**Appendix**

**Not For Publication**

# A: Procedure for Computing Slant Index

In G&S, for each congressperson *c*, they observe its ideology *yc* and phrase frequency *fpc*, the number of times phrase *p* appears in congressperson *c*’s speech, for each phrase *p*. For each phrase *p*, G&S regress the relative frequency, where, on *yc*, and obtain the intercept and slope parameters *ap* and *bp*, for each phrase *p*. The parameter values, together with the 1,000 phrases, are available at <http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/26242>, accessed April 2012.

The 1,000 phrases exhibit heterogeneous s lant. To mitigate the effect of outlier phrases (e.g., “African American” and “illegal immigration”), we set the parameter values for the 9 most left-leaning phrases and 9 most right-leaning phrases to be the same as the 10th most left-leaning phrase and the 10th most right-leaning phrase, respectively.

For each Wikipedia article n, we regress - *ap*, where  is the relative frequency of phrase *p* in the article, on *bp* for the 1,000 phrases, and obtain the slope estimate . When an article has none of the 1,000 phrases,  is 0.4975. We denote Yn = - 0.4975 and use Yn as our bias index for article n.

**B: Full Tables for Tables 6-7 in the Paper**

**Table 6: Regression Results for the First Stage Selection Equation**

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | |
| Dependent Variables | Has code words | Has code words | |
| Attention and editing |  |  | |
| Unique identifiers | 5.297\*\*\* | 1.732\*\*\* | |
|  | [0.551] | [0.480] | |
| Total revisions to date | -35.582\*\*\* | -20.211\*\*\* | |
|  | [2.231] | [1.960] | |
| Pageviews | -13.659\* |  | |
|  | [7.245] |  | |
| Dispersion |  |  | |
| Revisions per contributor | 1,278.439\*\*\* | 1,665.096\*\*\* | |
|  | [57.775] | [50.039] | |
| HHI | -52.372\*\*\* | -49.307\*\*\* | |
|  | [1.073] | [0.752] | |
| Article features |  |  | |
| Words | 2.965\*\*\* | 3.328\*\*\* | |
|  | [0.018] | [0.015] | |
| Reference | 711.030\*\*\* | 538.473\*\*\* | |
|  | [15.477] | [13.628] |
| References per word | -160.131\*\*\* | -53.585\*\*\* | |
|  | [14.952] | [11.456] | |
| Year created = 2002 | 0.650\*\*\* | 0.593\*\*\* |
|  | [0.025] | [0.017] |
| Year created = 2003 | 0.002 | -0.099\*\*\* |
|  | [0.026] | [0.017] |
| Year created = 2004 | -0.217\*\*\* | -0.327\*\*\* |
|  | [0.025] | [0.017] |
| Year created = 2005 | -0.334\*\*\* | -0.415\*\*\* |
