# Online Appendix for:

## All Eyes on Them

### A Field Experiment on Citizen Oversight and Electoral Integrity

*For Online Publication*

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## Contents



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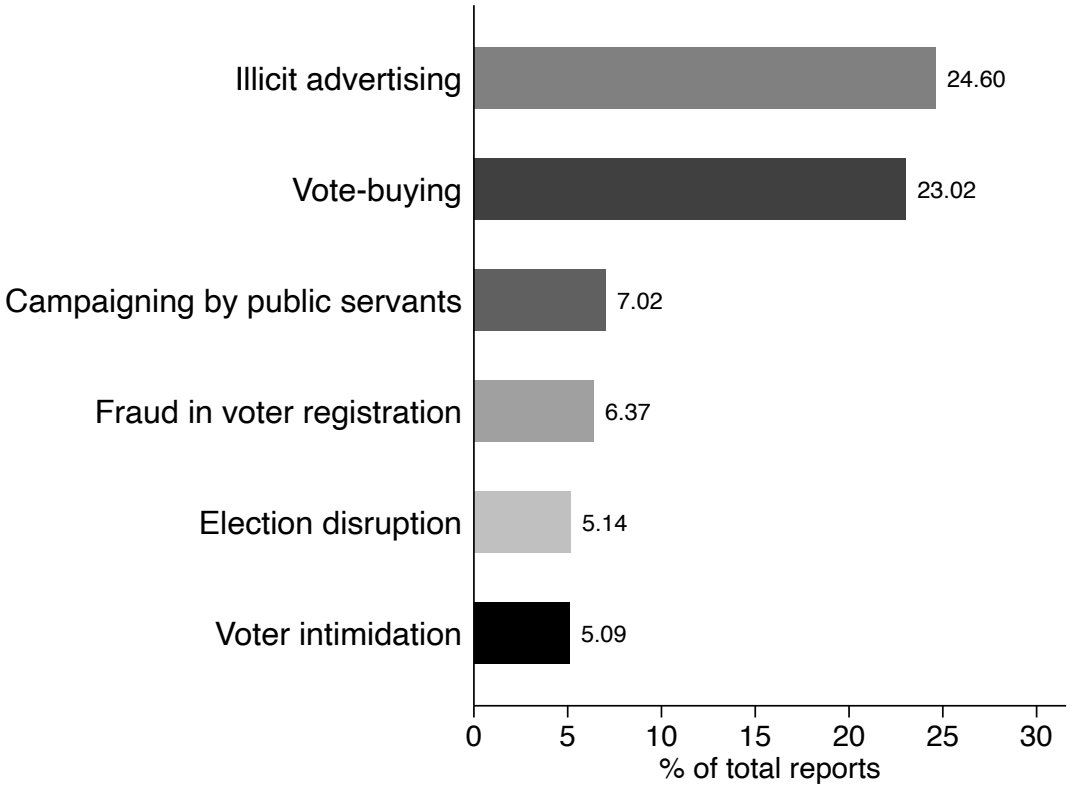
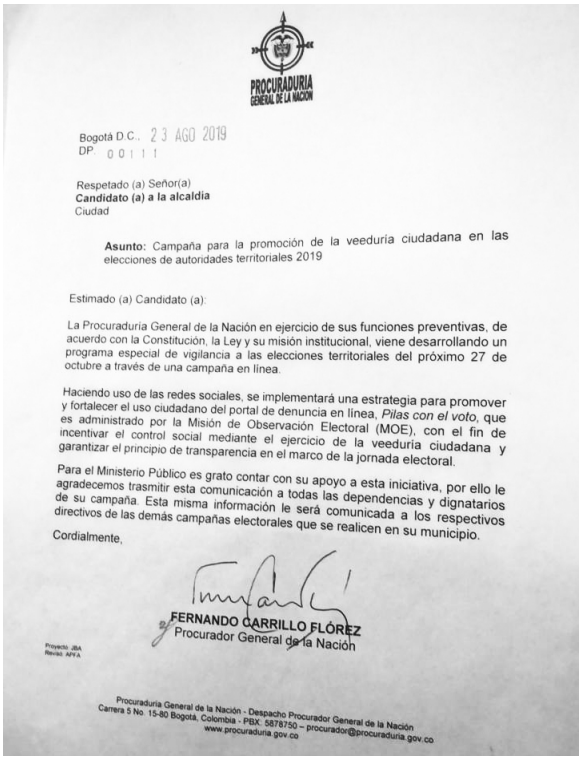
# A Additional Figures and Tables

Figure A1: Electoral irregularities Reported in 2015 Elections to the MOE




**Notes:** This figure displays the proportion of electoral irregularities of different types as a percentage of total irregularities reported through the MOE's *Pilas con el voto* in the context of the 2015 mayoral elections. The reports are restricted to those received between October 22-26, 2015 (election day was on October 25). The definitions for each type of electoral irregularity are presented in Section I.

Figure A2: Letter sent to candidates - Full Knowledge



PROCURADURIA GENERAL DE LA NACION

Bogotá D.C., 23 AGO 2019
DP 00111

Respetado (a) Señor(a)
**Candidato (a) a la alcaldía**
Ciudad

**Asunto**: Campaña para la promoción de la veeduría ciudadana en las elecciones de autoridades territoriales 2019

Estimado (a) Candidato (a):

La Procuraduría General de la Nación en ejercicio de sus funciones preventivas, de acuerdo con la Constitución, la Ley y su misión institucional, viene desarrollando un programa especial de vigilancia a las elecciones territoriales del próximo 27 de octubre a través de una campaña en línea.

Haciendo uso de las redes sociales, se implementará una estrategia para promover y fortalecer el uso ciudadano del portal de denuncia en línea, *Pilas con el voto*, que es administrado por la Misión de Observación Electoral (MOE), con el fin de incentivar el control social mediante el ejercicio de la veeduría ciudadana y garantizar el principio de transparencia en el marco de la jornada electoral.

Para el Ministerio Público es grato contar con su apoyo a esta iniciativa, por ello le agradecemos trasmitir esta comunicación a todas las dependencias y dignatarios de su campaña. Esta misma información le será comunicada a los respectivos directivos de las demás campañas electorales que se realicen en su municipio.

Cordialmente,

FERNANDO CARRILLO FLÓREZ
Procurador General de la Nación

Proyectó: JBA
Revisó: APA

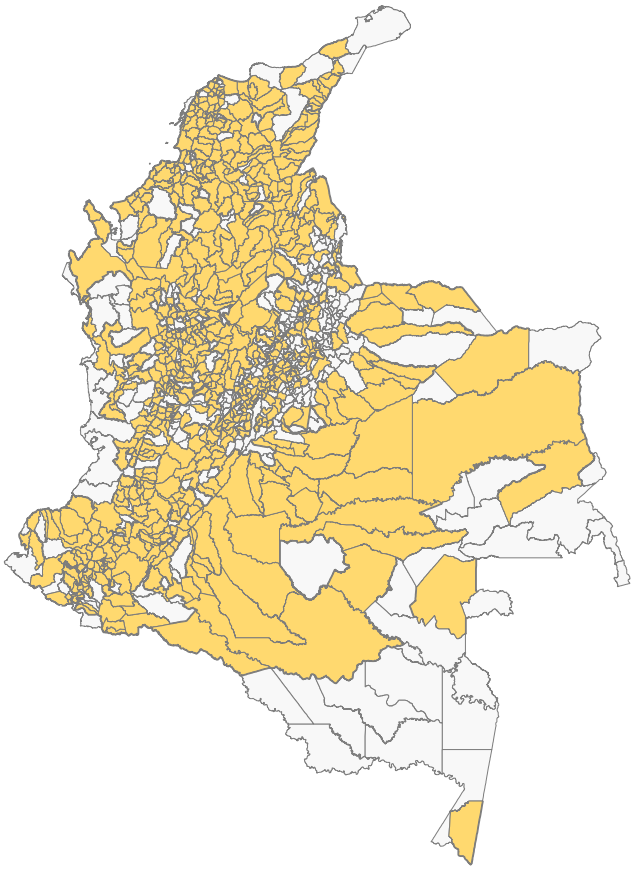
Procuraduría General de la Nación - Despacho Procurador General de la Nación
Carrera 5 No. 15-80 Bogotá, Colombia - PBX: 5878750 – procurador@procuraduria.gov.co
www.procuraduria.gov.co

**Translation:**

*Respected Sir/Madam, Candidate to the Mayor's Office*
***Subject:*** *Campaign to promote citizens' oversight in the 2019 local elections*
*The Attorney General of the Nation, in the exercise of its preventive functions, the Constitution, the Law and its Institutional Mission, is implementing a special program to watch over the forthcoming local elections of October 27 through an online campaign.*
*A strategy to promote and strengthen citizens' use of an online reporting website, Pilas con el voto, administered by the Misión de Observación Electoral will be set in place making use of social media. The goal of this strategy is to incentivize social control through citizen oversight and to guarantee transparency in the context of election day.*
*The Public Ministry welcomes your support, and thus we ask you to spread this information to your campaigns' offices and members. This same information will be communicated to the leaders of the other campaigns held in your municipality.[...]*

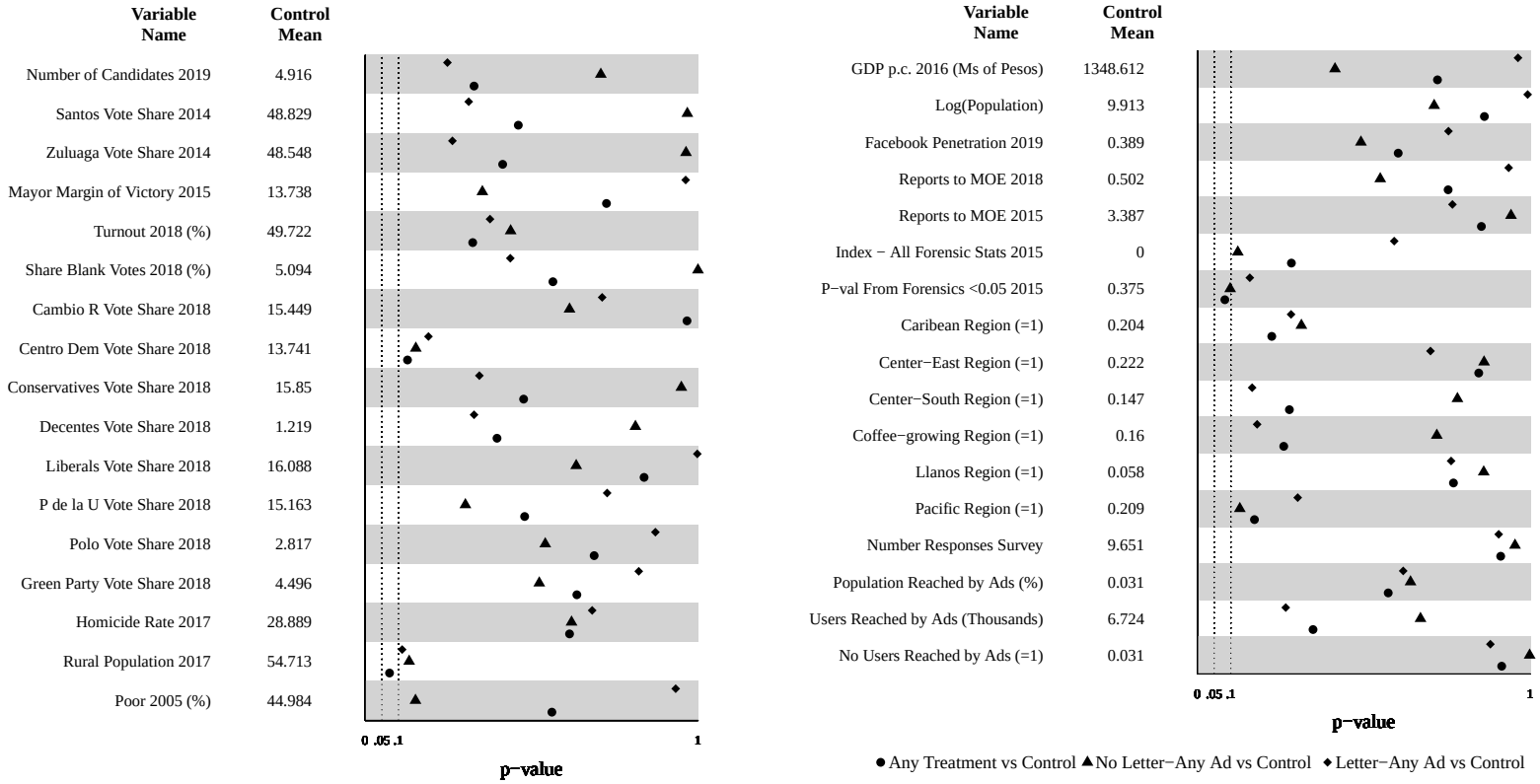
**Notes:** On the left, we show the actual letter sent to candidates in the full knowledge condition. On the right is a translation to English of the text contained in the letter.

Figure A3: Municipalities in the Study Sample



**Notes:** This figure shows a map of Colombia with the administrative boundaries of municipalities. Municipalities in yellow were part of the study sample; those in light grey are not in the sample.

Figure A4: Covariate Balance




**Notes:** This figure presents the $p$-values of the balance checks across three main treatment arms, using five sets of selected covariates: *Previous Reports:* reports to MOE 2018 and 2015; *Socioeconomic:* log of the population, Facebook penetration in 2019, GDP per capita 2016 (in Colombian pesos), percentage of poor in 2005, rural population in 2017, and homicide rate in 2017; *Political:* number of candidates registered in the 2019 mayoral elections, turnout in the 2015 mayoral elections, percentage of blank votes in 2015, the elected mayor's margin of victory in 2015, Santos' and Zuluaga's vote shares in the 2014 presidential elections, and the vote shares obtained by each party in the 2018 congressional elections; *Geographic:* regional dummies; and *Other:* number of responses in pre-treatment survey, percentage of population reached by the Facebook Ad, number of users reached by the Facebook Ad, and whether there were no users reached by the ad. The tests correspond to difference in means, in which observations are weighted by the percentage of the population older than 18 that was reached by a Facebook ad, except when reporting the difference in means of variables referring to the reach of the Facebook ads. The control group mean of each variable is presented.

Table A1: Summary Statistics Comparing Study Sample to Average Municipality

| | Study Sample | | | All Municipalities in Country | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Mean | Min | Max | Mean | Minimum | Maximum |
| Population 2018 (Thousands) | 26.86 | 4.83 | 159.88 | 43.01 | 0.28 | 7,412.57 |
| Facebook Penetration 2018 | 0.40 | 0.02 | 1.50 | 0.61 | - | - |
| Per Capita GDP 2016 (Millions of Pesos) | 1,321.94 | 264.45 | 15,575.94 | 1,294.64 | 164.06 | 15,575.94 |
| % Rural Population 2017 | 52.36 | 1.65 | 97.99 | 55.83 | 0.09 | 100.00 |
| % Poor 2005 | 45.65 | 6.84 | 100.00 | 45.40 | 5.43 | 100.00 |
| Reports to MOE 2018 | 0.52 | 0.00 | 8.00 | 0.93 | 0.00 | 143.00 |
| Reports to MOE 2015 | 3.43 | 0.00 | 33.00 | 4.09 | 0.00 | 301.00 |
| Sample size | | 698 | | | 1122 | |

**Notes:** This table displays summary statistics for the municipalities in the study sample (columns 1-3) and the full set of municipalities in Colombia (columns 4-6) on a selected group of variables. Data for the average Facebook penetration rate for the entire country is averaged across the whole population, not across municipalities.

Table A2: Covariate Balance

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| **Panel A. Previous Reports Covariates** | | | | | | | | | |
| Reports to MOE 2018 | 0.502 | 0.026 | 0.080 | -0.047 | 0.045 | -0.056 | -0.133 | 0.021 | 0.154 |
| | | (0.084) | (0.110) | (0.104) | (0.109) | (0.100) | (0.111) | (0.122) | (0.120) |
| | | [0.767] | [0.496] | [0.707] | [0.708] | [0.597] | [0.218] | [0.850] | [0.224] |
| Reports to MOE 2015 | 3.387 | 0.068 | 0.310 | -0.284 | 0.173 | 0.152 | 0.227 | 0.079 | -0.148 |
| | | (0.367) | (0.476) | (0.442) | (0.485) | (0.419) | (0.501) | (0.489) | (0.525) |
| | | [0.828] | [0.462] | [0.531] | [0.688] | [0.725] | [0.646] | [0.853] | [0.782] |
| **Panel B. Socioeconomic Covariates** | | | | | | | | | |
| Log(Population) | 9.913 | -0.010 | 0.032 | -0.021 | -0.042 | 0.029 | 0.024 | 0.033 | 0.010 |
| | | (0.060) | (0.078) | (0.075) | (0.074) | (0.072) | (0.082) | (0.082) | (0.077) |
| | | [0.712] | [0.435] | [0.622] | [0.296] | [0.423] | [0.569] | [0.463] | [0.816] |
| Facebook Penetration 2019 | 0.389 | 0.010 | 0.014 | 0.013 | 0.005 | -0.010 | -0.014 | -0.007 | 0.007 |
| | | (0.020) | (0.026) | (0.026) | (0.025) | (0.024) | (0.028) | (0.028) | (0.029) |
| | | [0.584] | [0.579] | [0.591] | [0.828] | [0.676] | [0.598] | [0.792] | [0.796] |
| GDP p.c. 2016 (Ms of Pesos) | 1,348.612 | -39.358 | -45.879 | -164.903 | 90.299 | 98.995 | 55.198 | 142.235 | 87.037 |
| | | (110.283) | (132.466) | (111.715) | (170.826) | (121.167) | (126.592) | (163.480) | (163.767) |
| | | [0.721] | [0.716] | [0.171] | [0.604] | [0.429] | [0.666] | [0.399] | [0.568] |
| Poor 2005 (%) | 44.984 | 0.980 | 1.327 | 1.612 | 0.016 | -3.328 | -2.857 | -3.793 | -0.936 |
| | | (1.684) | (2.238) | (2.203) | (2.100) | (2.094) | (2.426) | (2.386) | (2.363) |
| | | [0.482] | [0.467] | [0.377] | [0.994] | [0.062] | [0.179] | [0.057] | [0.627] |
| Rural Population 2017 | 54.713 | -3.471 | -6.156 | -3.238 | -1.033 | 0.510 | 1.299 | -0.269 | -1.568 |
| | | (1.935) | (2.560) | (2.376) | (2.440) | (2.330) | (2.680) | (2.654) | (2.589) |
| | | [0.053] | [0.008] | [0.146] | [0.625] | [0.824] | [0.621] | [0.916] | [0.519] |
| Homicide Rate 2017 | 28.889 | -1.333 | -3.489 | -1.751 | 1.220 | 0.420 | -0.962 | 1.785 | 2.746 |
| | | (2.643) | (3.147) | (3.329) | (3.720) | (3.101) | (3.527) | (3.789) | (3.886) |
| | | [0.618] | [0.268] | [0.595] | [0.700] | [0.891] | [0.781] | [0.651] | [0.501] |

