

Internet Control and Disinformation Across Regime Types During and After the Covid-19 Crisis

Appendix

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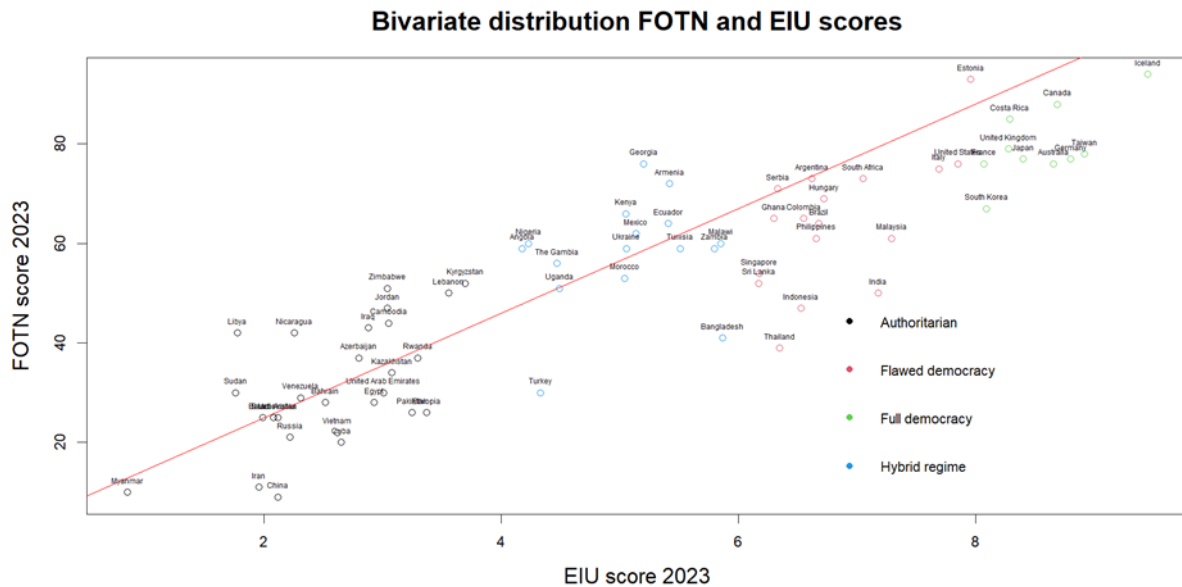
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Appendix A

Freedom on the Net Reports

1.1 Bivariate distribution of FOTN and EIU scores 2023



```
Call:
lm(formula = fotn_2023 ~ democracy_index + regime, data = df)
```

```
Residuals:
    Min       1Q   Median       3Q      Max
-25.3982  -5.5228   0.4935   7.4431  19.3853
```

