**Online appendix (not for publication)**

**Figure A1: Location of sample villages**
Description generated with high confidence

**A1: Timing for panchayat elections, NREGS roll-out and data collection**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** |
| Andhra Pradesh |  |  |  |  |  |  |  |  |  |  |  |
| Bihar |  |  |  |  |  |  |  |  |  |  |  |
| Chhattisgarh |  |  |  |  |  |  |  |  |  |  |  |
| Haryana |  |  |  |  |  |  |  |  |  |  |  |
| Maharashtra |  |  |  |  |  |  |  |  |  |  |  |
| Madhya Pradesh |  |  |  |  |  |  |  |  |  |  |  |
| Orissa |  |  |  |  |  |  |  |  |  |  |  |
| Rajasthan |  |  |  |  |  |  |  |  |  |  |  |
| Tamil Nadu |  |  |  |  |  |  |  |  |  |  |  |
| Uttar Pradesh |  |  |  |  |  |  |  |  |  |  |  |
| West Bengal |  |  |  |  |  |  |  |  |  |  |  |

*Note:* Lightly shaded areas indicate the period of roll-out of NREGS. Phase 1 of the program was rolled out in Feb 2006 in 200 districts, phase 2 of the program was rolled out in April 2007 in next 130 districts and Phase 3 of the program was rolled out in April 2008 in remaining districts of India. The darker shading in 2014 indicates the time of data collection for the survey used in the analysis. indicates the timing of panchayat election in states of India.

**Table A2: *pradhan* characteristics by reservation status**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Total** | | **Ever reserved** | | **Never reserved** | | **p-value** |
|  | **Mean** | **SD** | **Mean** | **SD** | **Mean** | **SD** |
| ***Pradhan* characteristics** | | | | | | | |
| Previously contested position | 0.147 | 0.355 | 0.133 | 0.341 | 0.162 | 0.371 | 0.592 |
| Held gov’t position before | 0.429 | 0.497 | 0.422 | 0.497 | 0.438 | 0.499 | 0.840 |
| Up to primary school | 0.27 | 0.445 | 0.361 | 0.483 | 0.175 | 0.382 | 0.007 |
| Up to High School | 0.264 | 0.442 | 0.253 | 0.437 | 0.275 | 0.449 | 0.752 |
| Higher secondary and above | 0.344 | 0.476 | 0.265 | 0.444 | 0.425 | 0.497 | 0.032 |
| Higher educ. & professional | 0.123 | 0.329 | 0.12 | 0.328 | 0.125 | 0.333 | 0.930 |
| SC | 0.601 | 0.491 | 0.639 | 0.483 | 0.563 | 0.499 | 0.325 |
| ST | 0.074 | 0.262 | 0.084 | 0.28 | 0.063 | 0.244 | 0.596 |
| OBC | 0.110 | 0.314 | 0.108 | 0.313 | 0.112 | 0.318 | 0.935 |
| OC | 0.209 | 0.408 | 0.169 | 0.377 | 0.25 | 0.436 | 0.204 |
| Hindu | 0.509 | 0.501 | 0.41 | 0.495 | 0.613 | 0.490 | 0.009 |
| Muslim | 0.092 | 0.290 | 0.096 | 0.297 | 0.087 | 0.284 | 0.846 |
| Other | 0.398 | 0.491 | 0.493 | 0.503 | 0.300 | 0.461 | 0.011 |
| No of observations | 163 | | 83 | | 80 | |  |