|  | [0.025] | [0.017] |
| Year created = 2006 | -0.442\*\*\* | -0.512\*\*\* |
|  | [0.025] | [0.017] |
| Year created = 2007 | -0.484\*\*\* | -0.521\*\*\* |
|  | [0.026] | [0.017] |
| Year created = 2008 | -0.320\*\*\* | -0.402\*\*\* |
|  | [0.026] | [0.018] |
| Year created = 2009 | -0.206\*\*\* | -0.292\*\*\* |
|  | [0.026] | [0.019] |
| Year created = 2010 | -0.165\*\*\* | -0.264\*\*\* |
|  | [0.027] | [0.019] |
| Year created = 2011 | -0.570\*\*\* | -0.665\*\*\* |
|  | [0.055] | [0.051] |
| Categories |  |  | |
| Abortion | 0.895\*\*\* | 0.869\*\*\* | |
|  | [0.070] | [0.052] | |
| Budget & Economy | 0.221\*\*\* | 0.194\*\*\* | |
|  | [0.016] | [0.012] | |
| Civil rights | 0.516\*\*\* | 0.493\*\*\* | |
|  | [0.016] | [0.012] | |
| Corporations | 0.024 | 0.063\*\* | |
|  | [0.042] | [0.032] | |
| Crime | 0.082\*\*\* | 0.069\*\*\* | |
|  | [0.015] | [0.012] | |
| Drugs | -0.152\*\*\* | -0.180\*\*\* | |
|  | [0.049] | [0.038] | |
| Education | 0.108\*\*\* | 0.059\*\*\* | |
|  | [0.013] | [0.010] | |
| Energy | 0.575\*\*\* | 0.545\*\*\* | |
|  | [0.035] | [0.026] | |
| Families & Children | -0.110\*\*\* | -0.133\*\*\* | |
|  | [0.023] | [0.017] | |
| Foreign Policy | 0.393\*\*\* | 0.325\*\*\* | |
|  | [0.013] | [0.010] | |
| Trade | 0.612\*\*\* | 0.506\*\*\* | |
|  | [0.034] | [0.024] | |
| Government | 0.297\*\*\* | 0.342\*\*\* | |
|  | [0.005] | [0.004] | |
| Gun Control | 0.543\*\*\* | 0.457\*\*\* | |
|  | [0.075] | [0.054] | |
| Health Care | 0.185\*\*\* | 0.160\*\*\* | |
|  | [0.021] | [0.016] | |
| Homeland Security | 0.049\* | 0.050\*\* | |
|  | [0.026] | [0.020] | |
| Immigration | 0.035 | -0.005 | |
|  | [0.022] | [0.017] | |
| Infrastructure & Technology | -0.110\*\*\* | -0.124\*\*\* | |
|  | [0.014] | [0.011] | |
| Jobs | -0.012 | -0.028\*\* | |
|  | [0.018] | [0.014] | |
| Principles & Values | -0.027 | -0.034\*\* | |
|  | [0.021] | [0.016] | |
| Social Security | 0.656\*\* | 0.540\*\*\* | |
|  | [0.295] | [0.196] | |
| Tax Reform | 0.475\*\*\* | 0.355\*\*\* | |
|  | [0.057] | [0.041] | |
| War & Peace | 0.042\*\*\* | 0.041\*\*\* | |
|  | [0.012] | [0.009] | |
| Welfare & Poverty | 0.265\*\*\* | 0.173\*\*\* | |
|  | [0.032] | [0.025] | |
| Bios | 0.131\*\*\* | 0.093\*\*\* | |
|  | [0.007] | [0.005] | |
| Year Dummies | Included | Included | |
| Observations | 415,836 | 647,352 | |
| Standard errors in brackets; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 | | | |