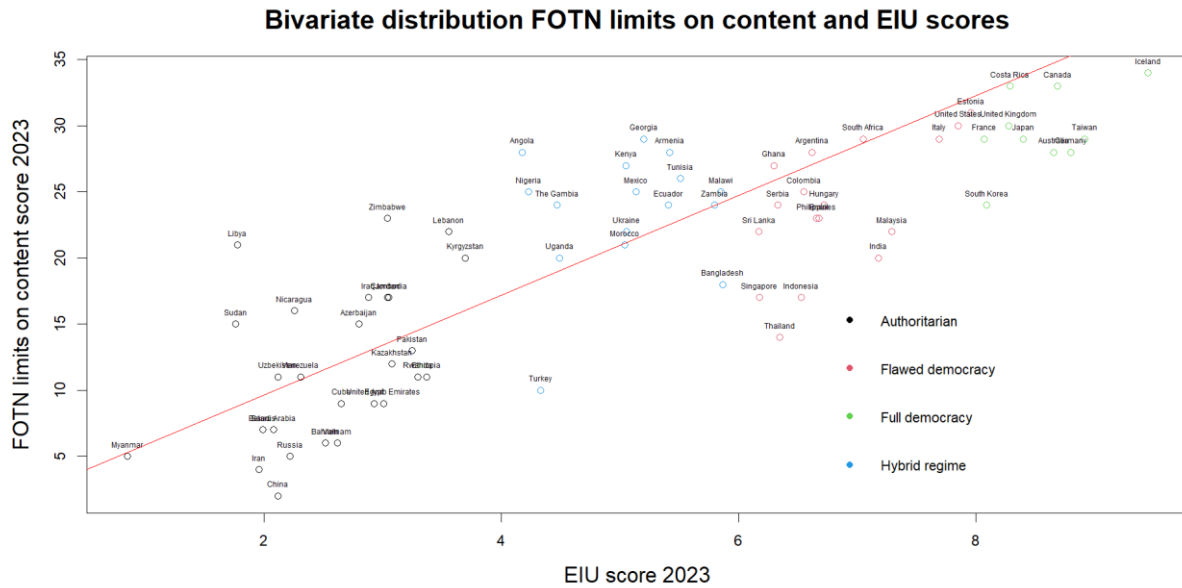
```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)      3.8919     5.6845   0.685   0.496
democracy_index  10.5184     2.0585   5.110 3.05e-06 ***
regimeFlawed democracy -11.7326     9.2273  -1.272   0.208
regimeFull democracy -14.2821    12.8103  -1.115   0.269
regimeHybrid regime    0.7633     5.9558   0.128   0.898
---
```

```
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 9.897 on 65 degrees of freedom
Multiple R-squared:  0.7961, Adjusted R-squared:  0.7835
F-statistic: 63.43 on 4 and 65 DF, p-value: < 2.2e-16
```

```
[1] "spearman correlation coefficient: 0.880244396082597"
```

1.2 Bivariate distribution of FOTN limits on content and EIU scores 2023



```
Call:
lm(formula = fotsn_B*_2023 ~ democracy_index + regime, data = df)
```

```
Residuals:
    Min       1Q   Median       3Q      Max
-10.7248  -3.0329   0.0673   3.1007  12.2116
```

```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    2.0731    2.6236   0.790  0.432301
democracy_index  3.7726    0.9501   3.971  0.000182 ***
regimeFlawed democracy -4.0165    4.2588  -0.943  0.349115
regimeFull democracy -4.6855    5.9124  -0.792  0.430962
regimeHybrid regime  2.3163    2.7488   0.843  0.402526
---
```

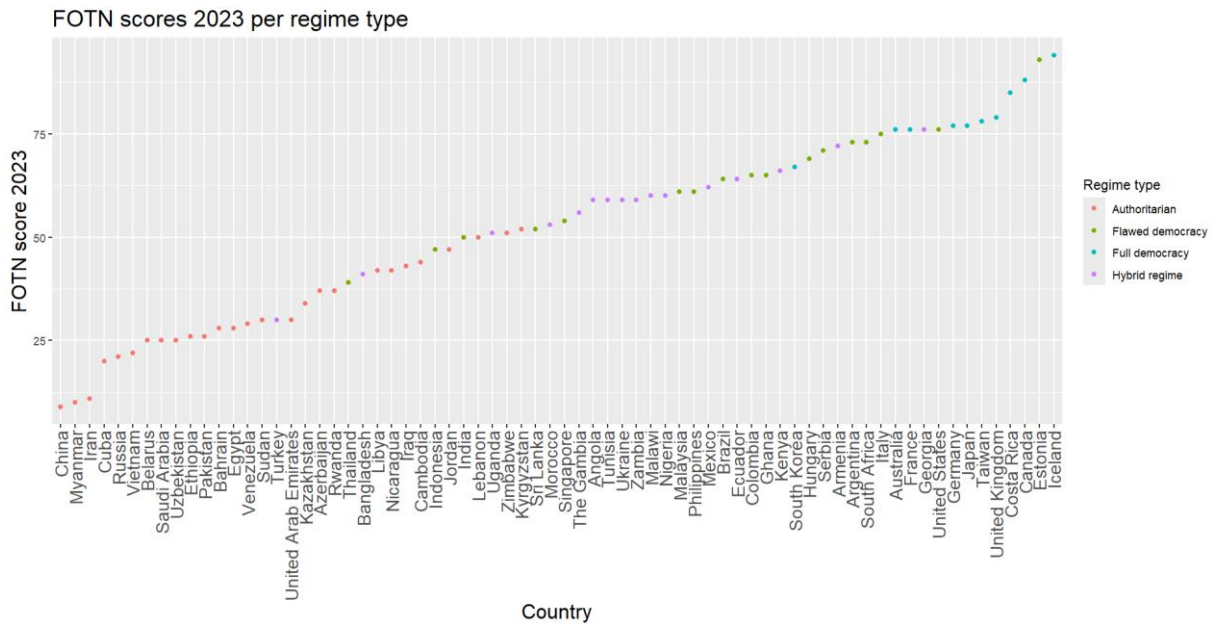
```
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 4.568 on 65 degrees of freedom
Multiple R-squared:  0.7202, Adjusted R-squared:  0.703
F-statistic: 41.82 on 4 and 65 DF, p-value: < 2.2e-16
```

