**Supplementary Materials**

**Topic 1: Economy**

|  |  |
| --- | --- |
| Control group | GDP is the standard measure of the value added created through the production of goods and services. It reflects the economic strength and market size of a country. |
| Misinformation group | GDP is the standard measure of the value added created through the production of goods and services. It reflects the economic strength and market size of a country.On January 20, 2017, the National Bureau of Statistics released data on China’s GDP in 2016, of which the GDP growth rate was 6.7%. The Bureau stated that this growth rate falls within the reasonable range of China’s policy expectations (between 6.5% and 7%), showing that the Chinese economy still possesses strong growth momentum. |
| Correction group | GDP is the standard measure of the value added created through the production of goods and services. It reflects the economic strength and market size of a country.--- page break ---On January 20, 2017, the National Bureau of Statistics released data on China’s GDP in 2016, of which the GDP growth rate was 6.7%. The Bureau stated that the growth rate is within the reasonable range (6.5% to 7%), indicating that China’s economy still has a strong momentum for growth.--- page break ---In 2018, the Brookings Institution published a report ‘A Forensic Examination of China’s National Accounts.’ In the report, three scholars from University of Chicago and Chinese University of Hong Kong found that, relative to the official numbers, the actual GDP growth from 2010 to 2016 was about 1.8% lower. At the end of 2015, Guan Yingmin, director of the Investment Planning Division of the Heilongjiang Provincial Commission of Industry and Information Technology, confirmed to the media that ‘some investment data are at least 20% larger than reality,’ and the economic data was seriously exaggerated. Furthermore, in 2017, the Central Inspection Team found evidence of fabricated GDP data in the Northeastern region. |

**Topic 2: Air pollution**

|  |  |
| --- | --- |
| Control group | Environmental protection refers to actions taken by individuals, organizations and governments to solve environmental problems and ensure the sustainable development of society. |
| Misinformation group | Environmental protection refers to actions taken by individuals, organizations and governments to solve environmental problems and ensure the sustainable development of society.In April 2015, the Beijing Environmental Protection Bureau issued the ‘Report on Beijing Environmental Quality in 2014.’ This report stated that Beijing’s air quality continued to be improved in 2014. The annual average PM2.5 concentration dropped 4% year-on-year, with a value of 85.9 μg/m3, and the air quality level was safe and healthy. The Chinese Ministry of Environmental Protection also reported this number in their official website. |
| Correction group | Environmental protection refers to actions taken by individuals, organizations and governments to solve environmental problems and ensure the sustainable development of society.--- page break ---In April 2015, the Beijing Environmental Protection Bureau issued the ‘Report on Beijing Environmental Quality in 2014.’ This report stated that Beijing’s air quality continued to be improved in 2014. The annual average PM2.5 concentration dropped 4% year-on-year, with a value of 85.9 μg/m3, and the air quality level was safe and healthy. The Chinese Ministry of Environmental Protection also reported this number in their official website.--- page break ---In March 2015, Peking University Guanghua School of Management released the ‘Report on Beijing Air Quality Assessment in 2010-2014.’ The report presents data from the Ministry of Environmental Protection and other agencies and concludes that in the five years from 2010 to 2014, Beijing has experienced 437 pollution events and 370 (85%) reached the level of severe pollution. The duration of each severe pollution event is ~25 hours. Furthermore, the average concentration of PM2.5 in 2014 was 98.57 μg/m3, which was 15% higher than the official figures. In March 2017, the Guanghua School of Management of Peking University also released the ‘Report on Beijing Regional Pollution Status Assessment in 2013-2016.’ Through an analysis of more than 10 million pollution data points from air quality monitoring stations in Beijing in 2013-2016, it found that the average PM2.5 level was 91.1 μg/m3 in the central area of Beijing in 2014, which was higher than the official number. |

**Supplementary Figures**



**Supplementary Figure 1**. Group means of experiments for non-CCP members (economy scenario).



**Supplementary Figure 2**. Group means of experiments for non-CCP members (air pollution scenario).

**Supplementary Tables**

|  |  |
| --- | --- |
|  | Demographics |
| Gender | Female | 44.51% |
|  | Male | 55.26% |
|  | Others | 0.23% |
| Hukou | Urban/Nonagricultural | 53.93% |
| Rural/Agricultural | 44.74% |
| Others | 1.74% |
| Education | $\leq $Second School | 14.73% |
| High School | 43.41% |
| College | 39.9% |
| Graduate School | 1.92% |
| Age | 18-29 | 22.78% |
| 30-45 | 53.20% |
| 46-60 | 20.45% |
| $>$60 | 3.57% |
| Income  | $<$2,500 | 26.44% |
| 2,500-7,500 | 60.11% |
| 7,501-15,000 | 11.53% |
| $>$15,000 | 1.92% |
| Foreign language | No | 45.11% |
| Yes  | 54.89% |
| Party member | Yes | 37.01% |
| No | 62.99% |
| Total | 2186 |  |