**Table 7: Regression Results for Slant Index and Bias Size**

|  |  |  |
| --- | --- | --- |
|  | (1) | (2) |
| Dependent Variables | Slant index | Slant index |
| Attention and editing |  |  |
| Unique identifiers | 1.460\*\*\* | 1.351\*\*\* |
|  | [0.081] | [0.070] |
| Total revisions to date | -3.120\*\*\* | -2.791\*\*\* |
|  | [0.324] | [0.279] |
| Pageviews | -2.072\*\* |  |
|  | [1.050] |  |
| Dispersion |  |  |
| Revisions per contributor | -13.874 | -24.412\*\* |
|  | [13.625] | [12.065] |
| HHI | 2.367\*\*\* | 1.840\*\*\* |
|  | [0.364] | [0.270] |
| Article features |  |  |
| Total frequency | -1.462\*\*\* | -1.081\*\*\* |
|  | [0.098] | [0.079] |
| Reference | 15.830\*\*\* | 4.280\*\* |
|  | [2.308] | [2.078] |
| References per word | 4.224 | 18.391\*\*\* |
|  | [6.319] | [6.001] |
| Year created = 2002 | -0.201\*\*\* | -0.235\*\*\* |
|  | [0.004] | [0.003] |
| Year created = 2003 | 0.030\*\*\* | 0.008\*\* |
|  | [0.005] | [0.003] |
| Year created = 2004 | 0.089\*\*\* | 0.079\*\*\* |
|  | [0.005] | [0.003] |
| Year created = 2005 | 0.103\*\*\* | 0.085\*\*\* |
|  | [0.005] | [0.004] |
| Year created = 2006 | 0.113\*\*\* | 0.094\*\*\* |
|  | [0.005] | [0.004] |
| Year created = 2007 | 0.117\*\*\* | 0.100\*\*\* |
|  | [0.005] | [0.004] |
| Year created = 2008 | 0.115\*\*\* | 0.099\*\*\* |
|  | [0.005] | [0.004] |
| Year created = 2009 | 0.109\*\*\* | 0.093\*\*\* |
|  | [0.005] | [0.004] |
| Year created = 2010 | 0.103\*\*\* | 0.087\*\*\* |
|  | [0.006] | [0.005] |
| Year created = 2011 | 0.111\*\*\* | 0.103\*\*\* |
|  | [0.018] | [0.018] |
| Categories |  |  |
| Abortion | 0.106\*\*\* | 0.101\*\*\* |
|  | [0.014] | [0.011] |
| Budget & Economy | 0.010\*\*\* | 0.013\*\*\* |
|  | [0.004] | [0.003] |
| Civil rights | -0.139\*\*\* | -0.142\*\*\* |
|  | [0.003] | [0.003] |
| Corporations | 0.027\*\* | 0.033\*\*\* |
|  | [0.011] | [0.008] |
| Crime | 0.006\* | 0.007\*\* |
|  | [0.003] | [0.003] |
| Drugs | 0.072\*\*\* | 0.076\*\*\* |
|  | [0.012] | [0.009] |
| Education | 0.009\*\*\* | 0.017\*\*\* |
|  | [0.003] | [0.003] |
| Energy | 0.032\*\*\* | 0.019\*\*\* |
|  | [0.007] | [0.006] |
| Families & Children | 0.025\*\*\* | 0.026\*\*\* |
|  | [0.006] | [0.005] |
| Foreign Policy | 0.099\*\*\* | 0.103\*\*\* |
|  | [0.003] | [0.002] |
| Trade | 0.062\*\*\* | 0.059\*\*\* |
|  | [0.006] | [0.005] |
| Government | -0.070\*\*\* | -0.088\*\*\* |
|  | [0.002] | [0.001] |
| Gun Control | 0.040\*\*\* | 0.037\*\*\* |
|  | [0.015] | [0.012] |
| Health Care | -0.020\*\*\* | -0.015\*\*\* |
|  | [0.005] | [0.004] |
| Homeland Security | -0.010\* | -0.014\*\*\* |
|  | [0.006] | [0.004] |
| Immigration | 0.037\*\*\* | 0.045\*\*\* |
|  | [0.006] | [0.005] |
| Infrastructure & Technology | 0.022\*\*\* | 0.023\*\*\* |
|  | [0.004] | [0.003] |
| Jobs | 0.004 | 0.015\*\*\* |
|  | [0.004] | [0.004] |
| Principles & Values | 0.007 | 0.012\*\*\* |
|  | [0.005] | [0.004] |
| Social Security | 0.075 | 0.051 |
|  | [0.055] | [0.042] |
| Tax Reform | 0.049\*\*\* | 0.055\*\*\* |
|  | [0.011] | [0.009] |
| War & Peace | 0.034\*\*\* | 0.035\*\*\* |
|  | [0.003] | [0.002] |
| Welfare & Poverty | 0.001 | -0.002 |
|  | [0.007] | [0.005] |
| Bios | 0.051\*\*\* | 0.068\*\*\* |
|  | [0.002] | [0.002] |
| Select Year dummies | 2007 omitted | 2001 omitted |
|  | 0.020\*\*\* in 2008 | -0.251\*\*\* in 2002 |
|  | 0.021\*\*\*in 2011 | -0.138\*\*\* in 2003 |
|  |  | -0.103\*\*\* in 2010 |
|  |  | -0.109\*\*\* in 2011 |
| Full set of Year Dummies | Included | Included |
| Inverse Mills ratio | -0.026\*\*\* | -0.041\*\*\* |
|  | [0.003] | [0.002] |
| Observations | 156,419 | 237,989 |