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**Table A2 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| **Panel C. Political Covariates** | | | | | | | | | |
| Number of Candidates 2019 | 4.916 | -0.154 | -0.093 | -0.037 | -0.331 | -0.117 | -0.084 | -0.151 | -0.067 |
| | | (0.157) | (0.199) | (0.209) | (0.195) | (0.191) | (0.223) | (0.213) | (0.212) |
| | | [0.233] | [0.617] | [0.873] | [0.055] | [0.512] | [0.690] | [0.469] | [0.728] |
| Index - All Forensic Stats 2015 | 0.000 | 0.087 | 0.281 | -0.004 | -0.016 | -0.119 | -0.126 | -0.113 | 0.013 |
| | | (0.081) | (0.113) | (0.099) | (0.098) | (0.100) | (0.117) | (0.112) | (0.110) |
| | | [0.291] | [0.010] | [0.965] | [0.869] | [0.211] | [0.278] | [0.294] | [0.903] |
| P-val From Forensics < 0.05 2015 | 0.375 | 0.069 | 0.106 | 0.035 | 0.065 | -0.024 | -0.027 | -0.020 | 0.007 |
| | | (0.040) | (0.051) | (0.051) | (0.051) | (0.048) | (0.056) | (0.056) | (0.056) |
| | | [0.086] | [0.050] | [0.514] | [0.219] | [0.639] | [0.658] | [0.722] | [0.907] |
| Turnout 2018 (%) | 49.722 | 0.757 | 1.707 | -0.134 | 0.686 | -0.035 | -0.091 | 0.020 | 0.110 |
| | | (0.765) | (1.023) | (0.996) | (1.019) | (0.988) | (1.111) | (1.183) | (1.165) |
| | | [0.352] | [0.076] | [0.880] | [0.488] | [0.965] | [0.927] | [0.983] | [0.899] |
| Share Blank Votes 2018 (%) | 5.094 | 0.180 | 0.431 | -0.056 | 0.163 | 0.273 | 0.139 | 0.405 | 0.265 |
| | | (0.313) | (0.447) | (0.409) | (0.409) | (0.408) | (0.466) | (0.498) | (0.512) |
| | | [0.558] | [0.222] | [0.847] | [0.645] | [0.464] | [0.716] | [0.329] | [0.532] |
| Mayor Margin of Victory 2015 | 13.738 | -0.353 | 0.118 | -0.785 | -0.397 | 1.186 | 0.551 | 1.814 | 1.262 |
| | | (1.002) | (1.359) | (1.156) | (1.286) | (1.128) | (1.294) | (1.361) | (1.400) |
| | | [0.734] | [0.939] | [0.500] | [0.758] | [0.327] | [0.704] | [0.175] | [0.380] |
| Santos Vote Share 2014 | 48.829 | 1.328 | 2.592 | 1.533 | -0.130 | 1.880 | 1.602 | 2.155 | 0.553 |
| | | (1.795) | (2.243) | (2.249) | (2.283) | (2.006) | (2.417) | (2.277) | (2.434) |
| | | [0.407] | [0.190] | [0.484] | [0.947] | [0.316] | [0.471] | [0.339] | [0.792] |
| Zuluaga Vote Share 2014 | 48.548 | -1.428 | -2.677 | -1.674 | 0.054 | -2.019 | -1.676 | -2.357 | -0.681 |
| | | (1.745) | (2.173) | (2.180) | (2.221) | (1.942) | (2.339) | (2.203) | (2.352) |
| | | [0.358] | [0.170] | [0.432] | [0.971] | [0.282] | [0.437] | [0.289] | [0.729] |
| Liberals Vote Share 2018 | 16.088 | -0.192 | -1.030 | 0.343 | 0.117 | 0.555 | -0.140 | 1.241 | 1.382 |
| | | (0.940) | (1.167) | (1.264) | (1.191) | (1.106) | (1.246) | (1.342) | (1.347) |
| | | [0.833] | [0.368] | [0.786] | [0.931] | [0.622] | [0.910] | [0.345] | [0.292] |

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**Table A2 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| Cambio R Vote Share 2018 | 15.449 | -0.043 | 0.712 | -1.056 | 0.199 | -1.095 | -1.380 | -0.814 | 0.566 |
| | | (1.053) | (1.337) | (1.324) | (1.337) | (1.233) | (1.406) | (1.432) | (1.403) |
| | | [0.964] | [0.602] | [0.467] | [0.868] | [0.378] | [0.338] | [0.567] | [0.694] |
| Centro Dem Vote Share 2018 | 13.741 | -1.397 | -1.566 | -1.863 | -0.771 | 0.277 | 1.360 | -0.792 | -2.152 |
| | | (0.914) | (1.136) | (1.129) | (1.182) | (1.005) | (1.261) | (1.099) | (1.250) |
| | | [0.097] | [0.154] | [0.089] | [0.487] | [0.766] | [0.242] | [0.488] | [0.052] |
| P de la U Vote Share 2018 | 15.163 | 0.648 | 1.244 | 0.187 | 0.508 | -0.889 | -1.025 | -0.754 | 0.271 |
| | | (0.915) | (1.185) | (1.220) | (1.162) | (1.140) | (1.267) | (1.363) | (1.310) |
| | | [0.485] | [0.264] | [0.875] | [0.659] | [0.431] | [0.416] | [0.565] | [0.851] |
| Green Party Vote Share 2018 | 4.496 | 0.222 | 0.457 | 0.590 | -0.373 | -0.322 | -0.374 | -0.271 | 0.104 |
| | | (0.469) | (0.624) | (0.717) | (0.540) | (0.668) | (0.776) | (0.725) | (0.682) |
| | | [0.671] | [0.449] | [0.371] | [0.492] | [0.575] | [0.637] | [0.710] | [0.880] |
| Polo Vote Share 2018 | 2.817 | -0.101 | -0.231 | 0.215 | -0.281 | 0.173 | 0.039 | 0.305 | 0.266 |
| | | (0.250) | (0.270) | (0.408) | (0.261) | (0.322) | (0.330) | (0.382) | (0.308) |
| | | [0.711] | [0.435] | [0.566] | [0.285] | [0.602] | [0.924] | [0.471] | [0.402] |
| Decentes Vote Share 2018 | 1.219 | 0.085 | 0.118 | 0.014 | 0.120 | 0.082 | -0.039 | 0.201 | 0.240 |
| | | (0.100) | (0.120) | (0.153) | (0.144) | (0.138) | (0.144) | (0.181) | (0.177) |
| | | [0.412] | [0.281] | [0.913] | [0.365] | [0.552] | [0.768] | [0.228] | [0.136] |
| **Panel D. Geographic Covariates** | | | | | | | | | |
| Caribean Region (=1) | 0.204 | 0.041 | 0.093 | 0.014 | 0.016 | -0.005 | -0.023 | 0.013 | 0.035 |
| | | (0.033) | (0.045) | (0.043) | (0.043) | (0.042) | (0.048) | (0.049) | (0.049) |
| | | [0.223] | [0.032] | [0.793] | [0.809] | [0.908] | [0.687] | [0.765] | [0.496] |
| Center-East Region (=1) | 0.222 | -0.007 | 0.006 | -0.024 | -0.002 | -0.021 | -0.030 | -0.013 | 0.017 |
| | | (0.034) | (0.043) | (0.042) | (0.043) | (0.040) | (0.046) | (0.047) | (0.046) |
| | | [0.817] | [0.884] | [0.560] | [1.000] | [0.593] | [0.563] | [0.774] | [0.753] |
| Center-South Region (=1) | 0.147 | -0.030 | -0.039 | -0.044 | -0.008 | -0.031 | -0.027 | -0.035 | -0.008 |
| | | (0.028) | (0.034) | (0.034) | (0.036) | (0.032) | (0.037) | (0.036) | (0.035) |
| | | [0.283] | [0.309] | [0.222] | [0.883] | [0.376] | [0.522] | [0.381] | [0.846] |

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**Table A2 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| Coffee-growing Region (=1) | 0.160 | 0.035 | 0.011 | 0.071 | 0.022 | 0.031 | 0.033 | 0.030 | -0.003 |
| | | (0.031) | (0.039) | (0.042) | (0.039) | (0.038) | (0.044) | (0.044) | (0.046) |
| | | [0.287] | [0.793] | [0.090] | [0.572] | [0.458] | [0.482] | [0.569] | [1.000] |
| Llanos Region (=1) | 0.058 | 0.006 | 0.006 | -0.019 | 0.030 | 0.002 | 0.009 | -0.005 | -0.014 |
| | | (0.019) | (0.025) | (0.022) | (0.027) | (0.024) | (0.028) | (0.027) | (0.028) |
| | | [0.829] | [0.814] | [0.461] | [0.310] | [1.000] | [0.823] | [1.000] | [0.663] |
| Pacific Region (=1) | 0.209 | -0.044 | -0.076 | 0.003 | -0.058 | 0.024 | 0.038 | 0.010 | -0.028 |
| | | (0.032) | (0.038) | (0.043) | (0.039) | (0.035) | (0.042) | (0.041) | (0.043) |
| | | [0.165] | [0.066] | [1.000] | [0.166] | [0.504] | [0.374] | [0.859] | [0.555] |
| **Panel E. Other Covariates** | | | | | | | | | |
| Number Responses Survey | 9.651 | -0.062 | -0.185 | 1.228 | -1.192 | -0.032 | -0.078 | 0.015 | 0.092 |
| | | (0.554) | (0.725) | (0.811) | (0.618) | (0.688) | (0.766) | (0.838) | (0.825) |
| | | [0.906] | [0.812] | [0.090] | [0.057] | [0.956] | [0.921] | [0.984] | [0.918] |
| Population Reached by Ads (%) | 0.031 | 0.001 | 0.001 | 0.001 | 0.000 | -0.000 | 0.000 | -0.000 | -0.000 |
| | | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |
| | | [0.563] | [0.520] | [0.632] | [0.820] | [0.967] | [0.941] | [0.877] | [0.844] |
| Users Reached by Ads (Thousands) | 6.724 | -0.707 | -0.172 | -1.053 | -0.900 | -0.491 | -0.456 | -0.525 | -0.069 |
| | | (0.751) | (0.949) | (0.826) | (0.882) | (0.717) | (0.833) | (0.812) | (0.804) |
| | | [0.150] | [0.841] | [0.135] | [0.163] | [0.372] | [0.454] | [0.388] | [0.900] |
| No Users Reached by Ads (=1) | 0.031 | -0.002 | -0.012 | 0.014 | -0.006 | -0.002 | 0.001 | -0.006 | -0.007 |
| | | (0.014) | (0.016) | (0.020) | (0.017) | (0.017) | (0.020) | (0.019) | (0.019) |
| | | [1.000] | [0.538] | [0.580] | [0.733] | [1.000] | [1.000] | [1.000] | [0.757] |

**Notes:** This table presents the balance checks for a selected set of covariates. The control group mean of each variable is presented in column (1). In each of the remaining columns the difference in means is reported for the shown treatment groups. Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A3: Balance on Pre-Treat Survey Respondent Characteristics

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| Female(=1) | 0.541 | 0.009 | -0.007 | 0.011 | 0.024 | -0.013 | -0.005 | -0.022 | -0.016 |
| | | (0.014) | (0.017) | (0.017) | (0.018) | (0.016) | (0.019) | (0.019) | (0.019) |
| | | [0.515] | [0.715] | [0.488] | [0.187] | [0.411] | [0.772] | [0.259] | [0.390] |
| Age | 34.634 | -0.206 | -0.543 | -0.185 | 0.142 | 0.979 | 0.884 | 1.072 | 0.188 |
| | | (0.310) | (0.396) | (0.399) | (0.414) | (0.380) | (0.449) | (0.436) | (0.452) |
| | | [0.535] | [0.175] | [0.664] | [0.741] | [0.009] | [0.044] | [0.009] | [0.657] |
| High School or Less (=1) | 0.475 | 0.019 | 0.018 | 0.016 | 0.025 | 0.031 | 0.032 | 0.030 | -0.002 |
| | | (0.014) | (0.018) | (0.017) | (0.018) | (0.017) | (0.019) | (0.019) | (0.019) |
| | | [0.184] | [0.326] | [0.362] | [0.179] | [0.062] | [0.098] | [0.130] | [0.919] |

**Notes:** This table presents the balance checks for a set of survey respondent characteristics. The control group mean of each variable is presented in column (1). In each of the remaining columns the difference in means is reported for the shown treatment groups. Clustered standard errors at the municipal-level are shown in parentheses and random inference p-values are shown in square brackets.

Table A4: Impacts on Reports After the Intervention

| | (1) Reports After Intervention(=1) | (2) N. Reports After Intervention | (3) High Quality Reports After Intervention (=1) | (4) High Quality N. Reports After Intervention |
|---|---|---|---|---|
| **Panel A. Pooled Treatment** | | | | |
| [$T$] Any treatment | 0.032 | 0.062 | 0.016 | 0.021 |
| | (0.024) | (0.042) | (0.020) | (0.035) |
| | [0.254] | [0.205] | [0.552] | [0.609] |
| **Panel B. Subtreatments by Types of Ad** | | | | |
| [$IA$] Information Ad | 0.049 | 0.096 | 0.014 | 0.031 |
| | (0.033) | (0.060) | (0.027) | (0.048) |
| | [0.121] | [0.100] | [0.688] | [0.576] |
| [$CA$] Call-to-Action Ad | 0.006 | -0.017 | -0.005 | -0.031 |
| | (0.030) | (0.043) | (0.025) | (0.034) |
| | [0.862] | [0.731] | [1.000] | [0.499] |
| [$I + CA$] Info + Call-to-Action Ad | 0.042 | 0.106 | 0.038 | 0.062 |
| | (0.033) | (0.064) | (0.029) | (0.051) |
| | [0.231] | [0.082] | [0.180] | [0.232] |
| Test $IA = CA$, p-value | 0.23 | 0.05 | 0.52 | 0.14 |
| Test $IA = I + CA$, p-value | 0.84 | 0.89 | 0.44 | 0.59 |
| Test $CA = I + CA$, p-value | 0.32 | 0.05 | 0.16 | 0.04 |
| **Panel C. Subtreatments by Letter - No Letter** | | | | |
| [$NL$] No Letter - Any Ad | 0.003 | 0.047 | 0.006 | 0.010 |
| | (0.030) | (0.058) | (0.026) | (0.044) |
| | [1.000] | [0.472] | [0.834] | [0.916] |
| [$L$] Letter - Any Ad | 0.048 | 0.070 | 0.021 | 0.026 |
| | (0.027) | (0.045) | (0.023) | (0.038) |
| | [0.107] | [0.149] | [0.418] | [0.565] |
| Test $NL = L$, p-value | 0.13 | 0.70 | 0.55 | 0.70 |
| Control Mean | 0.09 | 0.12 | 0.06 | 0.09 |
| Sample Size | 698 | 698 | 698 | 698 |

**Notes:** The outcome in column (1) is an indicator of whether any report was issued to the MOE from each municipality in the month after the intervention. In column (2) it is the number of such reports. In columns (3)-(4) the same definitions are used on the subset of reports of a high quality (see Section I for a discussion about how quality of reports is assessed by the MOE). All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A5: Robustness of the Impacts on the Media-Based Irregularity Measures: Including News Coming From MOE Reports

| | (1) Media Irregularities (=1) | (2) Number of Media Irregularities |
|---|---|---|
| **Panel A. Pooled Treatment** | | |
| [$T$] Any treatment | -0.055 | -0.080 |
| | (0.029) | (0.040) |
| | [0.060] | [0.033] |
| **Panel B. Subtreatments by Types of Ad** | | |
| [$IA$] Information Ad | -0.069 | -0.093 |
| | (0.036) | (0.051) |
| | [0.075] | [0.083] |
| [$CA$] Call-to-Action Ad | -0.032 | -0.051 |
| | (0.037) | (0.050) |
| | [0.407] | [0.310] |
| [$I + CA$] Info + Call-to-Action Ad | -0.063 | -0.096 |
| | (0.035) | (0.047) |
| | [0.085] | [0.049] |
| Test $IA = CA$, p-value | 0.33 | 0.41 |
| Test $IA = I + CA$, p-value | 0.86 | 0.95 |
| Test $CA = I + CA$, p-value | 0.41 | 0.35 |
| **Panel C. Subtreatments by Letter - No Letter** | | |
| [$NL$] No Letter - Any Ad | -0.039 | -0.068 |
| | (0.037) | (0.049) |
| | [0.300] | [0.188] |
| [$L$] Letter - Any Ad | -0.063 | -0.087 |
| | (0.031) | (0.043) |
| | [0.026] | [0.031] |
| Test $NL = L$, p-value | 0.47 | 0.65 |
| Control Mean | 0.18 | 0.23 |
| Sample Size | 698 | 698 |