**Note:** Own’s calculation from survey data

**Table A3: Household and individual’s characteristics by reservation status**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Total** | | **Ever reserved** | | **Never reserved** | | **p-value** |
|  | **Mean** | **SD** | **Mean** | **SD** | **Mean** | **SD** |
| **Panel A: Household characteristics** | | | | | | | |
| Female household head | 0.117 | 0.322 | 0.114 | 0.318 | 0.120 | 0.325 | 0.172 |
| Head's age | 49.433 | 12.785 | 49.382 | 12.881 | 49.484 | 12.689 | 0.581 |
| Head's education (years) | 3.840 | 4.140 | 3.798 | 4.114 | 3.881 | 4.165 | 0.165 |
| Married head (%) | 0.844 | 0.363 | 0.840 | 0.367 | 0.848 | 0.359 | 0.136 |
| Unmarried head | 0.015 | 0.120 | 0.014 | 0.117 | 0.015 | 0.123 | 0.416 |
| Widowed /separated head | 0.140 | 0.347 | 0.144 | 0.351 | 0.135 | 0.342 | 0.069 |
| Household size | 4.620 | 2.309 | 4.653 | 2.378 | 4.587 | 2.239 | 0.049 |
| No. of males 15-65 years | 1.684 | 1.065 | 1.693 | 1.091 | 1.676 | 1.039 | 0.253 |
| No. of females 15-65 years | 1.601 | 0.911 | 1.609 | 0.931 | 1.593 | 0.891 | 0.224 |
| No. of youth <15 years | 1.142 | 1.382 | 1.160 | 1.400 | 1.124 | 1.363 | 0.069 |
| No. of fem. youth (< 15 a) | 0.554 | 0.902 | 0.561 | 0.914 | 0.546 | 0.890 | 0.267 |
| Max. education level | 14.427 | 3.261 | 14.451 | 3.287 | 14.404 | 3.236 | 0.312 |
| Average age of members | 32.805 | 13.435 | 32.953 | 13.747 | 32.657 | 13.116 | 0.128 |
| Hindu | 0.915 | 0.279 | 0.915 | 0.278 | 0.914 | 0.280 | 0.739 |
| SC/ST | 0.407 | 0.491 | 0.405 | 0.491 | 0.408 | 0.491 | 0.702 |
| No. of obs. | 17,948 | | 9,534 | | 8,414 | |  |
| **Panel B: Individual characteristics** | | | | | | | |
| Share of female | 0.491 | 0.500 | 0.492 | 0.500 | 0.491 | 0.500 | 0.705 |
| Age | 39.913 | 15.729 | 39.896 | 15.743 | 39.929 | 15.715 | 0.799 |
| No education but literate | 0.396 | 0.489 | 0.394 | 0.489 | 0.398 | 0.489 | 0.321 |
| Up to primary | 0.198 | 0.398 | 0.197 | 0.398 | 0.199 | 0.399 | 0.579 |
| Up to HS | 0.280 | 0.449 | 0.280 | 0.449 | 0.280 | 0.499 | 0.853 |
| Up to University/Collage level | 0.110 | 0.313 | 0.112 | 0.316 | 0.108 | 0.310 | 0.081 |
| Others | 0.017 | 0.128 | 0.017 | 0.129 | 0.016 | 0.126 | 0.545 |
| Married | 0.748 | 0.434 | 0.750 | 0.433 | 0.746 | 0.435 | 0.223 |
| Widowed/separated | 0.079 | 0.269 | 0.080 | 0.271 | 0.078 | 0.267 | 0.254 |
| No. of obs. | 53,612 | | 28,336 | | 28,276 | |  |

**Note:** Own’s calculation from survey data

**Table A4: Impact of political reservation for female on program demand and documentation**

|  |  |  |
| --- | --- | --- |
|  | **Wanted to work in NREGS** | **Application documented** |
|  | **Panel A** |  |
| Reserved now (β1) | -0.009 | -0.006 |
|  | (0.007) | (0.006) |
| Reserved before (β2) | 0.032\*\*\* | -0.004 |
|  | (0.008) | (0.008) |
| Observations | 53,612 | 53,612 |
| R-squared | 0.245 | 0.243 |
| F statistics (β1+β2=0) | 6.383 | 1.36 |
| (p value) | (0.012) | (0.244) |
|  | **Panel B** |  |
| Reserved now (β1) | -0.044\*\*\* | -0.036\*\*\* |
|  | (0.007) | (0.007) |
| Reserved before (β2) | -0.039\*\*\* | -0.060\*\*\* |
|  | (0.009) | (0.009) |
| Reserved now × female (β3) | 0.072\*\*\* | 0.060\*\*\* |
|  | (0.006) | (0.006) |
| Reserved before × female (β4) | 0.148\*\*\* | 0.114\*\*\* |
|  | (0.007) | (0.007) |
| Observations | 53,612 | 53,612 |
| R-squared | 0.253 | 0.249 |
| F statistics (β1+ β3=0) | 15.070 | 12.740 |
| (p value) | 0.000 | 0.000 |
| F statistics (β2+β4=0) | 148.000 | 39.850 |
| (p value) | 0.000 | 0.000 |
| F statistics (β1+ β2+β3+β4=0) | 173.600 | 59.490 |
| (p value) | 0.000 | 0.000 |
| Dep. Var | 0.280 | 0.223 |
| Std. dev | 0.450 | 0.416 |