**Supplementary Table 1.** Demographics of Study Participants.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 7.504\*\*\*(0.000) |  | 5.336\*\*(0.003) |
| Correction - Control | 3.844\*(0.040) |  | 2.468(0.331) |
| Correction - Misinformation | -3.660(0.104) | -4.333\*(0.015) | -2.868(0.291) |

Note: Entries in the parentheses are exact *p*-values.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0.001.

**Supplementary Table 2.** Means of experiments for non-CCP members (the economy scenario, Scheffe tests).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 8.124\*\*\*(0.000) |  | 8.534\*\*\*(0.000) |
| Correction - Control | 2.600 (0.535) |  | 6.033\*\*(0.003) |
| Correction - Misinformation | -5.524\*(0.018) | -5.521\*\*(0.008) | -2.505(0.467) |

Note: Entries in the parentheses are exact *p*-values.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0.001.

**Supplementary Table 3.** Means of experiments for non-CCP members (the air pollution scenario, Scheffe tests).

We first conducted robustness checks by bootstrapping our dataset. Similar treatment effects were obtained when using wild cluster bootstrapped standard errors in six tests of means comparisons (see in Supplementary Tables below).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 8.665\*\*\*[6.229, 11.10] |  | 6.625\*\*\*[4.199, 9.051] |
| Correction - Control | 5.403\*\*\*[2.836,7.970] |  | 4.063\*\*[1.538, 6.589] |
| Correction - Misinformation | -3.262\*[-5.835, -0.690] | -4.291\*\*\*[-6.928, -1.655] | -2.562 [-5.139, 0.0148] |

Note: Entries in the parentheses are bootstrapped standard errors. The *t*-tests of the mean difference estimates are under the assumption of equal variances, and the associated *p*-values reflect two-sided tests.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0 .001.

**Supplementary Table 4.** Bootstrapped group means differences (B=3,000) (economy scenario).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 9.014\*\*\*[6.489, 11.54] |  | 9.630\*\*\*[7.267, 11.99] |
| Correction - Control | 4.960\*\*[1.736, 8.183] |  | 7.017\*\*\*[4.098, 9.937] |
| Correction - Misinformation | -4.054\*[-7.172, -0.937] | -4.045\*\*[-7.111, -0.978] | -2.613[-5.274, 0.0481] |

Note: Entries in the parentheses are bootstrapped standard errors. The *t*-tests of the mean difference estimates are under the assumption of equal variances, and the associated *p*-values reflect two-sided tests.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0 .001.

**Supplementary Table 5.** Bootstrapped group means differences (B=3,000) (air pollution scenario).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 8.665\*\*\*(0.000) |  | 6.625\*\*\*(0.000) |
| Correction - Control | 5.403\*\*\*(0.000) |  | 4.063\*\*(0.002) |
| Correction - Misinformation | -3.262\*(0.015) | -4.291\*\*(0.002) | -2.562(0.055) |

Note: Entries in the parentheses are exact *p*-values.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0.001.

**Supplementary Table 6.** Means of experiments for the economy scenario (Scheffe tests).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 9.014\*\*\*(0.000) |  | 9.630\*\*\*(0.000) |
| Correction - Control | 4.960\*\*(0.002) |  | 7.018\*\*\*(0.000) |
| Correction - Misinformation | -4.054\*(0.010) | -4.045\*\*(0.009) | -2.613(0.055) |

Note: Entries in the parentheses are exact *p*-values.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0.001.

**Supplementary Table 7.** Means of experiments for the air pollution scenario (Scheffe tests).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 8.665\*\*\*(0.000) |  | 6.625\*\*\*(0.000) |
| Correction - Control | 5.403\*\*\*(0.000) |  | 4.063\*\*(0.002) |
| Correction - Misinformation | -3.262\*(0.015) | -4.291\*\*(0.002) | -2.562(0.055) |

Note: Entries in the parentheses are exact *p*-values.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0.001.