**Notes:** The outcome in column (1) is an indicator of whether any irregularity was reported in the media in a particular municipality. In column (2) it is the number of different irregularities. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A6: Impacts on Media-Based Irregularity Measures - By Type of Irregularity

| | (1) Vote buying (=1) | (2) Riot (=1) | (3) Candidate intimidation (=1) | (4) Voter intimidation (=1) | (5) Registration fraud (=1) | (6) Public servant campaigning (=1) | (7) Electoral fraud (=1) | (8) Others (=1) |
|---|---|---|---|---|---|---|---|---|
| **Panel A. Pooled Treatment** | | | | | | | | |
| [$T$] Any treatment | -0.041 | -0.011 | -0.012 | -0.003 | 0.012 | -0.007 | 0.004 | -0.001 |
| | (0.015) | (0.014) | (0.013) | (0.010) | (0.009) | (0.008) | (0.008) | (0.011) |
| | [0.000] | [0.456] | [0.439] | [1.000] | [0.339] | [0.395] | [0.727] | [1.000] |
| **Panel B. Subtreatments by Types of Ad** | | | | | | | | |
| [$IA$] Information Ad | -0.042 | -0.004 | -0.018 | 0.001 | 0.016 | -0.013 | -0.003 | -0.005 |
| | (0.016) | (0.019) | (0.015) | (0.014) | (0.014) | (0.008) | (0.009) | (0.013) |
| | [0.018] | [0.903] | [0.326] | [1.000] | [0.232] | [0.257] | [1.000] | [1.000] |
| [$CA$] Call-to-Action Ad | -0.030 | -0.014 | -0.012 | -0.005 | 0.010 | 0.006 | 0.004 | 0.001 |
| | (0.018) | (0.017) | (0.016) | (0.013) | (0.013) | (0.013) | (0.011) | (0.014) |
| | [0.107] | [0.506] | [0.556] | [1.000] | [0.660] | [0.693] | [1.000] | [1.000] |
| [$I + CA$] Info + Call-to-Action Ad | -0.049 | -0.016 | -0.006 | -0.005 | 0.010 | -0.013 | 0.010 | 0.001 |
| | (0.014) | (0.016) | (0.017) | (0.013) | (0.013) | (0.008) | (0.013) | (0.014) |
| | [0.005] | [0.372] | [0.753] | [1.000] | [0.648] | [0.296] | [0.660] | [1.000] |
| Test $IA = CA$, p-value | 0.34 | 0.55 | 0.64 | 0.66 | 0.72 | 0.08 | 0.56 | 0.64 |
| Test $IA = I + CA$, p-value | 0.31 | 0.48 | 0.41 | 0.65 | 0.70 | . | 0.32 | 0.66 |
| Test $CA = I + CA$, p-value | 0.09 | 0.90 | 0.72 | 0.98 | 0.98 | 0.08 | 0.67 | 0.98 |
| **Panel C. Subtreatments by Letter - No Letter** | | | | | | | | |
| [$NL$] No Letter - Any Ad | -0.042 | -0.004 | -0.019 | 0.001 | 0.022 | -0.007 | 0.004 | 0.007 |
| | (0.016) | (0.018) | (0.015) | (0.014) | (0.015) | (0.010) | (0.011) | (0.015) |
| | [0.023] | [0.912] | [0.306] | [1.000] | [0.110] | [0.649] | [1.000] | [0.721] |
| [$L$] Letter - Any Ad | -0.040 | -0.015 | -0.009 | -0.005 | 0.007 | -0.007 | 0.004 | -0.005 |
| | (0.015) | (0.015) | (0.014) | (0.011) | (0.009) | (0.009) | (0.009) | (0.011) |
| | [0.001] | [0.296] | [0.552] | [0.722] | [0.717] | [0.654] | [0.716] | [0.714] |
| Test $NL = L$, p-value | 0.74 | 0.49 | 0.41 | 0.64 | 0.33 | 0.98 | 0.97 | 0.39 |
| Control Mean | 0.05 | 0.04 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 |
| Sample Size | 698 | 698 | 698 | 698 | 698 | 698 | 698 | 698 |

**Notes:** The outcomes in columns (1)-(8) are indicators of whether each of the types of irregularities displayed were reported in the media. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A7: Robustness of the Media-Based Irregularity Measures: Leave-one-out Estimates

| | (1) Any irregularity except vote buying (=1) | (2) Any irregularity except riots (=1) | (3) Any irregularity except candidate intimidation (=1) | (4) Any irregularity except voter intimidation (=1) | (5) Any irregularity except registration fraud (=1) | (6) Any irregularity except public servant campaigning (=1) | (7) Any irregularity except electoral fraud (=1) | (8) Any irregularity except others (=1) |
|---|---|---|---|---|---|---|---|---|
| **Panel A. Pooled Treatment** | | | | | | | | |
| [$T$] Any treatment | -0.024 | -0.039 | -0.042 | -0.058 | -0.066 | -0.049 | -0.052 | -0.054 |
| | (0.026) | (0.026) | (0.025) | (0.027) | (0.027) | (0.027) | (0.027) | (0.026) |
| | [0.348] | [0.107] | [0.085] | [0.020] | [0.012] | [0.067] | [0.051] | [0.032] |
| **Panel B. Subtreatments by Types of Ad** | | | | | | | | |
| [$IA$] Information Ad | -0.021 | -0.045 | -0.042 | -0.068 | -0.067 | -0.051 | -0.056 | -0.055 |
| | (0.033) | (0.032) | (0.032) | (0.033) | (0.033) | (0.034) | (0.034) | (0.033) |
| | [0.632] | [0.211] | [0.220] | [0.055] | [0.069] | [0.155] | [0.120] | [0.092] |
| [$CA$] Call-to-Action Ad | -0.019 | -0.029 | -0.021 | -0.043 | -0.052 | -0.037 | -0.036 | -0.037 |
| | (0.033) | (0.033) | (0.032) | (0.034) | (0.034) | (0.034) | (0.034) | (0.033) |
| | [0.633] | [0.449] | [0.527] | [0.201] | [0.153] | [0.275] | [0.282] | [0.266] |
| [$I + CA$] Info + Call-to-Action Ad | -0.033 | -0.044 | -0.061 | -0.064 | -0.079 | -0.058 | -0.064 | -0.069 |
| | (0.032) | (0.032) | (0.029) | (0.032) | (0.032) | (0.033) | (0.032) | (0.031) |
| | [0.325] | [0.188] | [0.054] | [0.050] | [0.024] | [0.075] | [0.054] | [0.037] |
| Test $IA = CA$, p-value | 0.94 | 0.64 | 0.54 | 0.45 | 0.64 | 0.68 | 0.58 | 0.59 |
| Test $IA = I + CA$, p-value | 0.72 | 0.99 | 0.53 | 0.90 | 0.70 | 0.84 | 0.80 | 0.68 |
| Test $CA = I + CA$, p-value | 0.66 | 0.66 | 0.20 | 0.52 | 0.40 | 0.53 | 0.41 | 0.33 |
| **Panel C. Subtreatments by Letter - No Letter** | | | | | | | | |
| [$NL$] No Letter - Any Ad | -0.010 | -0.027 | -0.017 | -0.044 | -0.062 | -0.039 | -0.038 | -0.042 |
| | (0.034) | (0.033) | (0.033) | (0.033) | (0.033) | (0.034) | (0.034) | (0.033) |
| | [0.881] | [0.435] | [0.636] | [0.191] | [0.094] | [0.271] | [0.267] | [0.210] |
| [$L$] Letter - Any Ad | -0.032 | -0.046 | -0.054 | -0.066 | -0.068 | -0.054 | -0.060 | -0.060 |
| | (0.028) | (0.027) | (0.026) | (0.028) | (0.029) | (0.029) | (0.029) | (0.028) |
| | [0.271] | [0.083] | [0.029] | [0.009] | [0.011] | [0.049] | [0.023] | [0.018] |
| Test $NL = L$, p-value | 0.47 | 0.51 | 0.21 | 0.46 | 0.81 | 0.63 | 0.48 | 0.54 |
| Control Mean | 0.13 | 0.13 | 0.13 | 0.15 | 0.16 | 0.15 | 0.15 | 0.14 |
| Sample Size | 698 | 698 | 698 | 698 | 698 | 698 | 698 | 698 |

**Notes:** The outcome in each column is an indicator of whether any irregularity was reported in the media in a particular municipality, when one leaves out each of the types of irregularities shown in columns (1)-(8). All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A8: Correlation Between Forensic and Media-Based Electoral Irregularity Measures

| | (1) Index of all Forensic Test Stats (z-score) | (2) | (3) Any P-value From Forensic Tests < 0.05 (=1) (z-score) | (4) |
|---|---|---|---|---|
| Media Irregularities (=1) | 0.084 | | 0.079 | |
| | (0.060) | | (0.048) | |
| Number of Media Irregularities | | 0.108 | | 0.101 |
| | | (0.077) | | (0.061) |
| Sample Size | 225 | 225 | 225 | 225 |

**Notes:** This table presents the OLS results of regressing z-scores of the forensic variables on z-scores of the media-based measure of irregularities detailed in Table 4. Each estimate comes from a separate regression of the shown variables. The sample is restricted to municipalities in the control group. Since all of these variables are normalized, the estimates reported can be interpreted as correlations. Robust standard errors are shown in parentheses.

Table A9: Correlation Between Forensic and Media-Based Electoral Irregularity Measures by Type

| | (1) Index of all Forensic Test Stats (z-score) | (2) Any P-value From Forensic Tests < 0.05 (=1) (z-score) |
|---|---|---|
| Vote Buying in Media (=1) (z-score) | 0.007 | 0.007 |
| | (0.048) | (0.036) |
| Riot in Media (=1) (z-score) | 0.188 | 0.130 |
| | (0.064) | (0.009) |
| Candidate Intimidation in Media (=1) (z-score) | -0.019 | 0.014 |
| | (0.043) | (0.045) |
| Voter Intimidation in Media (=1) (z-score) | 0.070 | 0.047 |
| | (0.079) | (0.043) |
| Registration Fraud in Media (=1) (z-score) | 0.071 | 0.101 |
| | (0.020) | (0.007) |
| Public Servant Campaigning in Media (=1) (z-score) | -0.066 | -0.076 |
| | (0.009) | (0.005) |
| Electoral Fraud in Media (=1) (z-score) | 0.076 | 0.082 |
| | (0.020) | (0.006) |
| Sample Size | 225 | 225 |

**Notes:** This table presents the OLS results of regressing z-scores of the forensic variables on z-scores of the media-based measure of irregularities by type, shown in Table A6. The sample is restricted to municipalities in the control group. Since all of these variables are normalized, the estimates reported can be interpreted as correlations. Robust standard errors are shown in parentheses.

Table A10: Impacts on Deviations from Benford's Second Digit Law - By Test

| Test: | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Pearson $\chi^2$ | | Kolmogorov-Smirnov $D$ | | Kuiper $V$ | |
| | Stat (z-score) | P-value < 0.05 (=1) | Stat (z-score) | P-value < 0.05 (=1) | Stat (z-score) | P-value < 0.05 (=1) |
| **Panel A. Pooled Treatment** | | | | | | |
| [$T$] Any treatment | -0.077 | -0.014 | -0.114 | -0.066 | -0.167 | -0.063 |
| | (0.072) | (0.035) | (0.067) | (0.038) | (0.058) | (0.035) |
| | [0.260] | [0.688] | [0.080] | [0.076] | [0.001] | [0.072] |
| **Panel B. Subtreatments by Types of Ad** | | | | | | |
| [$IA$] Information Ad | -0.146 | -0.048 | -0.296 | -0.099 | -0.275 | -0.094 |
| | (0.090) | (0.044) | (0.081) | (0.048) | (0.073) | (0.044) |
| | [0.104] | [0.302] | [0.001] | [0.043] | [0.000] | [0.038] |
| [$CA$] Call-to-Action Ad | -0.073 | -0.019 | -0.048 | -0.049 | -0.139 | -0.036 |
| | (0.088) | (0.046) | (0.085) | (0.050) | (0.073) | (0.046) |
| | [0.415] | [0.677] | [0.580] | [0.323] | [0.056] | [0.430] |
| [$I + CA$] Info + Call-to-Action Ad | -0.014 | 0.025 | -0.001 | -0.051 | -0.089 | -0.058 |
| | (0.089) | (0.044) | (0.089) | (0.048) | (0.075) | (0.045) |
| | [0.870] | [0.561] | [0.991] | [0.271] | [0.214] | [0.191] |
| Test $IA = CA$, p-value | 0.43 | 0.54 | 0.00 | 0.35 | 0.08 | 0.24 |
| Test $IA = I + CA$, p-value | 0.14 | 0.12 | 0.00 | 0.35 | 0.02 | 0.46 |
| Test $CA = I + CA$, p-value | 0.51 | 0.36 | 0.63 | 0.97 | 0.53 | 0.65 |
| **Panel C. Subtreatments by Letter - No Letter** | | | | | | |
| [$NL$] No Letter - Any Ad | -0.054 | -0.011 | -0.029 | -0.036 | -0.126 | -0.068 |
| | (0.091) | (0.045) | (0.088) | (0.049) | (0.075) | (0.044) |
| | [0.576] | [0.803] | [0.750] | [0.461] | [0.103] | [0.137] |
| [$L$] Letter - Any Ad | -0.090 | -0.015 | -0.158 | -0.082 | -0.188 | -0.060 |
| | (0.076) | (0.038) | (0.072) | (0.041) | (0.062) | (0.038) |
| | [0.234] | [0.686] | [0.025] | [0.038] | [0.001] | [0.111] |
| Test $NL = L$, p-value | 0.65 | 0.94 | 0.11 | 0.31 | 0.36 | 0.86 |
| Control Mean | 0.00 | 0.28 | 0.00 | 0.42 | 0.00 | 0.34 |
| Sample Size | 698 | 698 | 698 | 698 | 698 | 698 |

**Notes:** This table reports the effects of the intervention on the $\chi^2$, Kolmogorov-Smirnov and Kuiper test statistics testing for Benford's 2nd digit law. For each test, the outcome is the test statistic, as well as indicators that take the value of one if the p-value of each test leads to rejection of the null hypothesis with less than a 10% or 5% significance level. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A11: Impacts on Forensic Tests Suggested by Beber and Scacco (2012)

| | (1) Index of all Last Digit Forensic Test Stats (z-score) | (2) Any P-value From Last Digit Forensic Tests < 0.05 (=1) | (3) Repeated Digits Less than Expected (=1) | (4) Adjacent Pairs of Digits More than Expected (=1) |
|---|---|---|---|---|
| **Panel A. Pooled Treatment** | | | | |
| [$T$] Any treatment | -0.105 | -0.001 | -0.050 | -0.037 |
| | (0.073) | (0.032) | (0.029) | (0.031) |
| | [0.126] | [0.981] | [0.111] | [0.223] |
| **Panel B. Subtreatments by Types of Ad** | | | | |
| [$IA$] Information Ad | -0.256 | -0.075 | -0.086 | 0.010 |
| | (0.085) | (0.039) | (0.039) | (0.040) |
| | [0.002] | [0.055] | [0.028] | [0.788] |
| [$CA$] Call-to-Action Ad | -0.018 | 0.046 | -0.005 | -0.078 |
| | (0.091) | (0.043) | (0.036) | (0.039) |
| | [0.844] | [0.259] | [0.893] | [0.046] |
| [$I + CA$] Info + Call-to-Action Ad | -0.045 | 0.026 | -0.058 | -0.045 |
| | (0.093) | (0.042) | (0.041) | (0.040) |
| | [0.622] | [0.530] | [0.147] | [0.284] |
| Test $IA = CA$, p-value | 0.01 | 0.01 | 0.05 | 0.04 |
| Test $IA = I + CA$, p-value | 0.02 | 0.02 | 0.54 | 0.21 |
| Test $CA = I + CA$, p-value | 0.78 | 0.68 | 0.22 | 0.45 |
| **Panel C. Subtreatments by Letter - No Letter** | | | | |
| [$NL$] No Letter - Any Ad | -0.061 | 0.027 | -0.077 | -0.044 |
| | (0.094) | (0.041) | (0.039) | (0.039) |
| | [0.511] | [0.530] | [0.047] | [0.271] |
| [$L$] Letter - Any Ad | -0.127 | -0.015 | -0.036 | -0.034 |
| | (0.077) | (0.035) | (0.032) | (0.034) |
| | [0.073] | [0.635] | [0.262] | [0.312] |
| Test $NL = L$, p-value | 0.42 | 0.28 | 0.28 | 0.79 |
| Control Mean | -0.00 | 0.52 | 0.84 | 0.25 |
| Sample Size | 698 | 698 | 698 | 698 |

**Notes**: The outcome in column (1) is the index of the $\chi^2$, Kolmogorov-Smirnov and Kuiper test statistics for deviations of the last digit from a uniform distribution, described in Appendix E . In column (2) it is an indicator that takes the value of one if the p-value of any of these tests leads to rejection of the null hypothesis with less than a 5% significance level. In column (3) it is an indicator that takes the value of one if there is a smaller than expected proportion of repeated digits, according to the distributions derived by Beber and Scacco (2012). In column (4) it is an indicator that takes the value of one if there is a larger than expected proportion of pairs of adjacent digits, according to the distributions derived by Beber and Scacco (2012). All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A12: Covariate Balance - Candidate Level Data

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| **Panel A. Previous Reports Covariates** | | | | | | | | | |
| Reports to MOE 2018 | 0.534 | 0.089 | 0.182 | -0.043 | 0.128 | -0.061 | -0.099 | -0.025 | 0.074 |
| | | (0.105) | (0.145) | (0.052) | (0.056) | (0.053) | (0.061) | (0.062) | (0.065) |
| | | [0.396] | [0.197] | [0.737] | [0.337] | [0.636] | [0.515] | [0.863] | [0.620] |
| Reports to MOE 2015 | 3.541 | 0.491 | 0.915 | 0.175 | 0.371 | -0.017 | 0.101 | -0.133 | -0.235 |
| | | (0.440) | (0.605) | (0.232) | (0.237) | (0.221) | (0.260) | (0.264) | (0.283) |
| | | [0.266] | [0.080] | [0.735] | [0.485] | [0.974] | [0.864] | [0.834] | [0.721] |
| **Panel B. Socioeconomic Covariates** | | | | | | | | | |
| Log(Population) | 10.074 | -0.014 | 0.027 | -0.029 | -0.043 | -0.013 | 0.000 | -0.027 | -0.027 |
| | | (0.070) | (0.094) | (0.037) | (0.036) | (0.035) | (0.041) | (0.041) | (0.039) |
| | | [0.751] | [0.567] | [0.604] | [0.413] | [0.782] | [0.995] | [0.661] | [0.609] |
| Facebook Penetration 2019 | 0.437 | 0.016 | 0.013 | 0.031 | 0.005 | -0.009 | 0.003 | -0.020 | -0.023 |
| | | (0.024) | (0.031) | (0.013) | (0.012) | (0.012) | (0.014) | (0.013) | (0.014) |
| | | [0.480] | [0.650] | [0.284] | [0.848] | [0.745] | [0.935] | [0.523] | [0.491] |
| GDP p.c. 2016 (Ms of Pesos) | 1,433.517 | -35.450 | -73.688 | -96.508 | 66.347 | 110.407 | 101.602 | 119.010 | 17.409 |
| | | (125.418) | (143.793) | (56.948) | (80.699) | (56.901) | (61.649) | (74.035) | (75.144) |
| | | [0.783] | [0.606] | [0.528] | [0.695] | [0.392] | [0.460] | [0.450] | [0.919] |
| Poor 2005 (%) | 43.325 | -0.062 | 0.141 | 0.398 | -0.740 | -2.769 | -4.314 | -1.260 | 3.055 |
| | | (1.877) | (2.541) | (1.024) | (0.994) | (1.008) | (1.145) | (1.158) | (1.114) |
| | | [0.980] | [0.949] | [0.865] | [0.694] | [0.163] | [0.097] | [0.562] | [0.185] |
| Rural Population 2017 | 49.379 | -1.289 | -3.580 | -1.459 | 1.262 | 1.990 | 0.658 | 3.292 | 2.634 |
| | | (2.195) | (2.916) | (1.112) | (1.173) | (1.104) | (1.271) | (1.262) | (1.243) |
| | | [0.498] | [0.168] | [0.548] | [0.604] | [0.400] | [0.808] | [0.210] | [0.336] |
| Homicide Rate 2017 | 29.672 | -1.530 | -2.568 | -3.268 | 1.316 | 0.741 | -0.107 | 1.570 | 1.678 |
| | | (2.682) | (3.327) | (1.425) | (1.740) | (1.445) | (1.628) | (1.749) | (1.753) |
| | | [0.556] | [0.457] | [0.342] | [0.731] | [0.814] | [0.964] | [0.665] | [0.630] |