***Note:*** Each column reports results from a separate regression. Household, Individual, and village controls as well as *pradhan* characteristics and district fixed effects are included throughout but not reported. Household controls include the head’s gender, education, marital status, age (incl. squared); and the household’s size, dependency ratio, share of working age members, and mean education level. Individual control includes age, age squared, sex, and education. Village controls include population, the share of SCs, STs OBCs, and Hindus, total agricultural area, and the share of households with main occupation in agriculture, road access and distance to the next town. *Pradhan* characteristics include age, education, caste, and prior political experience. Bonferroni-adjusted p-values are reported for multiple tests in bottom rows of each panel of the table. The excluded category is ‘never reserved’, standard errors are clustered at gram panchayat and robust standard errors reported in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.10

**Table A5: Impact on Households of Political Reservation for women Participating in NREGS participation (no controls)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Have a Job Card** | **Days Worked (log)** | **Days worked by women** | **Completed 100 days** |
| Reserved now (β1) | -0.023 | -0.008 | 0.016\*\* | -0.009 |
|  | (0.034) | (0.035) | (0.007) | (0.014) |
| Reserved before (β2) | -0.001 | 0.162\*\*\* | 0.020\*\* | 0.013 |
|  | (0.032) | (0.038) | (0.008) | (0.013) |
| Observations | 69,205 | 17,948 | 17,948 | 17,948 |
| R-squared | 0.298 | 0.514 | 0.495 | 0.270 |
| F-statistics (β1+β2=0) | 0.214 | 11.06 | 11.44 | 0.0485 |
| (p- value) | 0.645 | 0.000885 | 0.000719 | 0.826 |

***Note:*** Each column reports results from a separate regression with dependent variables listed at the top of each column. Regressions are at the household level. Column 1 uses the entire sample while column 2 to 4 are conditional on the household having a job card. District fixed effects are included throughout. Robust standard errors in parentheses. Excluded category is ‘never reserved’. Standard errors clustered at *gram panchayat* level in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.10