**Supplementary Table 8.** Means of experiments for the economy scenario (Bonferroni tests).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 9.014\*\*\*(0.000) |  | 9.630\*\*\*(0.000) |
| Correction - Control | 4.960\*\*(0.002) |  | 7.018\*\*\*(0.000) |
| Correction - Misinformation | -4.054\*(0.010) | -4.045\*\*(0.009) | -2.613(0.055) |

Note: Entries in the parentheses are exact *p*-values.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0.001.

**Supplementary Table 9.** Means of experiments for the air pollution scenario (Bonferroni tests).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 8.665\*\*\*(0.000) |  | 6.625\*\*\*(0.000) |
| Correction - Control | 5.403\*\*\*(0.000) |  | 4.063\*\*(0.002) |
| Correction - Misinformation | -3.262\*(0.015) | -4.291\*\*(0.002) | -2.562(0.055) |

Note: Entries in the parentheses are exact *p*-values.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0.001.

**Supplementary Table 10.** Means of experiments for the economy scenario (Sidak tests).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Issue perception | Belief in misinformation | Support for government |
| Misinformation - Control | 9.014\*\*\*(0.000) |  | 9.630\*\*\*(0.000) |
| Correction - Control | 4.960\*\*(0.002) |  | 7.018\*\*\*(0.000) |
| Correction - Misinformation | -4.054\*(0.010) | -4.045\*\*(0.009) | -2.613(0.055) |

Note: Entries in the parentheses are exact *p*-values.

\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0.001.

**Supplementary Table 11.** Means of experiments for the air pollution scenario (Sidak tests).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Gender | Age | Education | Rural resident | Income | Foreign language | CCP member |
| Control | 0.566(0.509) | 3.001(0.716) | 2.361(0.725) | 1.443(0.510) | 1.931(0.631) | 0.587(0.493) | 0.382(0.487) |
| Misinformation | 0.556(0.505) | 3.156(0.798) | 2.236(0.739) | 1.473(0.542) | 1.858(0.666) | 0.513(0.501) | 0.349(0.478) |
| Correction | 0.566(0.496) | 3.032(0.826) | 2.260(0.756) | 1.457(0.511) | 1.914(0.693) | 0.534(0.500) | 0.395(0.490) |
| F | 0.04 | 3.42 | 3.08 | 0.29 | 1.08 | 2.26 | 0.72 |
| Prob>F | 0.9625 | 0.0332 | 0.0461 | 0.7464 | 0.3409 | 0.1047 | 0.4864 |

**Supplementary Table 12.** Balance and descriptive statistics of variables (economy scenario).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Gender | Age | Education | Rural resident | Income | Foreign language | CCP member |
| Control | 0.561 | 2.966 | 2.323 | 1.513 | 1.888 | 0.611 | 0.372 |
|  | (0.497) | (0.725) | (0.714) | (0.541) | (0.641) | (0.488) | (0.483) |
| Misinformation | 0.560 | 3.100 | 2.238 | 1.480 | 1.852 | 0.470 | 0.356 |
|  | (0.502) | (0.760) | (0.757) | (0.521) | (0.704) | (0.500) | (0.480) |
| Correction | 0.520 | 3.102 | 2.280 | 1.472 | 1.850 | 0.539 | 0.354 |
|  | (0.501) | (0.726) | (0.714) | (0.531) | (0.690) | (0.499) | (0.479) |
| F | 0.65  | 4.54  | 1.48  | 0.62  | 0.29  | 8.69  | 0.16 |
| Prob>F | 0.5243 | 0.0109 | 0.2290 | 0.5371 | 0.7451 | 0.0002 | 0.8531 |