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**Table A12 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| **Panel C. Political Covariates** | | | | | | | | | |
| Number of Candidates 2019 | 5.744 | -0.206 | -0.137 | -0.147 | -0.335 | -0.349 | -0.317 | -0.381 | -0.064 |
| | | (0.199) | (0.257) | (0.105) | (0.098) | (0.099) | (0.116) | (0.110) | (0.109) |
| | | [0.302] | [0.575] | [0.561] | [0.176] | [0.159] | [0.316] | [0.154] | [0.806] |
| Index - All Forensic Stats 2015 | -0.042 | 0.044 | 0.217 | -0.013 | -0.079 | -0.099 | -0.198 | -0.002 | 0.196 |
| | | (0.087) | (0.119) | (0.047) | (0.046) | (0.048) | (0.055) | (0.055) | (0.053) |
| | | [0.637] | [0.058] | [0.916] | [0.447] | [0.357] | [0.093] | [0.990] | [0.109] |
| P-val From Forensics < 0.05 2015 | 0.413 | 0.031 | 0.069 | 0.010 | 0.014 | 0.003 | -0.041 | 0.046 | 0.087 |
| | | (0.046) | (0.059) | (0.025) | (0.025) | (0.023) | (0.027) | (0.027) | (0.028) |
| | | [0.505] | [0.244] | [0.876] | [0.794] | [0.965] | [0.500] | [0.479] | [0.168] |
| Turnout 2018 (%) | 49.213 | 0.107 | 0.607 | -0.343 | 0.045 | -0.725 | -0.676 | -0.773 | -0.097 |
| | | (0.758) | (1.036) | (0.432) | (0.463) | (0.441) | (0.501) | (0.527) | (0.530) |
| | | [0.887] | [0.539] | [0.718] | [0.972] | [0.458] | [0.536] | [0.494] | [0.940] |
| Share Blank Votes 2018 (%) | 5.366 | 0.487 | 0.612 | 0.287 | 0.560 | 0.396 | 0.483 | 0.311 | -0.172 |
| | | (0.394) | (0.521) | (0.209) | (0.215) | (0.204) | (0.236) | (0.248) | (0.262) |
| | | [0.215] | [0.192] | [0.524] | [0.237] | [0.385] | [0.352] | [0.539] | [0.763] |
| Mayor Margin of Victory 2015 | 13.706 | 0.105 | 0.313 | -0.297 | 0.296 | 0.481 | 0.347 | 0.613 | 0.266 |
| | | (1.106) | (1.538) | (0.556) | (0.619) | (0.558) | (0.643) | (0.671) | (0.694) |
| | | [0.929] | [0.833] | [0.823] | [0.822] | [0.699] | [0.814] | [0.672] | [0.868] |
| Santos Vote Share 2014 | 48.549 | -0.302 | 0.029 | -0.197 | -0.751 | 2.061 | -0.107 | 4.180 | 4.287 |
| | | (1.870) | (2.310) | (1.026) | (1.072) | (0.915) | (1.113) | (1.035) | (1.130) |
| | | [0.848] | [0.988] | [0.925] | [0.744] | [0.267] | [0.962] | [0.076] | [0.070] |
| Zuluaga Vote Share 2014 | 48.734 | 0.051 | -0.316 | -0.022 | 0.505 | -2.136 | -0.012 | -4.212 | -4.199 |
| | | (1.819) | (2.238) | (0.996) | (1.044) | (0.886) | (1.079) | (1.001) | (1.094) |
| | | [0.976] | [0.879] | [0.991] | [0.836] | [0.241] | [0.995] | [0.055] | [0.074] |
| Liberals Vote Share 2018 | 15.559 | -0.321 | -1.243 | 0.057 | 0.252 | 0.956 | -0.312 | 2.194 | 2.506 |
| | | (0.988) | (1.176) | (0.589) | (0.573) | (0.521) | (0.581) | (0.643) | (0.650) |
| | | [0.753] | [0.319] | [0.968] | [0.842] | [0.386] | [0.810] | [0.127] | [0.086] |

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**Table A12 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| Cambio R Vote Share 2018 | 15.839 | -0.755 | -0.308 | -1.083 | -0.884 | -1.046 | -1.525 | -0.577 | 0.948 |
| | | (1.158) | (1.434) | (0.624) | (0.607) | (0.565) | (0.635) | (0.663) | (0.641) |
| | | [0.491] | [0.826] | [0.455] | [0.520] | [0.443] | [0.273] | [0.702] | [0.514] |
| Centro Dem Vote Share 2018 | 14.106 | -0.246 | -0.149 | -0.739 | 0.153 | -0.199 | 1.937 | -2.287 | -4.224 |
| | | (1.002) | (1.321) | (0.546) | (0.576) | (0.513) | (0.632) | (0.553) | (0.607) |
| | | [0.801] | [0.916] | [0.561] | [0.918] | [0.873] | [0.204] | [0.082] | [0.004] |
| P de la U Vote Share 2018 | 15.103 | -0.066 | 0.106 | 0.563 | -0.883 | -0.426 | -0.727 | -0.132 | 0.596 |
| | | (0.945) | (1.200) | (0.572) | (0.520) | (0.498) | (0.560) | (0.610) | (0.616) |
| | | [0.943] | [0.915] | [0.670] | [0.459] | [0.687] | [0.579] | [0.929] | [0.669] |
| Green Party Vote Share 2018 | 4.445 | 0.325 | 0.773 | 0.098 | 0.092 | -0.505 | -0.539 | -0.472 | 0.067 |
| | | (0.440) | (0.631) | (0.292) | (0.247) | (0.285) | (0.332) | (0.315) | (0.305) |
| | | [0.491] | [0.199] | [0.848] | [0.854] | [0.383] | [0.420] | [0.476] | [0.928] |
| Polo Vote Share 2018 | 2.982 | -0.047 | -0.147 | 0.228 | -0.224 | 0.424 | 0.261 | 0.583 | 0.322 |
| | | (0.299) | (0.331) | (0.184) | (0.132) | (0.130) | (0.132) | (0.168) | (0.157) |
| | | [0.848] | [0.718] | [0.559] | [0.537] | [0.130] | [0.337] | [0.081] | [0.393] |
| Decentes Vote Share 2018 | 1.294 | 0.161 | 0.122 | 0.167 | 0.195 | 0.120 | 0.007 | 0.231 | 0.224 |
| | | (0.116) | (0.125) | (0.084) | (0.072) | (0.072) | (0.072) | (0.098) | (0.096) |
| | | [0.204] | [0.315] | [0.435] | [0.164] | [0.531] | [0.972] | [0.333] | [0.343] |
| **Panel D. Geographic Covariates** | | | | | | | | | |
| Caribean Region (=1) | 0.227 | -0.013 | 0.020 | -0.006 | -0.053 | -0.003 | -0.041 | 0.033 | 0.074 |
| | | (0.039) | (0.050) | (0.021) | (0.020) | (0.019) | (0.022) | (0.023) | (0.023) |
| | | [0.748] | [0.674] | [0.889] | [0.263] | [0.937] | [0.394] | [0.554] | [0.155] |
| Center-East Region (=1) | 0.222 | 0.001 | -0.006 | -0.020 | 0.030 | 0.002 | 0.002 | 0.002 | -0.001 |
| | | (0.038) | (0.048) | (0.020) | (0.022) | (0.020) | (0.023) | (0.023) | (0.023) |
| | | [0.970] | [0.898] | [0.671] | [0.533] | [0.965] | [0.964] | [0.974] | [0.994] |
| Center-South Region (=1) | 0.169 | -0.039 | -0.042 | -0.066 | -0.008 | -0.027 | -0.008 | -0.045 | -0.037 |
| | | (0.033) | (0.042) | (0.017) | (0.019) | (0.016) | (0.019) | (0.018) | (0.018) |
| | | [0.213] | [0.326] | [0.117] | [0.875] | [0.501] | [0.866] | [0.309] | [0.398] |

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**Table A12 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| Coffee-growing Region (=1) | 0.153 | 0.059 | 0.044 | 0.101 | 0.031 | 0.037 | 0.052 | 0.022 | -0.030 |
| | | (0.034) | (0.045) | (0.020) | (0.019) | (0.019) | (0.022) | (0.022) | (0.023) |
| | | [0.113] | [0.329] | [0.028] | [0.472] | [0.384] | [0.341] | [0.676] | [0.584] |
| Llanos Region (=1) | 0.071 | 0.012 | 0.016 | -0.012 | 0.033 | -0.006 | 0.013 | -0.025 | -0.038 |
| | | (0.025) | (0.035) | (0.012) | (0.014) | (0.013) | (0.016) | (0.014) | (0.015) |
| | | [0.632] | [0.638] | [0.692] | [0.300] | [0.869] | [0.757] | [0.509] | [0.301] |
| Pacific Region (=1) | 0.158 | -0.021 | -0.032 | 0.004 | -0.034 | -0.003 | -0.018 | 0.013 | 0.031 |
| | | (0.032) | (0.040) | (0.018) | (0.017) | (0.016) | (0.018) | (0.019) | (0.019) |
| | | [0.477] | [0.389] | [0.937] | [0.421] | [0.949] | [0.636] | [0.778] | [0.459] |
| **Panel E. Other Covariates** | | | | | | | | | |
| Number Responses Survey | 10.207 | -0.245 | -0.495 | 1.165 | -1.419 | -0.269 | 0.071 | -0.600 | -0.671 |
| | | (0.578) | (0.725) | (0.375) | (0.277) | (0.314) | (0.343) | (0.390) | (0.382) |
| | | [0.698] | [0.491] | [0.160] | [0.038] | [0.717] | [0.930] | [0.506] | [0.427] |
| Population Reached by Ads (%) | 0.035 | 0.001 | 0.001 | 0.002 | 0.000 | -0.000 | 0.001 | -0.001 | -0.002 |
| | | (0.002) | (0.002) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| | | [0.523] | [0.625] | [0.354] | [0.862] | [0.972] | [0.729] | [0.698] | [0.456] |
| Users Reached by Ads (Thousands) | 8.758 | -0.950 | -0.239 | -1.377 | -1.254 | -0.506 | -0.158 | -0.846 | -0.689 |
| | | (1.054) | (1.376) | (0.445) | (0.485) | (0.393) | (0.471) | (0.439) | (0.460) |
| | | [0.229] | [0.844] | [0.189] | [0.199] | [0.526] | [0.883] | [0.346] | [0.492] |
| No Users Reached by Ads (=1) | 0.000 | 0.002 | 0.000 | 0.003 | 0.002 | 0.000 | -0.001 | 0.002 | 0.003 |
| | | (0.001) | (0.000) | (0.002) | (0.002) | (0.002) | (0.001) | (0.003) | (0.002) |
| | | [0.354] | [1.000] | [0.108] | [0.034] | [0.782] | [0.952] | [0.536] | [0.727] |
| **Panel F. Candidate Level Covariates** | | | | | | | | | |
| Candidate Will Engage in Irregularities (fraction of respondents) | 0.511 | 0.001 | 0.007 | -0.024 | 0.019 | 0.008 | 0.022 | -0.007 | -0.029 |
| | | (0.016) | (0.021) | (0.015) | (0.016) | (0.014) | (0.017) | (0.017) | (0.017) |
| | | [0.966] | [0.740] | [0.242] | [0.351] | [0.707] | [0.316] | [0.782] | [0.208] |

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**Table A12 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| Demeaned - Candidate Will Engage in Irregularities (fraction of respondents) | -0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | -0.000 |
| | | (0.000) | (0.000) | (0.012) | (0.013) | (0.012) | (0.013) | (0.014) | (0.014) |
| | | [1.000] | [1.000] | [1.000] | [1.000] | [1.000] | [1.000] | [1.000] | [1.000] |
| Above Average - Candidate Will Engage in Irregularities (=1) | 0.473 | -0.006 | 0.002 | -0.008 | -0.014 | 0.015 | -0.007 | 0.036 | 0.043 |
| | | (0.015) | (0.019) | (0.025) | (0.025) | (0.023) | (0.027) | (0.027) | (0.028) |
| | | [0.671] | [0.926] | [0.667] | [0.447] | [0.410] | [0.746] | [0.049] | [0.037] |
| Past Malfeasance (=1) | 0.263 | -0.002 | 0.002 | -0.009 | 0.000 | 0.019 | -0.021 | 0.061 | 0.082 |
| | | (0.045) | (0.064) | (0.075) | (0.085) | (0.070) | (0.081) | (0.087) | (0.093) |
| | | [0.962] | [0.979] | [0.895] | [1.000] | [0.764] | [0.781] | [0.414] | [0.312] |
| Candidate Will Win (fraction of respondents) | 0.255 | 0.005 | 0.004 | 0.003 | 0.009 | 0.015 | 0.019 | 0.011 | -0.008 |
| | | (0.009) | (0.011) | (0.014) | (0.014) | (0.013) | (0.015) | (0.015) | (0.016) |
| | | [0.537] | [0.685] | [0.788] | [0.391] | [0.148] | [0.129] | [0.314] | [0.508] |
| Log(Age) | 3.791 | 0.009 | 0.002 | 0.016 | 0.010 | 0.003 | 0.013 | -0.006 | -0.018 |
| | | (0.009) | (0.011) | (0.011) | (0.011) | (0.010) | (0.012) | (0.012) | (0.012) |
| | | [0.307] | [0.886] | [0.142] | [0.330] | [0.726] | [0.290] | [0.643] | [0.116] |
| Female(=1) | 0.172 | -0.029 | -0.039 | -0.019 | -0.029 | -0.007 | -0.006 | -0.008 | -0.002 |
| | | (0.013) | (0.017) | (0.018) | (0.018) | (0.017) | (0.019) | (0.019) | (0.019) |
| | | [0.010] | [0.027] | [0.282] | [0.100] | [0.640] | [0.708] | [0.631] | [0.927] |
| Incumbent Party - Lax (=1) | 0.184 | 0.007 | 0.002 | 0.003 | 0.014 | 0.024 | 0.038 | 0.011 | -0.028 |
| | | (0.012) | (0.016) | (0.020) | (0.020) | (0.018) | (0.022) | (0.021) | (0.022) |
| | | [0.579] | [0.889] | [0.823] | [0.329] | [0.082] | [0.020] | [0.499] | [0.072] |
| Incumbent Party - Strict (=1) | 0.044 | 0.009 | -0.007 | 0.010 | 0.025 | 0.009 | 0.001 | 0.017 | 0.016 |
| | | (0.007) | (0.009) | (0.011) | (0.012) | (0.010) | (0.012) | (0.013) | (0.013) |
| | | [0.249] | [0.433] | [0.256] | [0.008] | [0.320] | [0.905] | [0.113] | [0.159] |
| Party Coalition (=1) | 0.245 | 0.003 | -0.011 | -0.000 | 0.021 | 0.013 | 0.015 | 0.012 | -0.003 |
| | | (0.019) | (0.026) | (0.022) | (0.022) | (0.020) | (0.024) | (0.023) | (0.024) |
| | | [0.911] | [0.655] | [0.990] | [0.391] | [0.575] | [0.587] | [0.666] | [0.897] |

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**Table A12 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| Independent Candidate (=1) | 0.027 | -0.009 | -0.008 | 0.002 | -0.021 | 0.008 | 0.014 | 0.002 | -0.011 |
| | | (0.006) | (0.007) | (0.008) | (0.006) | (0.006) | (0.008) | (0.006) | (0.008) |
| | | [0.105] | [0.296] | [0.833] | [0.001] | [0.196] | [0.054] | [0.679] | [0.144] |

**Notes:** This table presents the balance checks for a selected set of covariates in the candidate-level data. The control group mean of each variable is presented in column (1). In each of the remaining columns the difference in means is reported for the shown treatment groups. Clustered standard errors at the municipal-level are shown in parentheses and random inference p-values are shown in square brackets.

Table A13: Correlation Between Past Malfeasance and Survey Measures of Likelihood to Engage in Irregularities

| | (1) | (2) | (3) |
|---|---|---|---|
| | Past Malfeasance (z-score) | | |
| Candidate will engage in irregularities (z-score) | 0.273 | | |
| | (0.057) | | |
| Demeaned Candidate will engage in irregularities (z-score) | | 0.413 | |
| | | (0.056) | |
| Above Average Candidate will engage in irregularities (z-score) | | | 0.383 |
| | | | (0.060) |
| Sample Size | 256 | 256 | 256 |
| N. Municipalities | 48 | 48 | 48 |

**Notes:** This table presents the OLS results of regressing a z-score of an indicator of whether a candidate was found to be involved in malfeasance in the past according to the investigation by the NGO PARES on different survey-based variables about the likelihood that a candidate commits irregularities. All of these variables are normalized so the estimates reported can be interpreted as correlations. In column (1) the dependent variable is the proportion of respondents from the pre-treatment survey that say that the candidate might commit at least one type of electoral irregularity. In column (2) it is this same variable, demeaned using the municipal-level mean. In column (3) it is an indicator that takes the value of one if this variable is above the municipal-level mean. Robust standard errors are shown in parentheses.

Table A14: Correlation Between Measures of Candidate Engagement in Irregularities and Other Covariates

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| | Candidate Will Win the Election (fraction of respondents) | | | Incumbent Party Candidate Strict Measure (=1) | | | Incumbent Party Candidate Lax Measure (=1) | | |
| Candidate will engage in irregularities (z-score) | 0.086 | | | 0.107 | | | 0.205 | | |
| | (0.019) | | | (0.019) | | | (0.021) | | |
| Demeaned Candidate will engage in irregularities (z-score) | | 0.111 | | | 0.140 | | | 0.245 | |
| | | (0.019) | | | (0.023) | | | (0.022) | |
| Above Average Candidate will engage in irregularities (z-score) | | | 0.116 | | | 0.128 | | | 0.216 |
| | | | (0.018) | | | (0.020) | | | (0.022) |
| Sample Size | 2989 | 2989 | 2989 | 2989 | 2989 | 2989 | 2989 | 2989 | 2989 |
| N. Municipalities | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 |

**Notes:** This table presents the OLS results of regressing the z-scores of the measures indicating each candidate's likelihood of engagement in electoral irregularities from Table 5 on z-scores of different candidate covariates. In columns (1)-(3) the examined covariate is the proportion of respondents from the pre-treatment survey that say the candidate is going to win the election in their municipality. In columns (4)-(6) it is an indicator that takes the value of one if the candidate belongs to exactly the same party or coalition of parties as the incumbent mayor. In columns (7)-(9) it is an indicator that takes the value of one if the candidate belongs to a party or coalition of parties that shares at least one party with the incumbent mayor. All of these variables are normalized so the estimates reported can be interpreted as correlations. Robust standard errors are shown in parentheses.