**Table A6: Impact of Political Reservation for Female as Leader on Demand, Access, and Program Rationing (no controls)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Formally Applied for Work** | **Worked in NREGS** | **Log of NREGS Days** | **Rationing** | | |
|  | **Overall** | **Extensive Margin** | **Intensive Margin** |
| **Panel A** | | | | | | |
| Reserved now (β1) | -0.002 | 0.002 | -0.007 | -0.017\*\* | 0.003 | -0.021\*\*\* |
|  | (0.008) | (0.006) | (0.019) | (0.007) | (0.006) | (0.005) |
| Reserved before (β2) | 0.020\*\* | 0.016\*\* | 0.049\*\* | -0.029\*\*\* | 0.024\*\*\* | -0.054\*\*\* |
|  | (0.010) | (0.007) | (0.023) | (0.009) | (0.007) | (0.006) |
|  |  |  |  |  |  |  |
| Observations | 53,612 | 53,612 | 53,612 | 53,612 | 53,612 | 53,612 |
| R-squared | 0.139 | 0.187 | 0.195 | 0.090 | 0.047 | 0.113 |
| F statistics (β1+β2=0) | 2.305 | 4.322 | 2.387 | 18.37 | 11.05 | 108.9 |
| (p value) | 0.129 | 0.0376 | 0.122 | 1.82e-05 | 0.000887 | 0 |
| **Panel B** | | | | | | |
| Reserved now (β1) | -0.044\*\*\* | -0.038\*\*\* | -0.186\*\*\* | -0.031\*\*\* | 0.002 | -0.033\*\*\* |
|  | (0.008) | (0.006) | (0.020) | (0.007) | (0.006) | (0.005) |
| Reserved before (β2) | 0.085\*\*\* | -0.061\*\*\* | -0.277\*\*\* | -0.055\*\*\* | 0.026\*\*\* | -0.082\*\*\* |
|  | (0.005) | (0.008) | (0.026) | (0.009) | (0.007) | (0.006) |
| Reserved now × female (β3) | -0.049\*\*\* | 0.082\*\*\* | 0.370\*\*\* | 0.028\*\*\* | 0.002 | 0.026\*\*\* |
|  | (0.010) | (0.005) | (0.017) | (0.004) | (0.003) | (0.003) |
| Reserved before × female (β4) | 0.140\*\*\* | 0.157\*\*\* | 0.667\*\*\* | 0.053\*\*\* | -0.004 | 0.057\*\*\* |
|  | (0.007) | (0.007) | (0.026) | (0.005) | (0.004) | (0.004) |
|  |  |  |  |  |  |  |
| Observations | 53,612 | 53,612 | 53,612 | 53,612 | 53,612 | 53,612 |
| R-squared | 0.154 | 0.207 | 0.225 | 0.093 | 0.047 | 0.117 |
| F statistics (β1+ β3=0) | 26.90 | 47.58 | 76.50 | 0.172 | 0.556 | 2.264 |
| (p value) | 2.16e-07 | 0 | 0 | 0.678 | 0.456 | 0.132 |
| F statistics (β2+β4=0) | 79.38 | 141.4 | 216.6 | 0.0523 | 9.531 | 15.76 |
| (p value) | 0 | 0 | 0 | 0.819 | 0.00202 | 7.21e-05 |
| F statistics (β1+ β2+β3+β4=0) | 120.1 | 223.7 | 333.2 | 0.214 | 9.818 | 17.11 |
| (p value) | 0 | 0 | 0 | 0.644 | 0.00173 | 3.55e-05 |

**Note*:*** Each column reports results from a separate regression at individual level with dependent variables listed at the top of each column. District fixed effects included throughout. Robust standard errors in parentheses. Bonferroni-adjusted p-values are reported for multiple tests in bottom rows of each panel of the table. The excluded category is ‘never reserved,’ standard errors are clustered at village council level, and robust standard errors reported in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.10.

**Table A7: Impact of Political Reservation for Female as Leader on Program Governance and Accountability (no controls)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Bribe Demanded** | **“Getting Job Is Tedious”** | **Participation in Social Audit** | **New NREGS Account** |
|  | **Panel A** | | | |
| Reserved now (β1) | -0.008\*\*\* | -0.002 | 0.004 | 0.048\*\* |
|  | (0.003) | (0.001) | (0.003) | (0.022) |
| Reserved before (β2) | -0.009\*\* | -0.002 | 0.011\*\*\* | -0.011 |
|  | (0.004) | (0.002) | (0.003) | (0.031) |
|  |  |  |  |  |
| Observations | 53,612 | 53,612 | 53,612 | 53,612 |
| R-squared | 0.101 | 0.033 | 0.128 | 0.169 |
| F statistics (β1+ β2=0) | 6.407 | 4.618 | 8.022 | 0.831 |
| (p value) | 0.0114 | 0.0316 | 0.00463 | 0.365 |
|  | **Panel B** | | | |
| Reserved now (β1) | -0.005\* | 0.001 | -0.009\*\*\* | 0.030 |
|  | (0.003) | (0.002) | (0.003) | (0.033) |
| Reserved before (β2) | -0.002 | 0.003 | -0.021\*\*\* | -0.082\* |
|  | (0.004) | (0.003) | (0.004) | (0.047) |
| Reserved now × female (β3) | -0.005\*\*\* | -0.005\*\*\* | 0.026\*\*\* | 0.037 |
|  | (0.001) | (0.001) | (0.002) | (0.041) |
| Reserved before × female (β4) | -0.015\*\*\* | -0.012\*\*\* | 0.065\*\*\* | 0.145\*\* |
|  | (0.002) | (0.002) | (0.004) | (0.069) |
|  |  |  |  |  |
| Observations | 53,612 | 53,612 | 53,612 | 53,612 |
| R-squared | 0.102 | 0.034 | 0.141 | 0.179 |
| F statistics (β1+ β3=0) | 12.39 | 5.950 | 37.13 | 6.455 |
| (p value) | 0.000433 | 0.0147 | 1.13e-09 | 0.0134 |
| F statistics (β2+ β4=0) | 15.48 | 6.920 | 128.1 | 1.877 |
| (p value) | 8.36e-05 | 0.00853 | 0 | 0.175 |
| F statistics (β1+ β2+ β3+ β4=0) | 16.23 | 13.89 | 107 | 5.332 |
| (p value) | 5.64e-05 | 0.000194 | 0 | 0.0240 |