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

|  |  |  |
| --- | --- | --- |
|  | (1) | (2) |
| Dependent Variables | Bias size | Bias size |
| Attention and editing |  |  |
| Unique identifiers | -6.571\*\*\* | -6.151\*\*\* |
|  | [0.370] | [0.316] |
| Total revisions to date | 16.167\*\*\* | 13.826\*\*\* |
|  | [1.483] | [1.258] |
| Pageviews | -2.979 |  |
|  | [4.809] |  |
| Dispersion |  |  |
| Revisions per contributor | 301.312\*\*\* | 355.838\*\*\* |
|  | [62.404] | [54.432] |
| HHI | -18.135\*\*\* | -14.774\*\*\* |
|  | [1.667] | [1.216] |
| Article features |  |  |
| Total frequency | -0.007 | -1.073\*\*\* |
|  | [0.447] | [0.358] |
| Reference | -70.922\*\*\* | -20.222\*\* |
|  | [10.572] | [9.376] |
| References per word | 203.924\*\*\* | 184.997\*\*\* |
|  | [28.911] | [26.999] |
| Year created = 2002 | 0.609\*\*\* | 0.697\*\*\* |
|  | [0.020] | [0.014] |
| Year created = 2003 | -0.114\*\*\* | -0.077\*\*\* |
|  | [0.022] | [0.015] |
| Year created = 2004 | -0.300\*\*\* | -0.289\*\*\* |
|  | [0.022] | [0.015] |
| Year created = 2005 | -0.381\*\*\* | -0.346\*\*\* |
|  | [0.022] | [0.016] |
| Year created = 2006 | -0.469\*\*\* | -0.434\*\*\* |
|  | [0.022] | [0.016] |
| Year created = 2007 | -0.368\*\*\* | -0.344\*\*\* |
|  | [0.023] | [0.017] |
| Year created = 2008 | -0.372\*\*\* | -0.364\*\*\* |
|  | [0.023] | [0.018] |
| Year created = 2009 | -0.322\*\*\* | -0.316\*\*\* |
|  | [0.024] | [0.019] |
| Year created = 2010 | -0.320\*\*\* | -0.319\*\*\* |
|  | [0.026] | [0.021] |
| Year created = 2011 | -0.639\*\*\* | -0.687\*\*\* |
|  | [0.085] | [0.082] |
| Categories |  |  |
| Abortion | -0.255\*\*\* | -0.230\*\*\* |
|  | [0.062] | [0.048] |
| Budget & Economy | -0.157\*\*\* | -0.161\*\*\* |
|  | [0.017] | [0.013] |
| Civil rights | 0.528\*\*\* | 0.514\*\*\* |
|  | [0.016] | [0.012] |
| Corporations | -0.240\*\*\* | -0.184\*\*\* |
|  | [0.048] | [0.038] |
| Crime | 0.006 | -0.003 |
|  | [0.016] | [0.013] |
| Drugs | -0.149\*\*\* | -0.160\*\*\* |
|  | [0.053] | [0.042] |
| Education | 0.057\*\*\* | 0.013 |
|  | [0.015] | [0.012] |
| Energy | -0.065\*\* | -0.080\*\*\* |
|  | [0.032] | [0.025] |
| Families & Children | -0.058\*\* | -0.063\*\*\* |
|  | [0.027] | [0.021] |
| Foreign Policy | -0.220\*\*\* | -0.237\*\*\* |
|  | [0.013] | [0.010] |
| Trade | 0.249\*\*\* | 0.268\*\*\* |
|  | [0.028] | [0.022] |
| Government | 0.186\*\*\* | 0.251\*\*\* |
|  | [0.007] | [0.006] |
| Gun Control | -0.413\*\*\* | -0.444\*\*\* |
|  | [0.068] | [0.053] |
| Health Care | 0.028 | 0.083\*\*\* |
|  | [0.024] | [0.019] |
| Homeland Security | -0.042 | -0.038\* |
|  | [0.026] | [0.020] |
| Immigration | -0.177\*\*\* | -0.202\*\*\* |
|  | [0.027] | [0.021] |
| Infrastructure & Technology | 0.007 | 0.001 |
|  | [0.016] | [0.013] |
| Jobs | -0.060\*\*\* | -0.100\*\*\* |
|  | [0.020] | [0.016] |
| Principles & Values | 0.046\*\* | 0.038\*\* |
|  | [0.022] | [0.018] |
| Social Security | -0.844\*\*\* | -0.603\*\*\* |
|  | [0.250] | [0.189] |
| Tax Reform | -0.175\*\*\* | -0.229\*\*\* |
|  | [0.052] | [0.040] |
| War & Peace | -0.152\*\*\* | -0.131\*\*\* |
|  | [0.013] | [0.010] |
| Welfare & Poverty | 0.037 | 0.063\*\* |
|  | [0.031] | [0.025] |
| Bios | -0.207\*\*\* | -0.260\*\*\* |
|  | [0.009] | [0.007] |
| Select Year dummies | 2007 omitted | 2001 omitted |
|  | -0.062\*\*\* in 2008 | 0.566\*\*\* in 2002 |
|  | -0.084\*\*\* in 2009 | 0.270\*\*\* in 2003 |
|  |  | 0.025 in 2010 |
|  | -0.096\*\*\* in 2011 | 0.049 in 2011 |
| Full set of Year Dummies | Included | Included |
| Inverse Mills ratio | 0.157\*\*\* | 0.239\*\*\* |
|  | [0.013] | [0.010] |
| Observations | 156,419 | 237,989 |