Table A15: Impacts on Vote Share of More Popular Candidates

| | (1) | (2) | (3) |
|---|---|---|---|
| | | Vote Share (%) | |
| Interaction term $Z$: | Candidate Will Win the Election (fraction of respondents) | Incumbent Party Candidate Strict Measure (=1) | Incumbent Party Candidate Lax Measure (=1) |
| **Panel A. Pooled Treatment** | | | |
| $[T \times Z]$ Any treatment $\times Z$ | -1.119 | -1.853 | 1.465 |
| | (2.171) | (1.927) | (1.227) |
| | [0.601] | [0.383] | [0.244] |
| **Panel B. Subtreatments by Types of Ad** | | | |
| $[IA \times Z]$ Information Ad $\times Z$ | -0.568 | -6.593 | 1.867 |
| | (2.614) | (2.499) | (1.550) |
| | [0.849] | [0.011] | [0.243] |
| $[CA \times Z]$ Call-to-Action Ad $\times Z$ | -0.861 | -1.545 | 1.341 |
| | (2.846) | (2.496) | (1.620) |
| | [0.766] | [0.523] | [0.408] |
| $[I + CA \times Z]$ Info + Call-to-Action Ad $\times Z$ | -1.935 | 0.635 | 1.186 |
| | (2.826) | (2.490) | (1.644) |
| | [0.498] | [0.801] | [0.454] |
| Test $IA \times Z = CA \times Z$, p-value | 0.92 | 0.07 | 0.77 |
| Test $IA \times Z = I + CA \times Z$, p-value | 0.64 | 0.01 | 0.70 |
| Test $CA \times Z = I + CA \times Z$, p-value | 0.73 | 0.44 | 0.93 |
| **Panel C. Subtreatments by Letter - No Letter** | | | |
| $[NL \times Z]$ No Letter - Any Ad $\times Z$ | -0.125 | -2.391 | 1.091 |
| | (2.970) | (2.685) | (1.632) |
| | [0.968] | [0.370] | [0.511] |
| $[L \times Z]$ Letter - Any Ad $\times Z$ | -1.587 | -1.584 | 1.667 |
| | (2.267) | (2.077) | (1.321) |
| | [0.505] | [0.450] | [0.202] |
| Test $NL \times Z = L \times Z$, p-value | 0.59 | 0.76 | 0.71 |
| Control Mean | 19.66 | 19.66 | 19.66 |
| Sample Size | 2989 | 2989 | 2989 |
| N. Municipalities | 630 | 630 | 630 |

**Notes:** The outcome in all columns is the vote share of each candidate, expressed as a percentage of total valid votes. In each of these columns, different proxies for candidate popularity are used to compute candidate-level heterogeneous effects. In column (1) it is the proportion of respondents from the pre-treatment survey that say the candidate is going to win the election in their municipality. In column (2) it is an indicator that takes the value of one if the candidate belongs to exactly the same party or coalition of parties as the incumbent mayor. In column (3) it is an indicator that takes the value of one if the candidate belongs to a party or coalition of parties that shares at least one party with the incumbent mayor. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Clustered standard errors at the municipal-level are shown in parentheses and random inference p-values are shown in square brackets.

Table A16: Impacts on Additional Electoral Outcomes

| | (1) Turnout (%) | (2) Margin of Victory (%) |
|---|---|---|
| **Panel A. Pooled Treatment** | | |
| [$T$] Any treatment | 0.443 | 0.889 |
| | (0.505) | (0.865) |
| | [0.387] | [0.320] |
| **Panel B. Subtreatments by Types of Ad** | | |
| [$IA$] Information Ad | 0.168 | 1.544 |
| | (0.668) | (1.251) |
| | [0.821] | [0.201] |
| [$CA$] Call-to-Action Ad | 0.999 | 1.179 |
| | (0.555) | (1.086) |
| | [0.093] | [0.272] |
| [$I + CA$] Info + Call-to-Action Ad | 0.176 | -0.057 |
| | (0.686) | (1.112) |
| | [0.803] | [0.952] |
| Test $IA = CA$, p-value | 0.18 | 0.79 |
| Test $IA = I + CA$, p-value | 0.99 | 0.24 |
| Test $CA = I + CA$, p-value | 0.21 | 0.31 |
| **Panel C. Subtreatments by Letter - No Letter** | | |
| [$NL$] No Letter - Any Ad | 0.127 | 0.572 |
| | (0.697) | (1.139) |
| | [0.852] | [0.598] |
| [$L$] Letter - Any Ad | 0.605 | 1.053 |
| | (0.520) | (0.949) |
| | [0.221] | [0.299] |
| Test $NL = L$, p-value | 0.45 | 0.67 |

**Notes:** The outcome in column (1) is turnout, as a percentage of the people registered to vote. In column (2) it is the margin of the winning candidate over the runner-up, expressed as a percentage of total votes. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A17: Estimates of the Percentage of the Effect on Candidate Vote Share Due to Decreasing Electoral Irregularities

| *Electoral Irregularity Measure / Measure of* $Z_c$: | Candidate will engage in irregularities (fraction of respondents) | Demeaned Candidate will engage in irregularities (fraction of respondents) | Above Average Candidate will engage in irregularities (=1) |
|---|---|---|---|
| Media Irregularities (=1) | 13.33 | 25.35 | 16.14 |
| Number of Media Irregularities | 14.09 | 20.86 | 12.37 |
| Index of all Forensic Test Stats (z-score) | 34.69 | 37.65 | 32.58 |
| Any P-value From Forensic Tests < 0.05 (=1) | 30.04 | 54.47 | 31.40 |

**Notes:** This table presents estimates of the percentage of the effect of the reporting campaign interventions on the vote share of the candidates more likely to engage in electoral irregularities accounted for by the decrease in electoral irregularities using the method described in Section III.D, using different combinations of variables proxying for electoral irregularities and for the proxies for the likelihood that a candidate engages in electoral irregularities, $Z_c$.

Table A18: Robustness: Impacts on Reports - No Controls

| | (1) Reports (=1) | (2) N. Reports | (3) High Quality Reports (=1) | (4) High Quality N. Reports |
|---|---|---|---|---|
| **Panel A. Pooled Treatment** | | | | |
| [$T$] Any treatment | 0.116 | 0.372 | 0.089 | 0.181 |
| | (0.036) | (0.103) | (0.031) | (0.053) |
| | [0.006] | [0.004] | [0.005] | [0.004] |
| **Panel B. Subtreatments by Types of Ad** | | | | |
| [$IA$] Information Ad | 0.167 | 0.484 | 0.083 | 0.127 |
| | (0.048) | (0.148) | (0.041) | (0.063) |
| | [0.002] | [0.000] | [0.051] | [0.039] |
| [$CA$] Call-to-Action Ad | 0.019 | 0.174 | 0.071 | 0.155 |
| | (0.046) | (0.141) | (0.040) | (0.082) |
| | [0.718] | [0.199] | [0.082] | [0.036] |
| [$I + CA$] Info + Call-to-Action Ad | 0.160 | 0.454 | 0.113 | 0.259 |
| | (0.048) | (0.148) | (0.042) | (0.085) |
| | [0.001] | [0.001] | [0.006] | [0.000] |
| Test $IA = CA$, p-value | 0.01 | 0.08 | 0.79 | 0.75 |
| Test $IA = I + CA$, p-value | 0.89 | 0.87 | 0.53 | 0.16 |
| Test $CA = I + CA$, p-value | 0.01 | 0.11 | 0.37 | 0.33 |
| **Panel C. Subtreatments by Letter - No Letter** | | | | |
| [$NL$] No Letter - Any Ad | 0.230 | 0.491 | 0.148 | 0.243 |
| | (0.048) | (0.138) | (0.043) | (0.084) |
| | [0.000] | [0.000] | [0.001] | [0.000] |
| [$L$] Letter - Any Ad | 0.057 | 0.311 | 0.059 | 0.149 |
| | (0.039) | (0.118) | (0.033) | (0.058) |
| | [0.180] | [0.010] | [0.084] | [0.018] |
| Test $NL = L$, p-value | 0.00 | 0.23 | 0.04 | 0.29 |
| Control Mean | 0.29 | 0.55 | 0.16 | 0.20 |
| Sample Size | 698 | 698 | 698 | 698 |

**Notes:** This table reports the same estimates as in Table 3 without any control variables except for strata fixed effects. The outcome in column (1) is an indicator of whether any report was issued to the MOE from each municipality. In column (2) it is the number of such reports. In columns (3)-(4) the same definitions are used on the subset of reports of a high quality (see Section I for a discussion about how the quality of reports is assessed by the MOE). All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A19: Impacts on Irregularity Measures - No Controls

| | (1) Media-Based Irregularities | (2) Media-Based Irregularities | (3) Deviations from Benford's 2nd Digit Law | (4) Deviations from Benford's 2nd Digit Law |
|---|---|---|---|---|
| | Media Irregularities (=1) | Number of Media Irregularities | Index of all Forensic Test Stats (z-score) | Any P-value From Forensic Tests < 0.05 (=1) |
| **Panel A. Pooled Treatment** | | | | |
| [$T$] Any treatment | -0.048 | -0.071 | -0.077 | -0.073 |
| | (0.028) | (0.038) | (0.078) | (0.041) |
| | [0.083] | [0.046] | [0.302] | [0.078] |
| **Panel B. Subtreatments by Types of Ad** | | | | |
| [$IA$] Information Ad | -0.045 | -0.073 | -0.169 | -0.093 |
| | (0.035) | (0.044) | (0.097) | (0.051) |
| | [0.257] | [0.152] | [0.088] | [0.077] |
| [$CA$] Call-to-Action Ad | -0.036 | -0.056 | -0.081 | -0.065 |
| | (0.036) | (0.047) | (0.097) | (0.052) |
| | [0.354] | [0.245] | [0.416] | [0.237] |
| [$I + CA$] Info + Call-to-Action Ad | -0.063 | -0.085 | 0.020 | -0.062 |
| | (0.034) | (0.045) | (0.100) | (0.052) |
| | [0.075] | [0.079] | [0.838] | [0.233] |
| Test $IA = CA$, p-value | 0.79 | 0.70 | 0.39 | 0.61 |
| Test $IA = I + CA$, p-value | 0.60 | 0.78 | 0.07 | 0.58 |
| Test $CA = I + CA$, p-value | 0.43 | 0.52 | 0.33 | 0.97 |
| **Panel C. Subtreatments by Letter - No Letter** | | | | |
| [$NL$] No Letter - Any Ad | -0.034 | -0.049 | -0.010 | -0.067 |
| | (0.036) | (0.047) | (0.101) | (0.052) |
| | [0.375] | [0.345] | [0.927] | [0.205] |
| [$L$] Letter - Any Ad | -0.056 | -0.083 | -0.111 | -0.077 |
| | (0.030) | (0.039) | (0.082) | (0.044) |
| | [0.052] | [0.030] | [0.185] | [0.072] |
| Test $NL = L$, p-value | 0.48 | 0.38 | 0.28 | 0.84 |
| Control Mean | 0.16 | 0.20 | 0.00 | 0.52 |
| Sample Size | 698 | 698 | 698 | 698 |

**Notes:** This table reports the same estimates as in Table 4 without any control variables except for strata fixed effects. The outcome in column (1) is an indicator of whether any irregularity was reported in the media in a particular municipality. In column (2) it is the number of different irregularities. In column (3) it is the index of the $\chi^2$, Kolmogorov-Smirnov and Kuiper test statistics testing for Benford's 2nd digit law, described in Section III.B . In column (4) it is an indicator that takes the value of one if the p-value of any of these tests leads to rejection of the null hypothesis with less than a 5% significance level. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A20: Robustness: Impacts on Vote Share of Candidates Likely to Engage in Irregularities - No Controls

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | | Vote Share (%) | | |
| Interaction term $Z$: | Candidate will engage in irregularities (fraction of respondents) | Demeaned Candidate will engage in irregularities (fraction of respondents) | Above Average Candidate will engage in irregularities (=1) | Past Malfeasance (=1) |
| **Panel A. Pooled Treatment** | | | | |
| $[T \times Z]$ Any treatment $\times Z$ | -3.218 | -3.332 | -2.771 | -3.390 |
| | (2.299) | (2.595) | (1.426) | (4.154) |
| | [0.177] | [0.222] | [0.058] | [0.514] |
| | {0.163} | {0.214} | {0.056} | |
| **Panel B. Subtreatments by Types of Ad** | | | | |
| $[IA \times Z]$ Information Ad $\times Z$ | -3.854 | -4.629 | -1.589 | -12.043 |
| | (2.899) | (3.379) | (1.855) | (3.619) |
| | [0.182] | [0.154] | [0.392] | [0.009] |
| | {0.195} | {0.186} | {0.402} | |
| $[CA \times Z]$ Call-to-Action Ad $\times Z$ | -1.117 | -0.201 | -1.441 | 5.287 |
| | (3.194) | (3.464) | (1.924) | (6.405) |
| | [0.699] | [0.963] | [0.447] | [0.376] |
| | {0.732} | {0.950} | {0.462} | |
| $[I + CA \times Z]$ Info + Call-to-Action Ad $\times Z$ | -4.468 | -4.951 | -5.317 | -0.724 |
| | (3.056) | (3.398) | (1.836) | (5.992) |
| | [0.125] | [0.143] | [0.001] | [0.883] |
| | {0.148} | {0.151} | {0.005} | |
| Test $IA \times Z = CA \times Z$, p-value | 0.43 | 0.25 | 0.95 | 0.01 |
| Test $IA \times Z = I + CA \times Z$, p-value | 0.85 | 0.93 | 0.07 | 0.06 |
| Test $CA \times Z = I + CA \times Z$, p-value | 0.35 | 0.22 | 0.07 | 0.45 |
| **Panel C. Subtreatments by Letter - No Letter** | | | | |
| $[NL \times Z]$ No Letter - Any Ad $\times Z$ | -3.291 | -2.123 | -2.151 | -1.698 |
| | (2.962) | (3.134) | (1.902) | (5.272) |
| | [0.263] | [0.491] | [0.250] | [0.752] |
| | {0.288} | {0.514} | {0.265} | |
| $[L \times Z]$ Letter - Any Ad $\times Z$ | -3.204 | -4.017 | -3.129 | -4.779 |
| | (2.525) | (2.937) | (1.545) | (5.172) |
| | [0.208] | [0.172] | [0.046] | [0.371] |
| | {0.205} | {0.190} | {0.046} | |
| Test $NL \times Z = L \times Z$, p-value | 0.98 | 0.55 | 0.60 | 0.63 |
| Control Mean | 20.01 | 20.01 | 20.01 | 20.01 |
| Sample Size | 2989 | 2989 | 2989 | 263 |
| N. Municipalities | 630 | 630 | 630 | 48 |

**Notes:** This table reports the same estimates as in Table 5 without any control variables except for strata fixed effects. The outcome in all columns is the vote share of each candidate, expressed as a percentage of total valid votes. In each of these columns, a different measure of the likelihood that a candidate commits irregularities is used to compute the candidate-level heterogeneous effects. In column (1) it is the proportion of respondents from the pre-treatment survey that say that the candidate might commit at least one type of electoral irregularity. In column (2) the outcome is this same variable, demeaned using the municipal-level mean. In column (3) it is an indicator that takes the value of one if this variable is above the municipal-level mean. Finally, in column (4) it is an indicator of whether a candidate was found to be involved in malfeasance in the past according to the investigation by the NGO PARES. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Clustered standard errors at the municipal-level are shown in parentheses, random inference p-values are shown in square brackets, and clustered wild-bootstrap p-values correcting for the variance in estimating $Z$ are shown in curly brackets.

Table A21: Long regression - Impacts on Reports

| | (1) Reports (=1) | (2) N. Reports | (3) High Quality Reports (=1) | (4) High Quality N. Reports |
|---|---|---|---|---|
| Info + No Letter | 0.217 | 0.409 | 0.138 | 0.167 |
| | (0.076) | (0.176) | (0.067) | (0.087) |
| | [0.003] | [0.007] | [0.017] | [0.027] |
| CtA + No Letter | 0.134 | 0.498 | 0.128 | 0.343 |
| | (0.070) | (0.269) | (0.064) | (0.187) |
| | [0.042] | [0.009] | [0.027] | [0.004] |
| Info + CtA + No Letter | 0.310 | 0.639 | 0.183 | 0.290 |
| | (0.070) | (0.182) | (0.069) | (0.110) |
| | [0.000] | [0.001] | [0.003] | [0.002] |
| Info + Partial K. Letter | 0.077 | 0.497 | 0.043 | 0.070 |
| | (0.067) | (0.239) | (0.054) | (0.085) |
| | [0.230] | [0.011] | [0.475] | [0.413] |
| CtA + Partial K. Letter | -0.087 | -0.199 | 0.031 | 0.034 |
| | (0.065) | (0.157) | (0.059) | (0.084) |
| | [0.164] | [0.195] | [0.577] | [0.670] |
| Info + CtA + Partial K. Letter | 0.110 | 0.181 | 0.030 | 0.066 |
| | (0.071) | (0.177) | (0.055) | (0.088) |
| | [0.086] | [0.277] | [0.577] | [0.414] |
| Info + Full K. Letter | 0.141 | 0.468 | 0.048 | 0.158 |
| | (0.074) | (0.297) | (0.060) | (0.119) |
| | [0.029] | [0.018] | [0.377] | [0.076] |
| CtA + Full K. Letter | -0.006 | 0.177 | 0.063 | 0.097 |
| | (0.065) | (0.183) | (0.061) | (0.091) |
| | [0.928] | [0.279] | [0.262] | [0.223] |
| Info + CtA + Full K. Letter | 0.054 | 0.582 | 0.120 | 0.441 |
| | (0.066) | (0.306) | (0.060) | (0.184) |
| | [0.404] | [0.015] | [0.034] | [0.001] |
| Test: Any treatment is equal, p-value | 0.00 | 0.01 | 0.49 | 0.29 |
| Test: Info treatments are equal, p-value | 0.32 | 0.95 | 0.44 | 0.65 |
| Test: CtA treatments are equal, p-value | 0.04 | 0.04 | 0.47 | 0.30 |
| Test: Info + CtA treatments are equal, p-value | 0.01 | 0.13 | 0.16 | 0.07 |
| Test: No Letter treatments are equal, p-value | 0.16 | 0.62 | 0.80 | 0.51 |
| Test: Letter treatments are equal, p-value | 0.11 | 0.04 | 0.85 | 0.43 |
| Test: Partial K. Letter treatments are equal, p-value | 0.05 | 0.02 | 0.98 | 0.94 |
| Test: Full K. Letter treatments are equal, p-value | 0.26 | 0.42 | 0.62 | 0.23 |
| Control Mean | 0.29 | 0.55 | 0.16 | 0.20 |
| Sample Size | 698 | 698 | 698 | 698 |

**Notes:** This table reports the effects of the intervention using the long regression and the same outcomes as in Table 3. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). The p-values of F-statistic tests of equality between different groups of coefficients are shown below each regression. Robust standard errors are shown in parentheses.