**Supplementary Table 13.** Balance and descriptive statistics of variables (air pollution scenario).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Issue perception(1) | Support for government(2) |  | Issue perception(3) | Trust in Information(4) | Support for government(5) |
|  | (Baseline: Control group) |  | (Baseline: Misinformation group) |
| Misinformation | 8.748\*\*\*(1.236) | 6.620\*\*\*(1.241) |  |  |
| Correction | 5.562\*\*\*(1.312) | 4.176\*\*\*(1.273) |  | -3.197\*\*(1.309) | -4.216\*\*\*(1.335) | -2.495(1.302) |
| Education | 2.563\*\*(0.847) | 2.468\*\*(0.939) |  | 1.458(1.123) | 1.908(1.041) | 1.794(1.030) |
| CCP member | -0.511(1.270) | 0.248(1.308) |  | 0.964(1.605) | 1.074(1.626) | 2.715(1.680) |
| Female | 1.245(1.078) | 1.134(1.067) |  | 2.005(1.340) | 2.190(1.383) | 1.457(1.342) |
| Age | 1.212(0.781) | 1.599\*(0.754) |  | 1.134(0.928) | 0.947(0.961) | 1.069(0.879) |
| Income | 0.954(1.046) | 0.660(1.043) |  | -0.359(1.293) | -1.165(1.354) | -1.427(1.352) |
| Rural resident | -0.694(1.153) | -0.419(1.116) |  | -0.350(1.429) | -0.481(1.411) | -0.521(1.377) |
| Foreign language | -1.862(1.310) | -2.029(1.343) |  | -0.384(1.680) | -0.949(1.714) | -2.055(1.795) |
| Constant | 67.61\*\*\*(4.857) | 69.54\*\*\*(4.834) |  | 79.30\*\*\*(5.961) | 79.94\*\*\*(5.866) | 82.34\*\*\*(5.559) |
| *N* | 1,077 | 1,077 |  | 614 | 614 | 614 |

In regressions (1) and (2), the baseline is the control group. In regressions (3), (4), and (5), the baseline is the misinformation group. Robust standard errors in parentheses. *P*-values reflect two-sided hypothesis tests.
\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0 .001.

**Supplementary Table 14.** Regression results of the economy scenario.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Issue perception(1) | Support for government(2) |  | Issue perception(3) | Trust in Information(4) | Support for government(5) |
|  | (Baseline: Control group) |  | (Baseline: Misinformation group) |
| Misinformation | 9.202\*\*\*(1.346) | 9.488\*\*\*(1.273) |  |  |
| Correction | 4.947\*\*(1.635) | 6.828\*\*\*(1.490) |  | -4.233\*\*(1.634) | -4.216\*\*(1.578) | -2.629(1.406) |
| Education | 2.633\*\*(1.117) | 3.003\*\*(1.068) |  | 1.349(1.419) | 2.337(1.422) | 1.397(1.294) |
| CCP member | 0.141(1.318) | 0.569(1.261) |  | 1.789(1.687) | 0.752(1.623) | 1.372(1.572) |
| Female | -0.615(1.190) | -0.550(1.117) |  | -0.418(1.499) | 0.0828(1.506) | -0.466(1.333) |
| Age | 1.195(0.876) | 1.327(0.827) |  | 2.670\*(1.136) | 2.698\*(1.121) | 2.237\*(1.021) |
| Income | -0.0774(1.199) | 0.528(1.129) |  | 0.550(1.378) | 0.889(1.466) | 1.569(1.111) |
| Rural resident | -0.0924(1.213) | -1.049(1.165) |  | 0.359(1.544) | -0.293(1.524) | -0.712(1.373) |
| Foreign language | 0.879(1.377) | -1.474(1.333) |  | 1.641(1.706) | 1.104(1.715) | -0.641(1.534) |
| Constant | 61.24\*\*\*(4.879) | 65.02\*\*\*(4.726) |  | 65.84\*\*\*(6.624) | 65.94\*\*\*(6.343) | 72.12\*\*\*(5.910) |
| *N* | 1,109 | 1,109 |  | 633 | 633 | 633 |

In regressions (1) and (2), the baseline is the control group. In regressions (3), (4), and (5), the baseline is the misinformation group. Robust standard errors in parentheses. *P*-values reflect two-sided hypothesis tests.
\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0 .001.