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

**C: Additional Econometric Models and Results**

Similar to the probit models, we develop two new models, models A and B, to examine changes to slant and bias size, controlling for the selection effects. Model A focuses on the importance of the editing process at intermediate stages. In this approach the model measures the slant index of an article at multiple points in time. Consider observing an article at time T, which is recent, and at an earlier moment, time t (t<T), and take first differences when we can observe slant in both time points. Assuming the exogeneity of Yt to those doing the editing, regressing YT on Yt provides an unbiased estimate of the changes in bias. Formally, this would become

YT = f(Yt, xT - xt) + u, when g(z) + e > 0,

YT = 0 when g(z) + e ≤ 0.

In a linear specification, a subset of xT and xt will be identical (such as category dummies), so this model only identifies changes brought about by revisions between times T and t. In this model, a vintage dummy indicates whether an article of a certain vintage has a tendency to change over its revisions.

An analogous variant on ln[Abs(Y)] can be estimated for the determinants of the change in bias. We refer to it as Model B.

There are two possible samples for Models A and B. One uses all available data, matching pairs of observations for the same article when a measure of slant index or bias size exists for a pair over time, controlling for selection (on the earliest observation). Another approach takes the last observation of an article, and finds the earliest observation of the article in which slant or bias size is measured. Once again, this controls for selection (on the latest observation).

***Change in Slant and Bias, Models A and B***

Tables C1 and C2 present the results for models A and B, looking at the determinants of changes to slant and bias size, respectively. There are three sets of estimates, each with and without *Pageviews* included, which changes the size and vintage of the data. All the topic dummies are dropped because these are not identified. The first two sets of estimates both control for selection (first stage is not shown). The observations in the first two columns are smaller than those in Panel B of Table 6 in the paper because the procedure requires that we have a value for lagged slant index or lagged bias size. The number of observations in the third and fourth columns is smaller as we only take the earliest and latest observation for an article and examine their differences. Columns 5 and 6 tests for the importance of selection, repeating the analysis in Columns 1 and 2 except that they do not apply first stage selection correction.

