.53 | 16.35 | 17.62 | 6.59 | 37.5 | 0 | / | 15.75 |
| Open | 50 | 13.04 | 21.33 | 17 | 14.72 | 15.87 | 18.10 | 6.59 | 31.25 | 0 | / | 16.08 |
| Panachage | 45 | 14.49 | 18.76 | 16.18 | 14.55 | 16.01 | 18.8 | 10.72 | 30 | 0 | / | 16 |
| # of obs. | 2 | 46 | 150 | 353 | 523 | 416 | 210 | 91 | 13 | 3 | 0 | 1810 |
| (% of obs.) | 0.11 | 2.54 | 8.29 | 19.50 | 28.90 | 22.98 | 11.60 | 5.03 | 0.88 | 0.17 | 0 | 100 |
| Mean composition | 42.14 |

|  |  |  |
| --- | --- | --- |
|  | **Gender composition of the list: % female candidates** |  |
|  | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | Total |
| **List: European People’s Party** |
| Closed | 6.67 | 11.45 | 9.48 | 7.11 | 13.11 | 9.79 | 12.26 | 6.06 | 33.33 | 0 | / | 10.06 |
| Open | 6.67 | 10.69 | 9.48 | 6.71 | 12.47 | 9.79 | 10.38 | 6.06 | 33.33 | 0 | / | 9.61 |
| Panachage | 5.33 | 10 | 9.53 | 7.89 | 11.22 | 9.66 | 12.04 | 4.46 | 33.33 | 0 | / | 9.59 |
| # of obs. | 30 | 131 | 306 | 492 | 473 | 235 | 106 | 33 | 3 | 1 | 0 | 1810 |
| (% of obs.) | 1.66 | 7.24 | 16.91 | 27.18 | 26.13 | 12.98 | 5.86 | 1.82 | 0.17 | 0.06 | 0 | 100 |
| Mean composition | 34.17 |
| **List: European Conservatives and Reformists** |
| Closed | 2.86 | 2.42 | 3.30 | 3.28 | 6.03 | 0 | 0 | / | / | / | / | 3.26 |
| Open | 1.90 | 1.94 | 3.33 | 3.49 | 6.03 | 0 | 0 | / | / | / | / | 3.15 |
| Panachage | 11.99 | 11.6 | 8.18 | 10 | 7.8 | 8.92 | 0 | / | / | / | / | 9.59 |
| # of obs. | 105 | 413 | 576 | 458 | 199 | 53 | 6 | 0 | 0 | 0 | 0 | 1810 |
| (% of obs.) | 5.8 | 22.82 | 31.82 | 25.30 | 10.99 | 2.93 | 0.33 | 0 | 0 | 0 | 0 | 100 |
| Mean composition | 22.30 |
| **List: Europe of Freedom and Direct Democracy** |
| Closed | 6.24 | 5.73 | 7.45 | / | / | / | / | / | / | / | / | 6.13 |
| Open | 6.24 | 5.60 | 7.45 | / | / | / | / | / | / | / | / | 6.08 |
| Panachage | 6.17 | 6.67 | 7.28 | / | / | / | / | / | / | / | / | 6.48 |
| # of obs. | 881 | 768 | 161 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1810 |
| (% of obs.) | 48.67 | 42.43 | 8.90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| Mean composition | 6.02 |

Note: **For the Closed List system:** For each individual, for each list, we created a dummy variable that equals 1 if the individual votes for the list under the closed list system. The rows labeled “Closed” show the mean of this variable, in the whole sample (last column) and by gender composition of the list. For example, for the European United Left-Nordic Green Left (GUE/NGL) list, the table can be read as follows. The average number of votes is 17.84% in the whole sample (1,810 observations). Among respondents who faced a GUE/NGL list with 0 female candidates (39 observations, that is, 2.15% of our total number of respondents), the average number of votes is 23.08%; among respondents who faced a GUE/NGL list with 10% female candidates (165 observations, that is, 9.12% of our total number of respondents), it is 15.76%; etc. In the “Mean composition” row one can read that the average percentage of female candidates on the GUE/NGL list in all the ballots is 29.23%.

**For the Open List system:** For each individual, for each list, we created a dummy variable that equals 1 if the individual votes for the list under the open list system. The “Open” rows show the mean of this variable, in the whole sample (last column) and by gender composition of the list. For example, for the GUE/NGL list, the table can be read as follows. The average number of votes is 17.40% in the whole sample (1,810 observations). Among respondents who faced a GUE/NGL list with 0 female candidates (39 observations, that is, 2.15% of our total number of respondents), this number is 20.51%; among respondents who faced a GUE/NGL list with 10% female candidates (165 observations, that is, 9.12% of our total number of respondents), it is 12.15%; etc. In the “Mean composition” row one can read that the average percentage of female candidates on the GUE/NGL list in all the ballots is 29.23%.