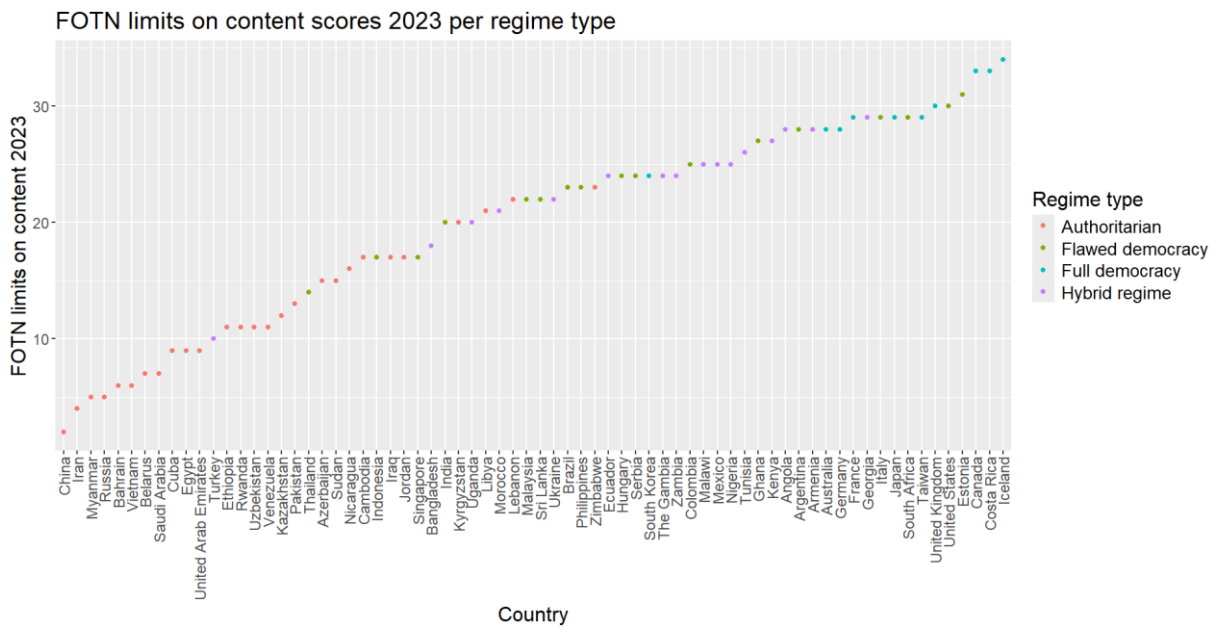
```
[1] "Spearman correlation coefficient: 0.816037856407324"
```