Table A22: Long regression - Impacts on Irregularities

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Media-Based Irregularities | | Deviations from Benford's 2nd Digit Law | |
| | Media Irregularities (=1) | Number of Media Irregularities | Index of all Forensic Test Stats (z-score) | Any P-value From Forensic Tests < 0.05 (=1) |
| Info + No Letter | -0.049 | -0.079 | -0.243 | -0.154 |
| | (0.051) | (0.063) | (0.112) | (0.066) |
| | [0.330] | [0.276] | [0.062] | [0.036] |
| CtA + No Letter | -0.046 | -0.067 | -0.098 | -0.035 |
| | (0.048) | (0.062) | (0.131) | (0.077) |
| | [0.395] | [0.345] | [0.477] | [0.656] |
| Info + CtA + No Letter | -0.029 | -0.028 | 0.088 | -0.043 |
| | (0.052) | (0.072) | (0.144) | (0.078) |
| | [0.579] | [0.717] | [0.464] | [0.593] |
| Info + Partial K. Letter | -0.085 | -0.128 | -0.273 | -0.057 |
| | (0.049) | (0.055) | (0.124) | (0.073) |
| | [0.112] | [0.068] | [0.027] | [0.448] |
| CtA + Partial K. Letter | -0.074 | -0.101 | -0.177 | -0.125 |
| | (0.044) | (0.060) | (0.104) | (0.079) |
| | [0.159] | [0.159] | [0.172] | [0.099] |
| Info + CtA + Partial K. Letter | -0.098 | -0.138 | -0.114 | -0.113 |
| | (0.041) | (0.047) | (0.107) | (0.068) |
| | [0.068] | [0.055] | [0.387] | [0.111] |
| Info + Full K. Letter | -0.045 | -0.068 | -0.374 | -0.152 |
| | (0.049) | (0.062) | (0.126) | (0.075) |
| | [0.398] | [0.358] | [0.003] | [0.034] |
| CtA + Full K. Letter | 0.003 | -0.023 | -0.008 | -0.056 |
| | (0.058) | (0.070) | (0.134) | (0.073) |
| | [0.975] | [0.757] | [0.950] | [0.442] |
| Info + CtA + Full K. Letter | -0.075 | -0.102 | -0.092 | -0.057 |
| | (0.047) | (0.061) | (0.142) | (0.067) |
| | [0.147] | [0.148] | [0.473] | [0.407] |
| Test: Any treatment is equal, p-value | 0.85 | 0.70 | 0.18 | 0.82 |
| Test: Info treatments are equal, p-value | 0.77 | 0.63 | 0.66 | 0.48 |
| Test: CtA treatments are equal, p-value | 0.50 | 0.61 | 0.52 | 0.65 |
| Test: Info + CtA treatments are equal, p-value | 0.49 | 0.30 | 0.44 | 0.71 |
| Test: No Letter treatments are equal, p-value | 0.95 | 0.82 | 0.13 | 0.32 |
| Test: Letter treatments are equal, p-value | 0.68 | 0.60 | 0.24 | 0.85 |
| Test: Partial K. Letter treatments are equal, p-value | 0.89 | 0.83 | 0.53 | 0.75 |
| Test: Full K. Letter treatments are equal, p-value | 0.50 | 0.60 | 0.07 | 0.50 |
| Control Mean | 0.16 | 0.20 | 0.00 | 0.52 |
| Sample Size | 698 | 698 | 698 | 698 |

**Notes:** This table reports the effects of the intervention using the long regression and the same outcomes as in Table 4. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). The p-values of F-statistic tests of equality between different groups of coefficients are shown below each regression. Robust standard errors are shown in parentheses.

Table A23: Long regression - Impacts on Vote Share of Candidates Likely to Engage in Irregularities

| | (1) | (2) | (3) |
|---|---|---|---|
| | | Vote Share (%) | |
| Interaction term $Z$: | Candidate will engage in irregularities (fraction of respondents) | Demeaned Candidate will engage in irregularities (fraction of respondents) | Above Average Candidate will engage in irregularities (=1) |
| Info + No Letter $\times Z$ | -5.034 | -4.343 | -1.283 |
| | (2.501) | (2.662) | (1.444) |
| | [0.039] | [0.100] | [0.355] |
| CtA + No Letter $\times Z$ | -3.281 | -0.020 | -2.848 |
| | (3.095) | (3.842) | (1.709) |
| | [0.191] | [0.996] | [0.057] |
| Info + CtA + No Letter $\times Z$ | -4.172 | -4.456 | -3.323 |
| | (3.044) | (4.030) | (1.737) |
| | [0.098] | [0.146] | [0.031] |
| Info + Partial K. Letter $\times Z$ | -6.291 | -6.306 | -3.782 |
| | (2.744) | (3.964) | (1.636) |
| | [0.022] | [0.055] | [0.018] |
| CtA + Partial K. Letter $\times Z$ | -5.088 | -6.564 | -4.070 |
| | (2.862) | (3.804) | (1.614) |
| | [0.042] | [0.018] | [0.004] |
| Info + CtA + Partial K. Letter $\times Z$ | -1.813 | -4.509 | -3.037 |
| | (3.150) | (3.728) | (1.778) |
| | [0.531] | [0.163] | [0.074] |
| Info + Full K. Letter $\times Z$ | -3.766 | -4.468 | -1.860 |
| | (2.526) | (2.996) | (1.844) |
| | [0.144] | [0.123] | [0.214] |
| CtA + Full K. Letter $\times Z$ | 2.410 | 4.825 | 1.326 |
| | (2.600) | (3.148) | (1.549) |
| | [0.340] | [0.105] | [0.399] |
| Info + CtA + Full K. Letter $\times Z$ | -2.911 | -2.632 | -3.157 |
| | (3.215) | (4.027) | (1.790) |
| | [0.248] | [0.355] | [0.034] |
| Test: Any treatment is equal, p-value | 0.31 | 0.20 | 0.20 |
| Test: Info treatments are equal, p-value | 0.74 | 0.90 | 0.43 |
| Test: CtA treatments are equal, p-value | 0.07 | 0.04 | 0.02 |
| Test: Info + CtA treatments are equal, p-value | 0.84 | 0.92 | 0.99 |
| Test: No Letter treatments are equal, p-value | 0.88 | 0.57 | 0.55 |
| Test: Letter treatments are equal, p-value | 0.13 | 0.08 | 0.08 |
| Test: Partial K. Letter treatments are equal, p-value | 0.48 | 0.90 | 0.89 |
| Test: Full K. Letter treatments are equal, p-value | 0.12 | 0.05 | 0.09 |
| Control Mean | 20.01 | 20.01 | 20.01 |
| Sample Size | 2989 | 2989 | 2989 |
| N. Municipalities | 630 | 630 | 630 |

**Notes:** This table reports the effects of the intervention using the long regression, including indicators for all possible treatment interactions, on the vote share of each candidate, expressed as a percentage of total valid votes. In each column, the different measure of the likelihood that a candidate commits irregularities is used to compute the candidate-level heterogeneous effects. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). The p-values of F-statistic tests of equality between different groups of coefficients are shown below each regression. Clustered standard errors at the municipal-level are shown in parentheses.

Table A24: Impacts on Reports - By Type of Letter

| | (1) Reports (=1) | (2) N. Reports | (3) High Quality Reports (=1) | (4) High Quality N. Reports |
|---|---|---|---|---|
| [$NL$] No Letter - Any Ad | 0.220 | 0.516 | 0.149 | 0.267 |
| | (0.047) | (0.135) | (0.043) | (0.083) |
| | [0.000] | [0.000] | [0.001] | [0.000] |
| [$PL$] Partial Knowledge Letter - Any Ad | 0.034 | 0.165 | 0.035 | 0.057 |
| | (0.046) | (0.128) | (0.037) | (0.057) |
| | [0.416] | [0.187] | [0.361] | [0.293] |
| [$FL$] Full Knowledge Letter - Any Ad | 0.063 | 0.414 | 0.078 | 0.237 |
| | (0.045) | (0.164) | (0.040) | (0.086) |
| | [0.165] | [0.005] | [0.035] | [0.002] |
| Test $NL$ = $PL$, p-value | 0.00 | 0.03 | 0.01 | 0.02 |
| Test $NL$ = $FL$, p-value | 0.00 | 0.59 | 0.14 | 0.78 |
| Test $PL$ = $FL$, p-value | 0.58 | 0.18 | 0.31 | 0.05 |
| Control Mean | 0.29 | 0.55 | 0.16 | 0.20 |
| Sample Size | 698 | 698 | 698 | 698 |

**Notes:** The outcome in column (1) is an indicator of whether any report was issued to the MOE from each municipality. In column (2) it is the number of such reports. In columns (3)-(4) the same definitions are used on the subset of reports of a high quality (see Section I for a discussion about how the quality of reports is assessed by the MOE). All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A25: Impacts on Irregularity Measures - By Type of Letter

| | (1) Media-Based Irregularities | (2) Media-Based Irregularities | (3) Deviations from Benford's 2nd Digit Law | (4) Deviations from Benford's 2nd Digit Law |
|---|---|---|---|---|
| | Media Irregularities (=1) | Number of Media Irregularities | Index of all Forensic Test Stats (z-score) | Any P-value From Forensic Tests < 0.05 (=1) |
| [$NL$] No Letter - Any Ad | -0.041 | -0.058 | -0.084 | -0.078 |
| | (0.035) | (0.046) | (0.088) | (0.050) |
| | [0.242] | [0.232] | [0.349] | [0.114] |
| [$PL$] Partial Knowledge Letter - Any Ad | -0.085 | -0.122 | -0.189 | -0.098 |
| | (0.032) | (0.041) | (0.080) | (0.049) |
| | [0.009] | [0.003] | [0.023] | [0.039] |
| [$FL$] Full Knowledge Letter - Any Ad | -0.040 | -0.065 | -0.156 | -0.087 |
| | (0.035) | (0.046) | (0.091) | (0.048) |
| | [0.282] | [0.184] | [0.080] | [0.083] |
| Test $NL$ = $PL$, p-value | 0.19 | 0.12 | 0.23 | 0.71 |
| Test $NL$ = $FL$, p-value | 0.96 | 0.87 | 0.47 | 0.85 |
| Test $PL$ = $FL$, p-value | 0.18 | 0.15 | 0.71 | 0.85 |
| Control Mean | 0.16 | 0.20 | 0.00 | 0.52 |
| Sample Size | 698 | 698 | 698 | 698 |

**Notes:** The outcome in column (1) is an indicator of whether any irregularity was reported in the media in a particular municipality. In column (2) it is the number of different irregularities. In column (3) it is the index of the $\chi^2$, Kolmogorov-Smirnov and Kuiper test statistics testing for Benford's 2nd digit law, described in Section III.B . In column (4) it is an indicator that takes the value of one if the p-value of any of these tests leads to rejection of the null hypothesis with less than a 5% significance level. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A26: Impacts on Vote Share of Candidates Likely to Engage in Irregularities - By Type of Letter

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Vote Share (%) | | | |
| Interaction term $Z$: | Candidate will engage in irregularities (fraction of respondents) | Demeaned Candidate will engage in irregularities (fraction of respondents) | Above Average Candidate will engage in irregularities (=1) | Past Malfeasance (=1) |
| $[NL \times Z]$ No Letter - Any Ad $\times Z$ | -4.552 | -3.307 | -2.476 | -3.838 |
| | (1.945) | (2.298) | (1.101) | (3.712) |
| | [0.021] | [0.118] | [0.019] | [0.329] |
| | {0.021} | {0.156} | {0.029} | |
| $[FL \times Z]$ Full Knowledge Letter - Any Ad $\times Z$ | -1.480 | -0.352 | -1.236 | -3.198 |
| | (1.924) | (2.297) | (1.159) | (5.022) |
| | [0.416] | [0.885] | [0.274] | [0.505] |
| | {0.461} | {0.873} | {0.289} | |
| $[PL \times Z]$ Partial Knowledge Letter - Any Ad $\times Z$ | -4.471 | -5.750 | -3.671 | -8.944 |
| | (2.001) | (2.493) | (1.124) | (3.946) |
| | [0.023] | [0.017] | [0.000] | [0.042] |
| | {0.026} | {0.026} | {0.001} | |
| Test $NL \times Z = PL \times Z$, p-value | 0.97 | 0.38 | 0.33 | 0.22 |
| Test $NL \times Z = FL \times Z$, p-value | 0.13 | 0.26 | 0.33 | 0.90 |
| Test $PL \times Z = FL \times Z$, p-value | 0.15 | 0.05 | 0.06 | 0.29 |
| Control Mean | 20 | 20 | 20 | 20 |
| Sample Size | 2989 | 2989 | 2989 | 263 |
| N. Municipalities | 630 | 630 | 630 | 48 |

**Notes:** The outcome in all columns is the vote share of each candidate, expressed as a percentage of total valid votes. In each of these columns, a different measure of the likelihood that a candidate commits irregularities is used to compute the candidate-level heterogeneous effects. In column (1) it is the proportion of respondents from the pre-treatment survey that say that the candidate might commit at least one type of electoral irregularity. In column (2) the outcome is this same variable, demeaned using the municipal-level mean. In column (3) it is an indicator that takes the value of one if this variable is above the municipal-level mean. Finally, in column (4) it is an indicator of whether a candidate was found to be involved in malfeasance in the past according to the investigation by the NGO PARES. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Clustered standard errors at the municipal-level are shown in parentheses, random inference p-values are shown in square brackets, and clustered wild-bootstrap p-values correcting for the variance in estimating $Z$ are shown in curly brackets.

Table A27: Cost-Benefit Comparisons

| Type of Intervention | Paper | Cost of reducing by 1 p.p. the vote share of candidates likely to engage in irregularities per polling station | Votes reduced for candidates likely to engage in irregularities per dollar |
|---|---|---|---|
| Citizen monitoring | This paper | \$0.70 | 21 |
| Electoral Observers | Enikolopov et al. (2013) | \$545-\$1818 | – |
| Top-down ICT monitoring | Callen and Long (2015) | – | 0.03 |
| Top-down ICT monitoring | Callen et al. (2016) | \$13 | – |
| Voter-education | Schechter and Vasudevan (2021) | – | 109 |

**Notes:** This table displays cost-benefit estimates of different interventions on two metrics: (1) the USD cost of reducing the vote share of candidates likely to engage in electoral irregularities by one percentage point per polling station; (2) the number of votes for these same candidates that would be reduced by a single dollar investment in the intervention. See Appendix H for further details about these estimates.

Table A28: Balance on Post-Treat Survey Respondent Characteristics

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| **Panel A. Respondent Covariates** | | | | | | | | | |
| Female(=1) | 0.557 | 0.002 | -0.019 | 0.014 | 0.011 | 0.038 | 0.026 | 0.050 | 0.024 |
| | | (0.020) | (0.026) | (0.026) | (0.026) | (0.024) | (0.028) | (0.028) | (0.028) |
| | | [0.923] | [0.475] | [0.581] | [0.680] | [0.110] | [0.351] | [0.052] | [0.412] |
| Age | 33.524 | -0.254 | -0.845 | 0.124 | -0.065 | 0.598 | 1.201 | -0.013 | -1.214 |
| | | (0.454) | (0.574) | (0.594) | (0.573) | (0.539) | (0.632) | (0.618) | (0.633) |
| | | [0.577] | [0.133] | [0.839] | [0.911] | [0.254] | [0.055] | [0.980] | [0.051] |
| High School or Less (=1) | 0.575 | 0.010 | -0.007 | 0.007 | 0.029 | 0.018 | 0.017 | 0.019 | 0.002 |
| | | (0.020) | (0.026) | (0.026) | (0.025) | (0.024) | (0.028) | (0.028) | (0.028) |
| | | [0.632] | [0.770] | [0.787] | [0.290] | [0.442] | [0.561] | [0.507] | [0.943] |
| **Panel B. Non-Response to Questions About Irregularities** | | | | | | | | | |
| Vote Buying - No Response (=1) | 0.420 | 0.004 | 0.013 | -0.003 | 0.003 | 0.003 | -0.008 | 0.014 | 0.022 |
| | | (0.014) | (0.019) | (0.018) | (0.018) | (0.017) | (0.020) | (0.020) | (0.020) |
| | | [0.770] | [0.482] | [0.859] | [0.890] | [0.843] | [0.685] | [0.448] | [0.245] |
| V. Intimidation - No Response (=1) | 0.437 | 0.007 | 0.016 | 0.006 | -0.000 | 0.012 | -0.002 | 0.024 | 0.026 |
| | | (0.014) | (0.019) | (0.018) | (0.018) | (0.017) | (0.020) | (0.020) | (0.020) |
| | | [0.621] | [0.388] | [0.779] | [0.991] | [0.503] | [0.928] | [0.207] | [0.163] |
| Registr. Fraud - No Response (=1) | 0.432 | 0.014 | 0.017 | 0.011 | 0.014 | 0.009 | -0.002 | 0.020 | 0.022 |
| | | (0.014) | (0.019) | (0.018) | (0.018) | (0.017) | (0.020) | (0.020) | (0.020) |
| | | [0.325] | [0.379] | [0.525] | [0.386] | [0.594] | [0.905] | [0.297] | [0.231] |
| Public Campaign. - No Response (=1) | 0.433 | -0.002 | 0.011 | -0.004 | -0.011 | 0.005 | -0.008 | 0.018 | 0.026 |
| | | (0.014) | (0.019) | (0.018) | (0.018) | (0.017) | (0.020) | (0.020) | (0.020) |
| | | [0.921] | [0.568] | [0.838] | [0.528] | [0.788] | [0.675] | [0.348] | [0.176] |
| Elect. Fraud - No Response (=1) | 0.426 | 0.010 | 0.012 | 0.014 | 0.006 | 0.019 | 0.002 | 0.036 | 0.034 |
| | | (0.014) | (0.019) | (0.018) | (0.018) | (0.017) | (0.020) | (0.020) | (0.020) |
| | | [0.462] | [0.532] | [0.451] | [0.741] | [0.251] | [0.925] | [0.063] | [0.080] |
| Illicit Advert. - No Response (=1) | 0.409 | 0.009 | 0.018 | 0.010 | -0.002 | 0.017 | 0.006 | 0.028 | 0.023 |
| | | (0.014) | (0.019) | (0.018) | (0.018) | (0.017) | (0.020) | (0.020) | (0.020) |
| | | [0.522] | [0.341] | [0.558] | [0.905] | [0.299] | [0.757] | [0.150] | [0.230] |

**Notes:** This table presents the balance checks for a set of post-survey respondent characteristics. The control group mean of each variable is presented in column (1). In each of the remaining columns the difference in means is reported for the shown treatment groups. Clustered standard errors at the municipal-level are shown in parentheses and random inference p-values are shown in square brackets.