As we see from Tables C1 and C2, controlling for starting points helps identify some facets of the revision process. If revisions increase, the slant does not change, but the bias will increase, by as much as 6% to 12% for one standard deviation, with different estimates giving different results. If the number of unique ids increases, slant also does not change, but bias declines, by as much as 11% for a one standard deviation increase in unique ids. While *Pageviews* is statistically significant in Table C2, it is not a large number.

The results show mixed evidence for Linus’ Law. More revisions have more bias, which is inconsistent with the null. However, more participation, as measured by unique IDs, produces less bias, and these are large values, which favor the null. The *Pageviews* of an article do not matter for slant, and it is too small to matter for the production of bias, which is not what the null predicted.

The results from dispersion also are not strong. All three measures of dispersion, average revisions per contributor, average references per word, and HHI are not significant, in general. This arises, we suspect, because they do not vary much over time.

The vintage effects take on a new interpretation in this estimate. They suggest, interestingly, that vintage is not important for understanding the change in the slant in an article, with one exception. The year 2002 vintage has a bias and continues to retain it while virtually all later vintages gradually lose theirs.

One other robust finding is that the lagged slant and bias of an article is a good predictor of its slant and bias in the next period. Indeed, it is the best predictor. Not surprisingly, the estimates of the lagged variables using all available lags are higher than those that match first and last observation, because the latter puts more time between observations.

Once again, we test whether the results persist for only the most active articles and find no qualitative difference. For the sake of brevity, we do not show these results.