**For the Panachage system:** For each individual, for each list, we created a variable that equals the total number of votes given by the individual to candidates of the list, divided by the total number of votes given by the individual. The “Panachage” rows show the mean of this variable, in the whole sample (last column) and by gender composition of the list. For example, for the GUE/NGL list, the table can be read as follows. The average fraction of votes is 17.63% in the whole sample (1,810 observations). Among respondents who faced a GUE/NGL list with 0 female candidates (39 observations, that is, 2.15% of our total number of respondents), it is 20.38%; among respondents who faced a GUE/NGL list with 10% female candidates (165 observations, that is, 9.12% of our total number of respondents), it is, 15.74%; etc. In the “Mean composition” row, one can read that the average percentage of female candidates on the GUE/NGL list in all ballots is 29.23%.

Table A3. *Votes for Women*, by Male and Female Respondents

The table below reports the *t*-statistics and the two-tailed *p*-values of paired t-tests comparing *Votes for Women* in the closed list system to the proportion of females on the ballot (line 2), comparing the *Votes for Women* in the open list system to *Votes for Women* in the closed list system (line 3), and comparing the *Votes for Women* in the panachage system to *Votes for Women* in the open list system (line 3).

Results are presented for the whole sample (n = 1810) and in the last two columns for male respondents and female respondents separately.

|  |  |  |  |
| --- | --- | --- | --- |
| Comparison between: | All (n = 1,810) | Men (n = 1,326) | Women (n = 484) |
| *Votes for Women* in closed listand*Proportion Females on Ballot* | *T* = 16.5177*P* = 0.0000 | *T* = 14.2618*P* = 0.0000 | *T* = 8.3360*P* = 0.0000 |
| *Votes for Women* in open listand*Votes for Women* in closed list | *T* = 6.9239*P* = 0.0000 | *T* = 3.2037*P* = 0.0014 | *T* = 7.3468*P* = 0.0000 |
| *Votes for Women* in panachageand*Votes for Women* in open list | *T* = 6.5869*P* = 0.0000 | *T* = 3.3579*P* = 0.0008 | *T* = 6.8828*P* = 0.0000 |

**Additional Multivariate Regression Analyses**

In this section, we complement the findings presented in the main text by conducting some multivariate regression analyses. To do so, we created a stacked dataset, where each respondent is entered into the dataset three times, once for each electoral system. This allows us to directly compare the effects of gender and ideology on support for female candidates across all systems.

We first consider the impact of gender and the electoral system. We include dummy variables for the open list electoral system and the panachage system (closed list is the reference), as well as interactions between gender and those electoral systems. The interactions allow us to see whether women are more likely to vote for women as the electoral system becomes more open, and the electoral system dummy variables indicate whether the same occurs for men. As individual characteristics, we include gender and dummy variables for ideological categories (Extreme Left, Center Left, Center Right, Extreme Right; Center is the reference category). We also add as a control the proportion of female candidates on the ballot faced by the respondent. More specifically, we estimate the following model, where index *i* denotes the individual and index *S* the electoral system:

*Votes for WomeniS* = *β0 + β1 Femalei + β2 Extreme Lefti* *+ β3 Center Lefti* *+ β4 Center Righti*

*+ β5 Extreme Righti* *+ β6 Open List + β7 Panachage + β8 Female\*Open List*

*+ β9 Female\*Panachage + β10 Proportion Females on Balloti* + *uiS + εiS*

where *Votes for WomeniS* is the proportion of individual *i*’s votes that are cast for women candidates (see the note in Table 4 for a precise definition); *Femalei* is a dummy variable that equals 1 if individual *i* is a female; *uiS* is the between-individual error term; and *εiS* is the within-individual error term. Table A.4 shows the results using a Random Effects model.

Several pieces of information emerge from Table A.4. The coefficient on *Female* indicates the effect on votes for women of having a woman respondent rather than a man, for closed list ballots. The numbers in the table confirm our observation that female respondents are not more likely than male respondents to cast votes for lists with a larger proportion of female candidates in the closed list system. The coefficients on *Open List* and *Panachage* indicate the effect on votes for women of using open list or panachage rules, respectively, compared to closed list rules, among male voters. Male respondents are more likely to vote for women in more open systems (although the effect is only significant at 10% for the open list system and is quite small). The coefficient on *Female \* Open List* allows us to determine whether the impact of an open list system is greater among female respondents. The coefficient on *Female \* Panachange* tells a similar story, substituting panachage for open list electoral rules. In open list and panachage systems, women increase their support for women candidates more than men do, compared to the closed list system benchmark. We therefore confirm that the effect of openness is not restricted to women voters, as the electoral system variables are also significant and positive, but that the effect is greater for women. This suggests a same-gender voting effect for women as well as a propensity to support women overall.[[1]](#footnote-1) The effect is particularly strong for the panachage system: compared to the closed list system, it is associated with 3 percentage points more votes for women among men and 13 percentage points more votes for women among women voters. This confirms the results we found earlier in Table 4.