*B= Limits on content

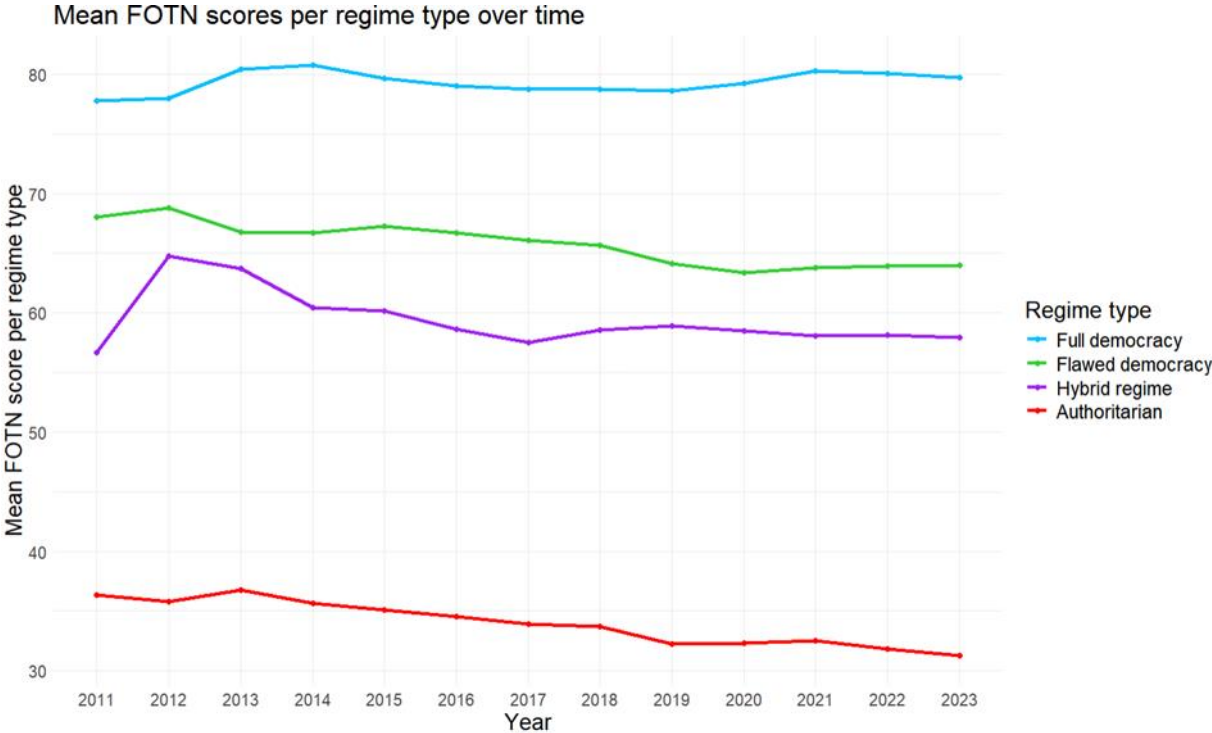
2.1 FOTN scores 2023 per country and regime type



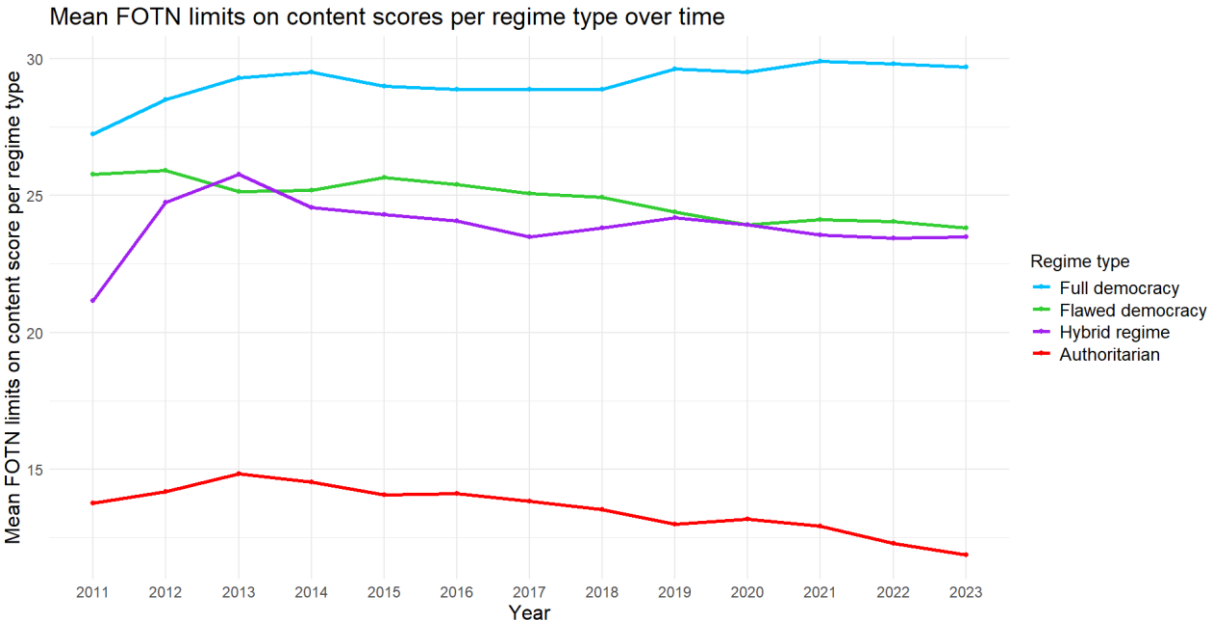
2.2 FOTN limits on content scores 2023 per country and regime type