**Table C1: Regression Results for Slant Index**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model A | All data | | First/last obs | | No first stage | |
| Attention and Editing |  |  |  |  |  |  |
| Unique identifiers – first diff | -0.089 | 0.05 | 0.614\*\* | -0.078 | -0.087 | 0.054 |
|  | [0.135] | [0.097] | [0.293] | [0.085] | [0.179] | [0.135] |
| Total revisions to date – first diff | 0.292 | 0.633\* | -2.450\*\*\* | 0.210 | 0.397 | 0.734 |
|  | [0.539] | [0.383] | [0.918] | [0.344] | [0.760] | [0.537] |
| Pageviews – first diff | 0.193 |  | -2.710 |  | 0.200 |  |
|  | [0.409] |  | [2.826] |  | [0.462] |  |
| Dispersion |  |  |  |  |  |  |
| Revisions per contributor – first diff | 4.07 | 8.956 | 12.170 | 28.114 | 3.882 | 8.501 |
|  | [6.656] | [6.121] | [22.654] | [23.515] | [4.987] | [5.792] |
| HHI – first diff | 0.297 | -0.303\*\*\* | -0.082 | -0.076 | 0.311\* | -0.264\* |
|  | [0.210] | [0.096] | [0.345] | [0.262] | [0.186] | [0.136] |
| Article Features |  |  |  |  |  |  |
| Total frequency – first diff | 0.176 | -0.169\*\*\* | 0.026 | -0.250\* | 0.189 | -0.159 |
|  | [0.115] | [0.054] | [0.380] | [0.139] | [0.219] | [0.170] |
| Reference – first diff | -1.051 | 1.325 | 5.217 | 10.408\*\*\* | -0.364 | 2.510 |
|  | [1.812] | [1.666] | [4.429] | [2.923] | [3.637] | [2.943] |
| References per word – first diff | 9.987\* | 7.079 | -1.403 | -4.712 | 9.240 | 5.826 |
|  | [5.339] | [5.262] | [13.520] | [11.519] | [10.401] | [8.783] |
| Year created = 2002 | -0.003\* | -0.005\*\*\* |  | -0.027\*\* | -0.002 | -0.005\*\*\* |
|  | [0.002] | [0.001] |  | [0.012] | [0.002] | [0.001] |
| Year created = 2003 | 0.002 | 0.001 |  | -0.021\* | 0.002 | 0.001 |
|  | [0.002] | [0.001] |  | [0.012] | [0.002] | [0.001] |
| Year created = 2004 | 0.002 | 0.005\*\*\* |  | 0.001 | 0.002 | 0.004\*\*\* |
|  | [0.002] | [0.001] |  | [0.012] | [0.002] | [0.001] |
| Year created = 2005 | 0.004\*\*\* | 0.005\*\*\* |  | 0.009 | 0.004\*\* | 0.005\*\*\* |
|  | [0.002] | [0.001] |  | [0.011] | [0.002] | [0.001] |
| Year created = 2006 | 0.003\*\* | 0.006\*\*\* |  | 0.009 | 0.003 | 0.005\*\*\* |
|  | [0.002] | [0.001] |  | [0.011] | [0.002] | [0.001] |
| Year created = 2007 | 0.003\* | 0.006\*\*\* | -0.006 | 0.007 | 0.003 | 0.005\*\*\* |
|  | [0.002] | [0.001] | [0.020] | [0.011] | [0.002] | [0.001] |
| Year created = 2008 | 0.003\*\* | 0.005\*\*\* | 0.009 | 0.008 | 0.003 | 0.005\*\*\* |
|  | [0.002] | [0.001] | [0.019] | [0.011] | [0.002] | [0.001] |
| Year created = 2009 | 0.004\*\* | 0.006\*\*\* | 0.015 | 0.015 | 0.003\* | 0.005\*\*\* |
|  | [0.002] | [0.001] | [0.019] | [0.012] | [0.002] | [0.001] |
| Year created = 2010 | 0.004\*\* | 0.006\*\*\* | 0.004 | 0.009 | 0.004\* | 0.005\*\*\* |
|  | [0.002] | [0.001] | [0.018] | [0.013] | [0.002] | [0.001] |
| Year created = 2011 | 0 | 0.003 |  | 0.012 | 0.001 | 0.002 |
|  | [0.005] | [0.006] |  | [0.027] | [0.003] | [0.003] |
| Lagged slant index | 0.963\*\*\* | 0.950\*\*\* | 0.840\*\*\* | 0.740\*\*\* | 0.963\*\*\* | 0.950\*\*\* |
|  | [0.001] | [0.001] | [0.005] | [0.003] | [0.001] | [0.001] |
| First stage | Yes | Yes | Yes | Yes | No | No |
| Observations | 96,461 | 172,443 | 9,303 | 27,669 | 96,461 | 172,443 |
| R-squared |  |  |  |  | 0.951 | 0.941 |