Table A29: Covariate Balance - Post-Treatment Survey

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| **Panel A. Previous Reports Covariates** | | | | | | | | | |
| Reports to MOE 2018 | 0.502 | 0.031 | 0.092 | -0.041 | 0.042 | -0.088 | -0.173 | -0.004 | 0.169 |
| | | (0.087) | (0.117) | (0.109) | (0.113) | (0.107) | (0.119) | (0.130) | (0.127) |
| | | [0.722] | [0.429] | [0.769] | [0.716] | [0.412] | [0.138] | [1.000] | [0.179] |
| Reports to MOE 2015 | 3.443 | 0.109 | 0.452 | -0.255 | 0.129 | 0.053 | 0.164 | -0.055 | -0.219 |
| | | (0.390) | (0.509) | (0.468) | (0.519) | (0.449) | (0.537) | (0.523) | (0.562) |
| | | [0.771] | [0.324] | [0.593] | [0.794] | [0.910] | [0.794] | [0.912] | [0.678] |
| **Panel B. Socioeconomic Covariates** | | | | | | | | | |
| Log(Population) | 9.948 | -0.023 | 0.035 | -0.021 | -0.082 | -0.016 | -0.011 | -0.020 | -0.008 |
| | | (0.064) | (0.084) | (0.080) | (0.079) | (0.077) | (0.087) | (0.088) | (0.083) |
| | | [0.551] | [0.403] | [0.710] | [0.118] | [0.754] | [0.828] | [0.757] | [0.861] |
| Facebook Penetration 2019 | 0.415 | 0.006 | 0.011 | 0.006 | 0.002 | -0.011 | -0.013 | -0.010 | 0.003 |
| | | (0.021) | (0.027) | (0.027) | (0.026) | (0.025) | (0.030) | (0.029) | (0.030) |
| | | [0.756] | [0.675] | [0.800] | [0.922] | [0.646] | [0.645] | [0.715] | [0.916] |
| GDP p.c. 2016 (Ms of Pesos) | 1,381.948 | -29.716 | -46.198 | -170.706 | 125.583 | 101.886 | 40.321 | 162.590 | 122.268 |
| | | (120.270) | (144.075) | (121.286) | (186.016) | (131.216) | (136.330) | (177.677) | (177.548) |
| | | [0.789] | [0.753] | [0.189] | [0.455] | [0.452] | [0.754] | [0.346] | [0.460] |
| Poor 2005 (%) | 44.230 | 0.185 | 0.560 | 0.682 | -0.674 | -3.014 | -2.775 | -3.249 | -0.473 |
| | | (1.747) | (2.343) | (2.253) | (2.163) | (2.155) | (2.480) | (2.467) | (2.419) |
| | | [0.898] | [0.757] | [0.712] | [0.700] | [0.101] | [0.210] | [0.124] | [0.826] |
| Rural Population 2017 | 53.809 | -2.927 | -5.377 | -3.370 | -0.073 | 1.222 | 1.680 | 0.770 | -0.910 |
| | | (1.986) | (2.637) | (2.439) | (2.525) | (2.426) | (2.792) | (2.751) | (2.672) |
| | | [0.091] | [0.017] | [0.147] | [0.973] | [0.588] | [0.531] | [0.756] | [0.732] |
| Homicide Rate 2017 | 29.592 | -1.112 | -2.954 | -2.005 | 1.586 | 0.121 | -1.843 | 2.056 | 3.899 |
| | | (2.791) | (3.331) | (3.540) | (3.968) | (3.334) | (3.770) | (4.089) | (4.172) |
| | | [0.677] | [0.398] | [0.574] | [0.661] | [0.970] | [0.607] | [0.612] | [0.364] |

Continued on next page

**Table A29 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| **Panel C. Political Covariates** | | | | | | | | | |
| Number of Candidates 2019 | 4.966 | -0.228 | -0.119 | -0.196 | -0.366 | -0.202 | -0.169 | -0.234 | -0.066 |
| | | (0.163) | (0.207) | (0.206) | (0.206) | (0.198) | (0.227) | (0.221) | (0.209) |
| | | [0.124] | [0.508] | [0.308] | [0.058] | [0.263] | [0.418] | [0.288] | [0.756] |
| Index - All Forensic Stats 2015 | -0.027 | 0.102 | 0.312 | 0.002 | -0.005 | -0.142 | -0.141 | -0.142 | -0.001 |
| | | (0.082) | (0.119) | (0.101) | (0.100) | (0.107) | (0.125) | (0.119) | (0.117) |
| | | [0.226] | [0.009] | [0.991] | [0.966] | [0.176] | [0.231] | [0.235] | [0.990] |
| P-val From Forensics < 0.05 2015 | 0.381 | 0.057 | 0.094 | 0.031 | 0.046 | -0.047 | -0.051 | -0.043 | 0.008 |
| | | (0.042) | (0.054) | (0.054) | (0.053) | (0.051) | (0.059) | (0.059) | (0.059) |
| | | [0.174] | [0.098] | [0.562] | [0.412] | [0.382] | [0.363] | [0.493] | [0.905] |
| Turnout 2018 (%) | 48.930 | 0.772 | 1.523 | 0.418 | 0.380 | -0.518 | -0.252 | -0.780 | -0.528 |
| | | (0.748) | (1.014) | (0.984) | (1.004) | (0.981) | (1.115) | (1.169) | (1.170) |
| | | [0.331] | [0.120] | [0.616] | [0.684] | [0.585] | [0.804] | [0.492] | [0.649] |
| Share Blank Votes 2018 (%) | 5.247 | 0.333 | 0.631 | 0.065 | 0.305 | 0.302 | 0.154 | 0.447 | 0.292 |
| | | (0.334) | (0.475) | (0.436) | (0.436) | (0.431) | (0.492) | (0.525) | (0.542) |
| | | [0.271] | [0.129] | [0.873] | [0.412] | [0.426] | [0.725] | [0.287] | [0.561] |
| Mayor Margin of Victory 2015 | 13.912 | -0.244 | 0.256 | -0.740 | -0.248 | 1.539 | 0.714 | 2.353 | 1.638 |
| | | (1.072) | (1.466) | (1.234) | (1.384) | (1.213) | (1.392) | (1.466) | (1.515) |
| | | [0.828] | [0.855] | [0.576] | [0.880] | [0.234] | [0.629] | [0.100] | [0.273] |
| Santos Vote Share 2014 | 48.119 | 0.430 | 1.782 | 0.709 | -1.178 | 1.469 | 0.880 | 2.050 | 1.170 |
| | | (1.870) | (2.316) | (2.322) | (2.370) | (2.056) | (2.467) | (2.340) | (2.482) |
| | | [0.816] | [0.432] | [0.751] | [0.586] | [0.411] | [0.691] | [0.378] | [0.588] |
| Zuluaga Vote Share 2014 | 49.208 | -0.608 | -1.973 | -0.902 | 1.026 | -1.621 | -0.956 | -2.277 | -1.321 |
| | | (1.821) | (2.250) | (2.256) | (2.311) | (1.997) | (2.393) | (2.271) | (2.405) |
| | | [0.739] | [0.366] | [0.686] | [0.647] | [0.364] | [0.654] | [0.304] | [0.539] |
| Liberals Vote Share 2018 | 15.680 | 0.117 | -0.995 | 0.914 | 0.427 | 0.535 | 0.034 | 1.029 | 0.994 |
| | | (0.991) | (1.235) | (1.339) | (1.243) | (1.172) | (1.328) | (1.411) | (1.418) |
| | | [0.888] | [0.444] | [0.475] | [0.738] | [0.633] | [0.975] | [0.447] | [0.478] |

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**Table A29 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| Cambio R Vote Share 2018 | 15.216 | -0.304 | 0.374 | -0.865 | -0.419 | -1.355 | -1.173 | -1.534 | -0.362 |
| | | (1.054) | (1.343) | (1.343) | (1.309) | (1.222) | (1.419) | (1.400) | (1.400) |
| | | [0.785] | [0.807] | [0.490] | [0.770] | [0.265] | [0.410] | [0.292] | [0.792] |
| Centro Dem Vote Share 2018 | 14.322 | -1.228 | -1.355 | -1.883 | -0.456 | 0.434 | 1.698 | -0.812 | -2.510 |
| | | (0.970) | (1.205) | (1.196) | (1.253) | (1.064) | (1.332) | (1.167) | (1.322) |
| | | [0.196] | [0.226] | [0.100] | [0.702] | [0.675] | [0.178] | [0.474] | [0.040] |
| P de la U Vote Share 2018 | 15.106 | 0.199 | 0.241 | 0.431 | -0.071 | -0.469 | -0.485 | -0.453 | 0.033 |
| | | (0.960) | (1.197) | (1.298) | (1.194) | (1.113) | (1.246) | (1.367) | (1.373) |
| | | [0.802] | [0.853] | [0.757] | [0.958] | [0.661] | [0.680] | [0.741] | [0.978] |
| Green Party Vote Share 2018 | 4.606 | 0.198 | 0.450 | 0.446 | -0.294 | -0.203 | -0.406 | -0.003 | 0.403 |
| | | (0.500) | (0.637) | (0.765) | (0.585) | (0.685) | (0.801) | (0.752) | (0.728) |
| | | [0.698] | [0.444] | [0.556] | [0.619] | [0.745] | [0.594] | [0.995] | [0.544] |
| Polo Vote Share 2018 | 2.811 | 0.036 | -0.062 | 0.377 | -0.205 | 0.153 | -0.023 | 0.326 | 0.349 |
| | | (0.265) | (0.286) | (0.438) | (0.274) | (0.348) | (0.354) | (0.413) | (0.329) |
| | | [0.899] | [0.848] | [0.380] | [0.511] | [0.643] | [0.962] | [0.475] | [0.293] |
| Decentes Vote Share 2018 | 1.248 | 0.122 | 0.171 | 0.042 | 0.153 | 0.081 | -0.033 | 0.193 | 0.227 |
| | | (0.102) | (0.124) | (0.161) | (0.152) | (0.149) | (0.155) | (0.196) | (0.192) |
| | | [0.278] | [0.140] | [0.785] | [0.289] | [0.611] | [0.828] | [0.298] | [0.199] |
| **Panel D. Geographic Covariates** | | | | | | | | | |
| Caribean Region (=1) | 0.197 | 0.014 | 0.055 | 0.013 | -0.025 | -0.010 | -0.012 | -0.008 | 0.004 |
| | | (0.034) | (0.046) | (0.044) | (0.042) | (0.042) | (0.048) | (0.048) | (0.048) |
| | | [0.751] | [0.233] | [0.767] | [0.567] | [0.905] | [0.872] | [0.886] | [1.000] |
| Center-East Region (=1) | 0.236 | -0.002 | 0.008 | -0.020 | 0.005 | -0.016 | -0.025 | -0.007 | 0.018 |
| | | (0.036) | (0.047) | (0.046) | (0.047) | (0.043) | (0.050) | (0.050) | (0.050) |
| | | [1.000] | [0.898] | [0.627] | [1.000] | [0.707] | [0.619] | [0.908] | [0.785] |
| Center-South Region (=1) | 0.163 | -0.047 | -0.051 | -0.072 | -0.018 | -0.020 | -0.016 | -0.024 | -0.009 |
| | | (0.030) | (0.037) | (0.035) | (0.039) | (0.033) | (0.039) | (0.038) | (0.037) |
| | | [0.137] | [0.209] | [0.061] | [0.761] | [0.653] | [0.719] | [0.568] | [0.852] |

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**Table A29 – continued from previous page**

| | Control Mean | Any Treatment vs Control | Information vs Control | Call-to-action vs Control | Info + Call-to-action vs Control | Any Letter vs No Letter | Letter P. Knowledge vs No Letter | Letter F. Knowledge vs No Letter | Letter F. vs Letter P. Knowledge |
|---|---|---|---|---|---|---|---|---|---|
| Coffee-growing Region (=1) | 0.158 | 0.051 | 0.024 | 0.087 | 0.042 | 0.038 | 0.043 | 0.033 | -0.010 |
| | | (0.032) | (0.041) | (0.044) | (0.042) | (0.040) | (0.048) | (0.047) | (0.049) |
| | | [0.118] | [0.537] | [0.053] | [0.311] | [0.351] | [0.358] | [0.546] | [0.891] |
| Llanos Region (=1) | 0.064 | 0.006 | 0.006 | -0.022 | 0.033 | 0.002 | 0.010 | -0.005 | -0.015 |
| | | (0.021) | (0.027) | (0.024) | (0.030) | (0.026) | (0.031) | (0.029) | (0.030) |
| | | [0.863] | [1.000] | [0.458] | [0.302] | [1.000] | [0.817] | [1.000] | [0.635] |
| Pacific Region (=1) | 0.182 | -0.022 | -0.042 | 0.014 | -0.037 | 0.006 | -0.000 | 0.011 | 0.012 |
| | | (0.032) | (0.040) | (0.043) | (0.040) | (0.037) | (0.043) | (0.043) | (0.044) |
| | | [0.495] | [0.307] | [0.780] | [0.385] | [0.884] | [1.000] | [0.903] | [0.866] |
| **Panel E. Other Covariates** | | | | | | | | | |
| Number Responses Survey | 9.985 | -0.138 | -0.342 | 1.118 | -1.175 | -0.038 | -0.041 | -0.034 | 0.007 |
| | | (0.560) | (0.734) | (0.821) | (0.621) | (0.697) | (0.772) | (0.853) | (0.837) |
| | | [0.799] | [0.616] | [0.138] | [0.070] | [0.965] | [0.963] | [0.970] | [0.994] |
| Population Reached by Ads (%) | 0.034 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.001 | -0.000 | -0.001 |
| | | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |
| | | [0.817] | [0.601] | [0.996] | [0.970] | [0.954] | [0.787] | [0.842] | [0.672] |
| Users Reached by Ads (Thousands) | 7.418 | -0.888 | -0.245 | -1.342 | -1.074 | -0.573 | -0.483 | -0.662 | -0.179 |
| | | (0.812) | (1.025) | (0.886) | (0.950) | (0.763) | (0.888) | (0.864) | (0.858) |
| | | [0.090] | [0.749] | [0.084] | [0.135] | [0.334] | [0.482] | [0.296] | [0.795] |
| No Users Reached by Ads (=1) | 0.000 | 0.012 | 0.007 | 0.014 | 0.014 | -0.013 | -0.013 | -0.013 | -0.000 |
| | | (0.005) | (0.007) | (0.010) | (0.010) | (0.013) | (0.014) | (0.014) | (0.010) |
| | | [0.177] | [0.423] | [0.153] | [0.194] | [0.336] | [0.603] | [0.615] | [1.000] |
| N Responses Post-Treat Survey | 8.379 | 0.189 | -0.016 | 0.250 | 0.331 | -0.190 | -0.353 | -0.030 | 0.324 |
| | | (0.327) | (0.428) | (0.428) | (0.430) | (0.429) | (0.496) | (0.479) | (0.461) |
| | | [0.560] | [0.973] | [0.548] | [0.440] | [0.656] | [0.477] | [0.966] | [0.485] |

**Notes:** This table presents the balance checks on the sample of municipalities with post-treatment survey responses for a selected set of covariates. The control group mean of each variable is presented in column (1). In each of the remaining columns the difference in means is reported for the shown treatment groups. Robust standard errors are shown in parentheses and random inference p-values are shown in square brackets.

Table A30: Impacts on Survey-Based Irregularity Measures

| | (1) Irregularity Index (z-score) | (2) Vote buying (z-score) | (3) Voter intimidation (z-score) | (4) Registration fraud (z-score) | (5) Public servant campaigning (z-score) | (6) Electoral fraud (z-score) | (7) Illicit Advertising (z-score) |
|---|---|---|---|---|---|---|---|
| **Panel A. Pooled Treatment** | | | | | | | |
| [$T$] Any treatment | -0.158 | -0.096 | 0.019 | -0.042 | -0.215 | -0.170 | -0.195 |
| | (0.088) | (0.088) | (0.083) | (0.086) | (0.086) | (0.084) | (0.083) |
| | [0.093] | [0.270] | [0.827] | [0.629] | [0.014] | [0.039] | [0.025] |
| **Panel B. Subtreatments by Types of Ad** | | | | | | | |
| [$IA$] Information Ad | -0.120 | -0.021 | -0.066 | -0.077 | -0.204 | -0.088 | -0.151 |
| | (0.118) | (0.116) | (0.103) | (0.115) | (0.113) | (0.110) | (0.107) |
| | [0.307] | [0.849] | [0.564] | [0.501] | [0.066] | [0.436] | [0.145] |
| [$CA$] Call-to-Action Ad | -0.151 | -0.100 | 0.017 | 0.102 | -0.126 | -0.259 | -0.219 |
| | (0.110) | (0.117) | (0.105) | (0.108) | (0.110) | (0.104) | (0.108) |
| | [0.158] | [0.373] | [0.858] | [0.354] | [0.236] | [0.016] | [0.033] |
| [$I + CA$] Info + Call-to-Action Ad | -0.203 | -0.166 | 0.107 | -0.151 | -0.315 | -0.164 | -0.214 |
| | (0.117) | (0.113) | (0.109) | (0.112) | (0.114) | (0.105) | (0.112) |
| | [0.074] | [0.142] | [0.308] | [0.181] | [0.005] | [0.130] | [0.047] |
| Test $IA = CA$, p-value | 0.81 | 0.55 | 0.44 | 0.15 | 0.52 | 0.14 | 0.56 |
| Test $IA = I + CA$, p-value | 0.53 | 0.26 | 0.12 | 0.56 | 0.38 | 0.51 | 0.61 |
| Test $CA = I + CA$, p-value | 0.68 | 0.61 | 0.43 | 0.04 | 0.12 | 0.39 | 0.97 |
| **Panel C. Subtreatments by Letter - No Letter** | | | | | | | |
| [$NL$] No Letter - Any Ad | -0.079 | -0.088 | 0.142 | 0.023 | -0.171 | -0.175 | -0.131 |
| | (0.117) | (0.117) | (0.104) | (0.111) | (0.113) | (0.107) | (0.111) |
| | [0.493] | [0.480] | [0.161] | [0.839] | [0.124] | [0.103] | [0.234] |
| [$L$] Letter - Any Ad | -0.199 | -0.100 | -0.044 | -0.076 | -0.238 | -0.168 | -0.229 |
| | (0.094) | (0.095) | (0.090) | (0.094) | (0.093) | (0.090) | (0.090) |
| | [0.037] | [0.306] | [0.623] | [0.425] | [0.010] | [0.063] | [0.012] |
| Test $NL = L$, p-value | 0.29 | 0.91 | 0.05 | 0.36 | 0.54 | 0.94 | 0.36 |
| Control Mean | 0.00 | -0.00 | -0.00 | -0.00 | 0.00 | 0.00 | 0.00 |
| Sample Size | 634 | 642 | 639 | 639 | 640 | 639 | 644 |

**Notes:** The outcomes in columns (2)-(7) are the average responses to questions about the likelihood of the occurrence of different types of irregularities. In column (1) it is an index of these variables. All variables have been standardized with respect to the control group mean and standard deviation. All specifications include the covariates selected using the method described in Chernozhukov et al. (2015) and Belloni et al. (2014). Robust standard errors are shown in parentheses and randomization inference p-values are shown in square brackets.