**Supplementary Table 15.** Regression results of the air pollution scenario.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Issue perception(1) | Support for government(2) |  | Issue perception(3) | Trust in Information(4) | Support for government(5) |
|  | (Baseline: Control group) |  | (Baseline: Misinformation group) |
| Misinformation | 10.10\*\*\* | 8.290\*\*\* |  |  |
| (-1.739) | (-1.755) |  |  |  |  |
| Correction | 6.682\*\*\* | 5.693\*\* |  | -3.617\* | -4.606\* | -2.96 |
| (-1.967) | (-1.881) |  | (-1.759) | (-1.922) | (-1.659) |
| Education | 3.319\* | 3.420\*\* |  | 2.135 | 1.612 | 1.972 |
| (-1.287) | (-1.211) |  | (-1.764) | (-1.596) | (-1.54) |
| CCP member | -1.829 | -0.585 |  | 2.232 | 2.344 | 4.791\* |
| (-1.824) | (-2.035) |  | (-2.158) | (-2.252) | (-2.079) |
| Female | 0.699 | -0.11 |  | 1.707 | 1.017 | -0.0319 |
| (-1.568) | (-1.488) |  | (-1.941) | (-2.052) | (-1.786) |
| Age | 1.376 | 2.404\* |  | 1.229 | 0.967 | 1.459 |
| (-1.054) | (-1.019) |  | (-1.347) | (-1.395) | (-1.223) |
| Income | 0.547 | -0.259 |  | 0.346 | -0.0222 | -1.664 |
| (-1.541) | (-1.48) |  | (-1.967) | (-2.126) | (-1.931) |
| Rural resident | -0.78 | -0.975 |  | -0.693 | -1.943 | -2.161 |
| (-1.835) | (-1.728) |  | (-2.443) | (-2.534) | (-2.264) |
| Foreign language | -1.25 | -0.191 |  | -2.461 | -2.536 | -2.327 |
| (-1.802) | (-2.032) |  | (-2.154) | (-2.45) | (-2.455) |
| Constant | 66.22\*\*\* | 66.69\*\*\* |  | 77.99\*\*\* | 81.43\*\*\* | 84.12\*\*\* |
| (-7.345) | (-7.447) |  | (-9.601) | (-9.757) | (-8.462) |
| *N* | 1077 | 1077 |  | 614 | 614 | 614 |

In regressions (1) and (2), the baseline is the control group. In regressions (3), (4), and (5), the baseline is the misinformation group. Robust standard errors in parentheses. *P*-values reflect two-sided hypothesis tests.
\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0 .001.

**Supplementary Table 16.** Regression results of the economy scenario (after entropy).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Issue perception(1) | Support for government(2) |  | Issue perception(3) | Trust in Information(4) | Support for government(5) |
|  | (Baseline: Control group) |  | (Baseline: Misinformation group) |
| Misinformation | 11.51\*\*\* | 10.02\*\*\* |  |  |
| (-1.891) | (-1.734) |  |  |
| Correction | 4.643\* | 6.792\*\* |  | -6.505\*\* | -5.818\* | -3.022 |
| (-2.341) | (-2.068) |  | (-2.289) | (-2.306) | (-2.067) |
| Education | 2.83 | 3.245\* |  | 1.735 | 2.662 | 2.564 |
| (-1.526) | (-1.452) |  | (-2.175) | (-2.194) | (-2.082) |
| CCP member | -0.618 | -0.283 |  | 0.158 | 0.43 | -0.859 |
| (-1.739) | (-1.67) |  | (-2.305) | (-2.485) | (-2.153) |
| Female | -1.665 | -2.057 |  | -0.333 | -1.556 | -1.047 |
| (-1.64) | (-1.554) |  | (-2.003) | (-2.18) | (-1.986) |
| Age | 1.902 | 2.320\* |  | 3.504\* | 2.662 | 3.268\* |
| (-1.077) | (-1.088) |  | (-1.391) | (-1.44) | (-1.315) |
| Income | -0.913 | 0.699 |  | -0.255 | -0.908 | 1.868 |
| (-1.526) | (-1.458) |  | (-1.73) | (-1.843) | (-1.53) |
| Rural resident | -1.899 | -2.64 |  | -1.12 | -2.012 | -1.484 |
| (-1.539) | (-1.842) |  | (-1.97) | (-2.067) | (-1.995) |
| Foreign language | 1.42 | -1.022 |  | 3.934 | 2.946 | 0.754 |
| (-1.867) | (-1.921) |  | (-2.353) | (-2.475) | (-2.263) |
| Constant | 63.07\*\*\* | 64.13\*\*\* |  | 67.05\*\*\* | 71.67\*\*\* | 67.50\*\*\* |
| (-5.616) | (-6.557) |  | (-8.169) | (-8.107) | (-7.869) |
| *N* | 1109 | 1109 |  | 633 | 633 | 633 |

In regressions (1) and (2), the baseline is the control group. In regressions (3), (4), and (5), the baseline is the misinformation group. Robust standard errors in parentheses. *P*-values reflect two-sided hypothesis tests.
\**p*≤0.05. \*\**p*≤0.01. \*\*\**p*≤0 .001.

**Supplementary Table 17.** Regression results of the air pollution scenario (after entropy).