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

**Table C2: Regression Results for Bias Size**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model B | All data | | First/last obs | | No first stage | |
| Attention and Editing |  |  |  |  |  |  |
| Unique identifiers – first diff | -3.862\*\*\* | -3.703\*\*\* | -5.931\*\*\* | -2.911\*\*\* | -3.875\*\* | -3.739\*\*\* |
|  | [0.989] | [0.687] | [1.750] | [0.484] | [1.758] | [1.230] |
| Total revisions to date – first diff | 15.377\*\*\* | 8.852\*\*\* | 25.015\*\*\* | 11.951\*\*\* | 14.459\*\* | 7.822 |
|  | [3.941] | [2.719] | [5.481] | [1.964] | [7.348] | [4.997] |
| Pageviews – first diff | 9.377\*\*\* |  | 53.492\*\*\* |  | 9.317 |  |
|  | [2.987] |  | [16.862] |  | [6.780] |  |
| Dispersion |  |  |  |  |  |  |
| Revisions per contributor – first diff | 9.401 | -43.531 | 23.900 | 2.465 | 11.040 | -38.934 |
|  | [48.652] | [43.494] | [135.191] | [134.038] | [33.736] | [40.617] |
| HHI – first diff | -0.626 | 0.842 | -4.007\* | -0.441 | -0.748 | 0.445 |
|  | [1.538] | [0.682] | [2.059] | [1.493] | [1.338] | [0.778] |
| Article Features |  |  |  |  |  |  |
| Total frequency – first diff | -11.579\*\*\* | -5.078\*\*\* | -11.233\*\*\* | -4.418\*\*\* | -11.689\*\*\* | -5.189\*\* |
|  | [0.837] | [0.385] | [2.268] | [0.791] | [1.694] | [2.175] |
| Reference – first diff | -84.429\*\*\* | -95.137\*\*\* | -97.733\*\*\* | -96.140\*\*\* | -90.451\*\*\* | -107.143\*\*\* |
|  | [13.239] | [11.834] | [26.431] | [16.663] | [27.508] | [24.928] |
| References per word – first diff | -18.27 | 40.845 | 64.586 | 65.078 | -11.748 | 53.508 |
|  | [39.026] | [37.389] | [80.719] | [65.637] | [61.993] | [57.283] |
| Year created = 2002 | 0.030\*\*\* | 0.065\*\*\* |  | -0.027\*\* | 0.027\* | 0.060\*\*\* |
|  | [0.011] | [0.007] |  | [0.012] | [0.016] | [0.011] |
| Year created = 2003 | -0.015 | -0.01 |  | -0.021\* | -0.016 | -0.010 |
|  | [0.012] | [0.008] |  | [0.012] | [0.017] | [0.012] |
| Year created = 2004 | -0.028\*\* | -0.030\*\*\* |  | 0.001 | -0.027 | -0.026\*\* |
|  | [0.011] | [0.008] |  | [0.012] | [0.017] | [0.011] |
| Year created = 2005 | -0.036\*\*\* | -0.030\*\*\* |  | 0.009 | -0.034\*\* | -0.024\*\* |
|  | [0.012] | [0.008] |  | [0.011] | [0.017] | [0.011] |
| Year created = 2006 | -0.045\*\*\* | -0.043\*\*\* |  | 0.009 | -0.042\*\* | -0.035\*\*\* |
|  | [0.012] | [0.008] |  | [0.011] | [0.017] | [0.011] |
| Year created = 2007 | -0.033\*\*\* | -0.028\*\*\* | -0.006 | 0.007 | -0.030\* | -0.020\* |
|  | [0.012] | [0.008] | [0.020] | [0.011] | [0.017] | [0.011] |
| Year created = 2008 | -0.034\*\*\* | -0.029\*\*\* | 0.009 | 0.008 | -0.032\* | -0.022\* |
|  | [0.012] | [0.008] | [0.019] | [0.011] | [0.017] | [0.011] |
| Year created = 2009 | -0.030\*\* | -0.024\*\*\* | 0.015 | 0.015 | -0.028\* | -0.018 |
|  | [0.012] | [0.009] | [0.019] | [0.012] | [0.017] | [0.011] |
| Year created = 2010 | -0.039\*\*\* | -0.034\*\*\* | 0.004 | 0.009 | -0.037\*\* | -0.027\*\* |
|  | [0.012] | [0.009] | [0.018] | [0.013] | [0.017] | [0.012] |
| Year created = 2011 | -0.033 | -0.038 |  | 0.012 | -0.028 | -0.026 |
|  | [0.039] | [0.043] |  | [0.027] | [0.034] | [0.031] |
| Lagged bias size | 0.923\*\*\* | 0.902\*\*\* | 0.798\*\*\* | 0.690\*\*\* | 0.923\*\*\* | 0.902\*\*\* |
|  | [0.001] | [0.001] | [0.006] | [0.004] | [0.002] | [0.002] |
| First stage | Yes | Yes | Yes | Yes | No | No |
| Observations | 96,461 | 172,443 | 9,303 | 27,669 | 96,461 | 172,443 |
| R-squared |  |  |  |  | 0.864 | 0.833 |

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