***Note:*** Each column reports results from a separate regression at individual level with dependent variables listed at the top of each column. District fixed effects included throughout. Robust standard errors in parentheses. Bonferroni-adjusted p-values are reported for multiple tests in bottom rows of each panel of the table. The excluded category is ‘never reserved,’ standard errors are clustered at village council level, and robust standard errors reported in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.10.

7

**Table A8: Impact of Political Reservation for Female as Leader on Participation in Village Governance (no controls)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Attended GS Meetings (Yes/No)** | **Number of Meetings Attended** | **No information on meetings** | **Problems Raised Were Solved** |
|  | **Panel A** | | | |
| Reserved now (β1) | 0.023\*\* | 0.053\*\*\* | -0.045 | 0.007 |
|  | (0.010) | (0.018) | (0.029) | (0.018) |
| Reserved before (β2) | -0.011 | -0.022 | -0.001 | -0.012 |
|  | (0.012) | (0.023) | (0.023) | (0.010) |
| Observations | 53,656 | 53,656 | 53,656 | 53,656 |
| R-squared | 0.089 | 0.026 | 0.146 | 0.049 |
| F statistics (β1+ β2=0) | 0.023\*\* | 1.647 | 1.228 | 0.0609 |
| (p value) | (0.010) | 0.200 | 0.273 | 0.806 |
|  | **Panel B** | | | |
| Reserved now (β1) | 0.123\*\*\* | 0.220\*\*\* | -0.023 | 0.056\* |
|  | (0.012) | (0.024) | (0.034) | (0.031) |
| Reserved before (β2) | -0.206\*\*\* | -0.342\*\*\* | -0.045\*\* | -0.100\*\*\* |
|  | (0.013) | (0.031) | (0.020) | (0.036) |
| Reserved now × female (β3) | 0.011 | 0.019 | 0.031 | -0.002 |
|  | (0.016) | (0.032) | (0.031) | (0.025) |
| Reserved before × female (β4) | -0.042\*\* | -0.082\*\* | -0.066\*\* | -0.019 |
|  | (0.017) | (0.036) | (0.030) | (0.040) |
| Observations | 53,656 | 53,656 | 53,656 | 53,656 |
| R-squared | 0.125 | 0.033 | 0.150 | 0.064 |
| F statistics (β1+ β3=0) | 51.93 | 26.72 | 6.291 | 6.327 |
| (p value) | 0 | 2.92e-07 | 0.0154 | 0.0151 |
| F statistics (β2+ β4=0) | 7.030 | 5.917 | 2.358 | 1.301 |
| (p value) | 0.00816 | 0.0152 | 0.131 | 0.259 |
| F stat (β1+ β2+ β3+ β4=0) | 75.34 | 46.07 | 8.780 | 7.449 |
| (p value) | 0 | 0 | 0.00465 | 0.00874 |
| Dep. var. mean | 0.184 | 0.324 | 0.247 | 0.0917 |
| Standard deviation | 0.388 | 1.430 | 0.432 | 0.289 |

***Note:*** Each column reports results from a separate regression at individual level with dependent variables listed at the top of each column. District fixed effects included throughout. Robust standard errors in parentheses. Bonferroni-adjusted p-values are reported for multiple tests in bottom rows of each panel of the table. The excluded category is ‘never reserved,’ standard errors are clustered at village council level, and robust standard errors reported in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.10.