3.1 Mean FOTN scores per regime type over time



3.2 Mean FOTN limits on content scores per regime type over time



V-Dem Data

The selected indicators belong to the assessment indicators, which are based on several assessments provided by country experts. Type (C) data require an assessment of the factual situation in a specific country at a specific point in time. Country experts code this data.

The Internet censorship effort (v2mecenefi) belongs to the Media which is part of the Civil Liberty. This variable is assembled by the Varieties of Democracy project. The other indicators are derived from the Digital Society Survey, which is organised by the Digital Society Project and contains questions on the political environment of the internet and social media.

We used the ‘Model Estimates’ – Measurement Model Output (e.g. v2mecenefi), which provides country-year point estimates (Coppedge et al., 2024c, p. 26).

Here is an example of the composition and measurement of an indicator (Coppedge et al., 2024b, pp. 207-208).

Internet censorship effort (C) (v2mecenefi)

Project Manager(s): Michael Coppedge

Additional versions: *_osp, *_ord, *_codelow, *_codehigh, *_sd, *_mean, *_nr

Question: Does the government attempt to censor information (text, audio, or visuals) on the Internet?

Clarification: Censorship attempts include Internet filtering (blocking access to certain websites or browsers), denial-of-service attacks, and partial or total Internet shutdowns. We are not concerned with censorship of topics such as child pornography, highly classified information such as military or intelligence secrets, statements offensive to a particular religion, or defamatory speech unless this sort of censorship is used as a pretext for censoring political information or opinions. We are also not concerned with the extent of internet access, unless there is absolutely no access at all (in which case the coding should be 0).

Responses:

0 (1): The government successfully blocks Internet access except to sites that are pro-government or devoid of political content.

1 (2): The government attempts to block Internet access except to sites that are pro-government or devoid of political content, but many users are able to circumvent such controls.

2 (3): The government allows Internet access, including to some sites that are critical of the government, but blocks selected sites that deal with especially politically sensitive issues.

3 (4): The government allows Internet access that is unrestricted, with the exceptions mentioned above.

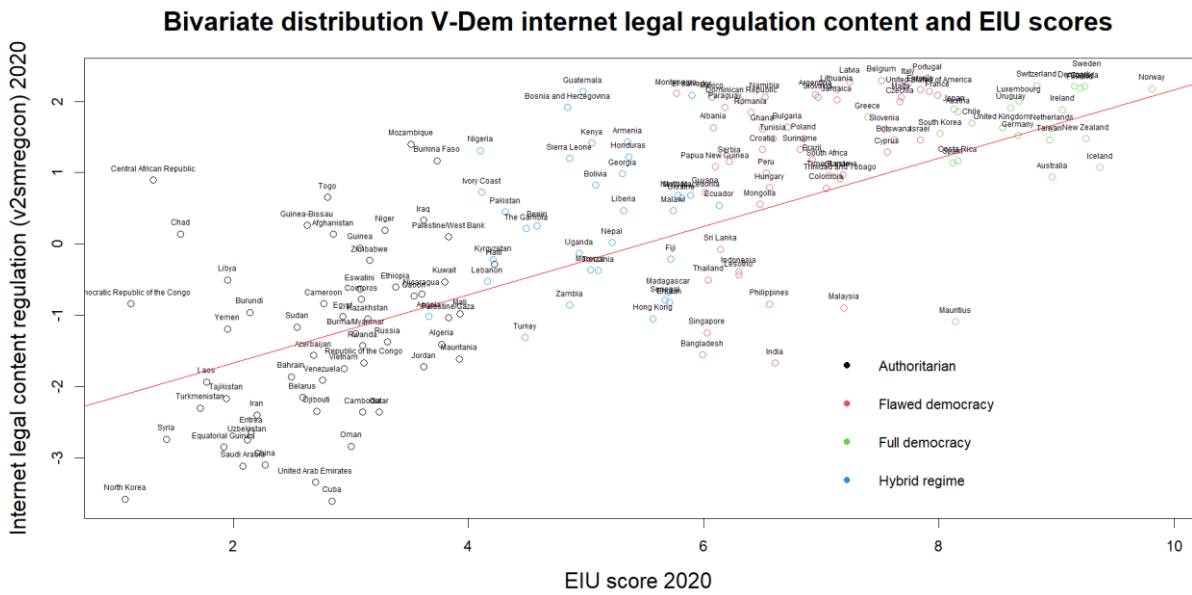
Scale: Ordinal, converted to interval by the measurement model.