Table A.4: *Votes for Women*: Effect of gender and electoral system

|  |  |  |
| --- | --- | --- |
| **Variable** | **Coefficient** | **Associated two-tailed *p*-value**  |
| Gender: Female | −0.001 | 0.928 |
| System: Open List | 0.010\* | 0.073 |
| System: Panachage | 0.028\*\*\* | 0.000 |
| Female \* Open List | 0.038\*\*\* | 0.000 |
| Female \* Panachage | 0.093\*\*\* | 0.000 |
| Ideology: Extreme Left | 0.028\*\* | 0.041 |
| Ideology: Center Left | 0.047\*\*\* | 0.000 |
| Ideology: Center Right | −0.018 | 0.246 |
| Ideology: Extreme Right | −0.098\*\*\* | 0.000 |
| Proportion Women On Ballot | 1.163\*\*\* | 0.000 |
| Constant | −0.001 | 0.970 |
| N | 5271 |  |
| N of Groups | 1757 |  |
| *R2* within groups | 0.055 |  |
| *R2* between groups | 0.1414 |  |
| *R2* overall | 0.1168 |  |

Note: Each respondent is entered into the dataset three times, once for each electoral system

\* *p* < 0.1, \*\* *p* < 0.05, \*\*\* *p* < 0.01 (two-tailed)

We now turn to the impact of ideology. Table A.4 confirms that left-wing voters are more supportive of women candidates than center and center-right voters, and that extreme-right voters are less supportive. To further study the impact of ideology, we estimate a model allowing for interactions between ideology and the electoral system, again using a Random Effects model. The results are shown in Table A.5.

This further analysis reveals that the impact of ideology documented in Table A.4 is mostly driven by differences in the closed list system election. Indeed, we confirm that in the closed list system, center left voters are more supportive of lists with many women candidates than center and center right voters; and that extreme right voters are less supportive. However, none of the interaction terms between ideology and the open electoral systems are significant. These findings suggest that ideology has a strong effect on votes for women, but the effect is mostly driven by the different gender compositions of the party lists, rather than by voters’ ideology itself. Indeed, while we observe a large effect of ideology in the closed list system, there are no significant additional effects of ideology in the other systems (once one takes into account the closed list vote). This is consistent with the observations made about Figure 1: whatever their ideology, voters tend to increase their support for women when one moves from a closed list system to a more open system, and they do so in proportions which do not vary significantly with ideology.

Table A.5: *Votes for Women*: Effect of ideology and electoral system

|  |  |  |
| --- | --- | --- |
| **Variable** | **Coefficient** | **Associated two-tailed *p*-value** |
| Ideology: Extreme Left | 0.020 | 0.233 |
| Ideology: Center Left | 0.053\*\*\* | 0.001 |
| Ideology: Center Right | −0.012 | 0.507 |
| Ideology: Extreme Right | −0.091\*\*\* | 0.000 |
| System: Open List | 0.025\* | 0.056 |
| System: Panachage | 0.052\*\*\* | 0.000 |
| Extreme Left \* Open List | −0.0004 | 0.978 |
| Center Left \* Open List | −0.006 | 0.693 |
| Center Right \* Open List | −0.006 | 0.750 |
| Extreme Right \* Open List | −0.022 | 0.324 |
| Extreme Left \* Panachage | 0.025 | 0.110 |
| Center Left \* Panachage | −0.011 | 0.484 |
| Center Right \* Panachage | −0.011 | 0.534 |
| Extreme Right \* Panachage | 0.002 | 0.942 |
| Proportion Women on Ballot | 1.163\*\*\* | 0.000 |
| Female | 0.043\*\*\* | 0.000 |
| Constant | −0.014 | 0.648 |
| N | 5271 |  |
| N of Groups | 1757 |  |
| *R2* within groups | 0.0381 |  |
| *R2* between groups | 0.1414 |  |
| *R2* overall | 0.1120 |  |

Note: Each respondent is entered into the dataset three times, once for each electoral system

\* *p* < 0.1, \*\* *p* < 0.05, \*\*\* *p* < 0.01 (two-tailed)

1. . Note that men, when given the chance under open list or panachage rules, are not choosing to engage in same-gender voting to increase the proportion of men for whom they vote. [↑](#footnote-ref-1)