# B Dataset of News about Electoral Irregularities

We constructed our dataset of the electoral irregularities covered in the news from three different and complementary sources. We begin by discussing each of these sources and then describe further details about the coding of news.

*1.Private News Monitoring Company*: We hired *Siglo Data*, a data analysis firm based in Colombia, which is specialized in monitoring and classifying news in mass media and social networks. They actively monitor and classify news coming from TV channels, radio stations, written press, both offline and online. More concretely, they claim to cover news from over 100 newspapers and 60 magazines, 10 national and 60 local radio stations, 15 national and 10 regional TV channels and 370 news websites. They provided the data for the universe of news that had mentions about electoral irregularities related to the 2019 local elections, and that appeared in either the written press, the radio or newspapers on the internet up to November 10, two weeks after the date of the elections. To guarantee neutrality in the analysis, this firm was unaware of the intervention.

*2. Press releases from Colombia's Electoral Court*: We additionally relied on the official

press releases produced by the *Consejo Nacional Electoral* (CNE), the National Electoral Court of Colombia. As part of its regular activities, this entity is in charge of monitoring and controlling all the electoral activity of political groups and their candidates, as well as overseeing electoral organization and ensuring the proper development of electoral processes. In this vein, the CNE published on its website a list of news covering the 2019 local elections, which we included in our analysis.[1]

*3. Electoral irregularity monitoring from an NGO*: Finally, we use information from the *Fundación Paz y Reconciliación* (PARES), a well-known NGO in Colombia focused on producing independent research on conflict, security, governance, and democracy, among others. To this end, they monitor elections, and in 2019 they produced a report of instances of electoral irregularities gathered from media, citizen reports and their own monitoring activity in the field.[2]

Using the exhaustive list of news coming from these three sources, we hired a research assistant to go through each of these and classify them in terms of three main variables: (i) whether the news reported an electoral irregularity or not, (ii) whether the news came from information obtained from citizen reports submitted to the MOE, (iii) the types of electoral irregularities reported in the news. In our final data set, we exclude news that is not about electoral irregularities according to (i), and that in (ii) so that we do not confound the effect of the campaign on reporting from the effect on actual irregularities.

Using the cleaned data set, which contains over 160 news reports satisfying our criteria, we create an indicator of whether any electoral irregularity was reported by the media in each of one the municipalities in our study group, as well as a variable of the number of distinct irregularities reported per municipality.

# C Covariates Included in the Analysis

The covariates included in the analysis can be broadly categorized in three groups:

**Past reports:** We include the total number of reports made to the MOE in the 2015 local elections and the 2018 congressional elections, as a way to control both for previous experience with reporting channels and the prevalence of electoral irregularities. This data was provided by the MOE, aggregated at the municipal level.

**Socioeconomic characteristics:** As geographical and demographic variables we use the

1. The website they use to publicize the coverage of elections can be accessed through the following link:https://www.cne.gov.co/prensa/cne-en-medios?start=78.

2. The full report is publicly available online at this link: https://pares.com.co/2019/10/29/un-balance-nacional-de-estas-elecciones-locales-2019/.

municipal population in 2018, the proportion of rural population in 2017, and dummies for the six main regions in the country. As measures of economic activity and development we use an estimate of GDP per capita in 2016, the % of the poor population in 2005 and the homicide rate in 2017. The population and GDP variables were taken from the National Department of Statistics (DANE); the rest of the variables were taken from the "Muncipal Characteristics" database created and updated by the Centro de Estudios sobre Desarrollo Económico (CEDE), at the Universidad de los Andes in Bogotá, Colombia. Finally, we also included Facebook's penetration rate (defined as the number of active Facebook users divided by total population), which we construct using user data from Facebook's Marketing API.

**Political preferences:** In order to get a rich set of political characteristics for each municipality we used the turnout in the congressional elections of 2018, the margin of victory in the 2015 mayoral elections, and the share of blank votes, as well as the vote share for each major party in the 2018 congressional elections and the vote share for each candidate in the second round of the 2014 presidential elections. Lastly, we include the number of candidates running in the 2019 mayoral elections, as well as the main forensic measures we used in the analysis but measured for the 2015 mayoral elections. All of these variables were constructed from the official voting records held by the Registraduría Nacional.

When running regressions at the candidate-level, we also included the following covariates for each of the mayoral candidates running in the municipalities in our sample:

**Political platform:** We included information about the political platform used by the candidate to register her candidacy. Specifically, whether she is running with a coalition of parties or as an independent. We also created a variable of whether the candidate is running as an incumbent or not. In Colombia, there is not immediate reelection for candidates. Thus, we computed being an incumbent as either running with exactly the same party or coalition of parties as the incumbent mayor (strict measure) or with at least one party shared by the party or coalition of parties as the incumbent mayor (lax measure).

**Sociodemographic characteristics:** We used data on the candidates' gender and age, which was provided by the Registraduría Nacional.

**Survey-based characteristics:** Using the pre-treatment survey (described in Section II.E), we additionally created proxies for the likelihood that each candidate would engage in

electoral irregularities, which are described in Section III.C, and a measure of the popularity of each candidate, which corresponds to the percentage of respondents in each municipality that says a particular candidate will win the local election.

# D Measures of Deviation from Benford's 2nd Digit Law

We use the following tests to determine whether the observed distribution of second digits in the voting booth counts differs from Benford's distribution in each municipality in our sample:

1. Pearson $X^2$:

$$X^2 = n \times \sum_{i=0}^{9} \frac{(o_i - e_i)^2}{e_i}$$

   where $o_i$ is the observed proportion of digit $i$ and $e_i$ is the expected proportion according to Benford's distribution. This statistic is distributed $\chi^2$ with 9 degrees of freedom.

2. Kolmogorov-Smirnov $D$:

$$D = \sup_{x \in \{0,1,2,\ldots,9\}} |F_n(x) - F(x)|$$

   where $F_n$ is the empirical distribution of digits and $F(x)$ is the target distribution.

3. Kuiper $V$:

$$V = \max_{x \in \{0,1,2,\ldots,9\}} [F_n(x) - F(x)] + \max_{x \in \{0,1,2,\ldots,9\}} [F(x) - F_n(x)]$$

While the Pearson $\chi^2$ test is probably the most commonly used in the literature, it has been shown to be under-powered in small samples (Nigrini 2012), such as the municipalities in our sample, which typically have 100-200 observations to compute these tests. The latter two tests are more appropriate for these types of samples and, in particular, the Kuiper test takes into account the "circular" nature of the distribution of second-digits. To further correct for small sample inference, we compute p-values simulating draws from the distribution under the null hypothesis that the data come from a Benford distribution.

# E Robustness Using the Forensic Test Suggested by Beber and Scacco (2012)

In this section we begin by explaining the forensic tests suggested by Beber and Scacco (2012) and we then report the results of intervention using these tests as outcomes. The tests considered rely on psychological biases that humans have in *manually* manipulating numbers. As such, these tests do not detect more sophisticated ways of manipulating vote counts, such as the use of random number generators.

In particular, Beber and Scacco (2012) report three types of failures humans have in reproducing randomly occurring numbers: 1. the last digits of humanly manipulated numbers do not follow a uniform distribution; 2. humans *underestimate* the likelihood of the repetition of consecutive digits – e.g. "22" or "66"; 3. humans *overestimate* the likelihood of adjacent pairs of numbers – e.g. "34" or "43".

To test for the first phenomenon, we use tests akin to the ones used for Benford's 2nd Digit Law using the uniform distribution of the last digits as a reference. For the last two, we use indicators that take the value of one if there is a smaller than expected proportion of repeated digits, or there is a larger than expected proportion of pairs of adjacent digits, according to the distributions derived by Beber and Scacco (2012), focusing on the last two digits of voting counts.

Table A11 reports the results of using these tests as outcomes in our main specifications. Across the different tests, we see that the main conclusions from the previous results still hold, although some results lose precision, possibly since this test captures only manual manipulations of the voting counts, as suggested earlier. The intervention, and in particular the information advertisements, reduced deviations of the last digit from a uniform distribution, they decreased the probability of observing less than expected repeated digits, and they reduced the probability of observing more than expected adjacent pairs of digits. All of these results are consistent with fewer irregularities occurring in treated municipalities, according to the tests suggested by Beber and Scacco (2012).

# F Measures of Electoral Irregularities Using a Post-Treatment Survey

In addition to the media-based and forensic electoral irregularity measures, we also conducted an online post-treatment survey and used it to construct a survey-based measure of electoral irregularities. As mentioned in the main text, these survey-based measures of irregularities might have been biased due to differential perceptions or changes in social norms about

irregularities triggered by the different treatment ads. In particular, these might likely have made citizens more prone to state that irregularities occurred in their municipalities, given that the ads' main message was to encourage citizens to report or speak up about them. Thus, we expect this to have biased the estimates in the direction of finding that the ad campaign *increased* irregularities according to this survey-based measure. Despite this possible bias, in this section, we show that the results shown in the main text are robust to using these alternative measures.

In the following, we explain how the survey was conducted and the outcome variables we construct from it, and we then proceed to report the effects of the intervention on those outcomes.

## F.1 Post-Treatment Survey Recruitment and Outcomes

The roll-out of the post-treatment survey started immediately after the main intervention ended (beginning on October 29), and it lasted for 18 days (until November 15). Respondents were recruited using two different strategies. First, we recontacted through email the respondents from the pre-treatment survey who had expressed interest in participating in this follow-up survey. Second, we also launched a Facebook ad campaign identical to the one done in the pre-treatment survey to obtain additional respondents. Once again, we encouraged participation through a raffle for tablets.

The main goal of this survey was to obtain a measure of respondents' perception of the occurrence of electoral irregularities in their municipalities. We thus asked respondents how likely different types of irregularities had occurred in the previous elections in their municipality on a scale from 1 to 4 (with larger values representing higher likelihood). We did this for the most common irregularities described in Section I: vote-buying, illicit advertisement, campaigning by public servants, voter intimidation, fraud in voter registration, and electoral fraud.

We then computed the average across responses in each municipality, and we standardized these variables using the control groups' mean and standard deviation for ease of interpretation. We also created a standardized index across all irregularity types to avoid the issue of multiple hypothesis testing.

We obtained approximately $5,440$ responses from 660 municipalities in the sample, but out of these, only $2,964$ of respondents from 634 municipalities answered all of the questions about the likelihood of occurrence of irregularities. Given that the intervention might have affected respondents' propensity or willingness of answering these questions, we check for balance of the response rate across the questions regarding the likelihood of irregularities, along with demographic characteristics of respondents. Results of this exercise (reported

in Table A28), suggest that, in fact, response rates and respondents' demographic characteristics are well balanced. Furthermore, we find that the subsample of municipalities with responses to this survey are also balanced across municipal characteristics, including the number of responses to the survey (see Table A29).

### F.2 Effect of the Intervention on Survey-Based Irregularity Measures

We report the effects of the different interventions on the survey-based irregularity measures in Table A30. Consistent with our other proxies for electoral irregularities, we find that the reporting campaign reduced the occurrence of irregularities. In particular, receiving any of the treatments reduced the irregularity index by 0.16 standard deviations ($p < 0.1$). Thus, despite the likely bias towards zero, these conservative estimates reinforce the evidence from the measures used in the main text, suggesting that the intervention reduced irregularities.

This effect is strongest for irregularities like campaigning by public servants, electoral fraud and illicit political advertising, but we find negative estimates for other types of irregularities – except for voter intimidation, which has a small and insignificant effect. Furthermore, we do not find statistically significant differences across types of interventions.

The fact that survey-based measures yield the same results as our two other measures of electoral irregularities further strengthens the evidence of a treatment effect of our intervention. Specifically, this measure complements the evidence gathered by the other two by presumably detecting some types of irregularities not captured by them. In particular, it might capture some irregularities under-reported in the media. Indeed, using our survey-based outcomes, we find that the ads decrease the incidence of public servants' electoral campaigning, electoral fraud and illegal advertising on election day, which are scarcely mentioned in the media, as seen in Table A6.

## G Bootstrap Procedure to Account for Variance in Estimating Candidate-Level Variables

Denote the data by the triplet $(y, X, Z)$, where $y$ and $X$ are at the candidate-municipality level, while $Z$ corresponds to data from our pre-treatment survey, and thus is at the respondent-candidate-municipal level. The candidate level variables $\hat{z}_{ic}$ are estimated from $Z$ but are included as regressors in the estimation so $\hat{z}_{ic} \in X$.

Given this notation, we we build on the wild bootstrap procedure proposed by Cameron et al. (2008), and incorporate an extra resampling stage of $Z$, in order to incorporate the variance in estimating the candidate level variables $\hat{z}_{ic}$. The procedure can be summarized

as follows:

1. From the original sample, estimate $t = \frac{\hat{\gamma}-\gamma_0}{s_{\hat{\gamma}}}$, where $s_{\hat{\gamma}}$ is the standard error of $\hat{\gamma}$ clustered at the municipal level.

2. Estimate the restricted model which imposes the null hypothesis (i.e. $\gamma = 0$). Call the restricted estimates $\hat{\beta}^R$ and the corresponding residuals $\left\{(\hat{u}_1^R, ...., \hat{u}_M^R)\right\}$.

3. Do $B$ iterations of this step. On the $b-th$ iteration:

   (a) For each candidate-municipality combination, create a sample of respondents $Z_{ci}^*$ by resampling with replacement $N_{ic}$ times from the original sample of respondents—where $N_{ic}$ is the original number of respondents for candidate $c$ in municipality $i$.

   (b) Compute the $\hat{z}_{ic}^*$, the measure of how likely each candidate is to engage in irregularities from $Z^*$.

   (c) Create a pseudo-sample $(y^*, X^*)$ using the following method. For each cluster $i = 1, ..., M$ , generate $\hat{u}_i^{R*} = a_i \hat{u}_i^R$, where $a_i$ is a random variable that takes the value $\frac{1-\sqrt{5}}{2}$ with probability $\frac{1+\sqrt{5}}{2\sqrt{5}}$, or $1 - \frac{1-\sqrt{5}}{2}$ with probability $1 - \frac{1+\sqrt{5}}{2\sqrt{5}}$.[3] Then define $X^*$ as $X$ but using the sampled $\hat{z}_{ic}^*$ instead of the original $\hat{z}_{ic}$. Finally, define $y_i^* = X_i^* \hat{\beta}^R + \hat{u}_i^{R*}$.

   (d) Compute $t_b = \frac{\hat{\gamma}_b^* - \gamma_0}{s_{\hat{\gamma}_b^*}}$, where $\hat{\gamma}_b^*$ and $s_{\hat{\gamma}_b^*}$ are estimated as in step (1) but using the $b-th$ pseudo-sample.

4. Compute the bootstrapped p-value as $p = \frac{\sum_{b=1}^{B} \mathbb{1}\{|t_b| > |t|\}}{B}$

# H Cost-Benefit Calculations and Comparisons

**Intervention considered in this paper:** 1. The Facebook advertisements cost $\$10,870$ USD in total. This implies a cost of $\$15.57$ USD per municipality or $\$1.71$ USD per polling station (since there are $6,349$ polling stations in the municipalities in our sample). Given that the effect of the reporting campaign was to reduce the vote share of candidates above average in the percentage of people who say they will engage in electoral irregularities by 2.46 p.p., the cost of reducing a single percentage point is $\$0.70$ USD ($= 1.71/2.46$) per polling station. 2. The average votes in each municipality are $13,352$, which means that the

3. As explained by Cameron et al. (2008) these weights are preferred when the distribution of the estimates is potentially asymmetric. We use this alternative since it produces the most conservative p-values (i.e. the ones most likely not to reject the null) when applied to our setting.

reporting campaign reduced by 328.46 (= $2.46/100 \times 13,352$) the votes for candidates above average in the percentage of people who say they will engage in electoral irregularities. This then implies that a single dollar invested in the campaign was responsible for a reduction of 21.10 votes (= 328.46/15.57) per municipality.

**Electoral observers:** Using the cost estimates by polling station provided by Callen et al. (2016), and the 11 p.p drop in the vote share estimated by Enikolopov et al. (2013), a 1 percentage point change in the vote share costs between \$545.45 (= 6000/11) and \$1,818.18 (= 20000/11) USD per polling station.

**Top-down ICT monitoring:** 1. Callen and Long (2015) report a "[...]total budget of just over US\$100,000" for 471 treated polling stations, which implies a cost of approximately \$210 USD per polling station. Given the effect of the intervention is to reduce by 6 the votes for candidates "connected" to electoral authorities, this implies that a single dollar reduced 0.029 votes for these candidates (= 6/210). 2. Callen et al. (2016) report a cost of \$40 USD per polling station and a reduction of the vote share of the incumbent candidate by 3 percentage points,[4] so reducing a single percentage point cost approximately \$13.33 USD (= 40/3).

**Voter-education interventions:** Schechter and Vasudevan (2021) directly report that the intervention they study had a cost-effectiveness of one-dollar investment translating into 109 fewer votes for candidates that are part of vote-buying parties.

4. This is the largest estimate reported by them.

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