Notes: As of December 2014, the former category "0 There is no internet" is coded separately asv2mecenefibin. The variable is then rebased to zero.

Data release: 3-14.

Cross-coder aggregation: Bayesian item response theory measurement model (see V-Dem Methodology).

4.1 Bivariate distribution of V-Dem internet legal regulation content (v2smregcon) and EIU democracy score 2020



```
Call:
lm(formula = v2smregcon ~ democracy_index + regime, data = df)
```

```
Residuals:
    Min       1Q   Median       3Q      Max
-2.77864 -0.52955  0.08152  0.55974  2.89496
```

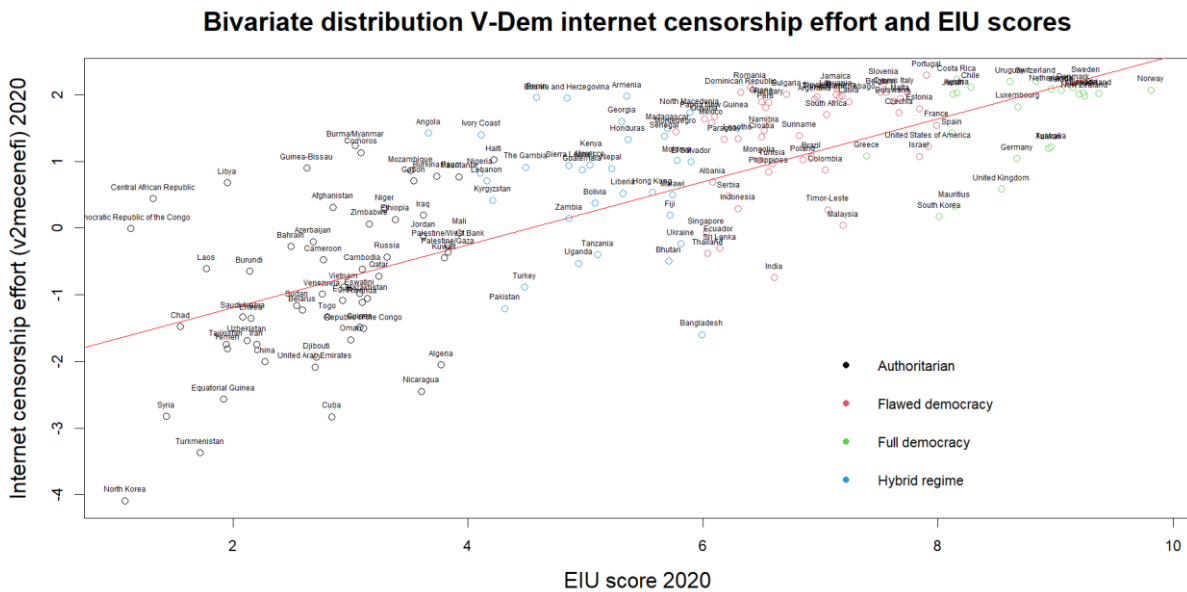
```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -2.63386   0.35008  -7.524 3.47e-12 ***
democracy_index  0.47947   0.11622   4.126 5.90e-05 ***
regimeFlawed democracy  0.57222   0.51049   1.121  0.264
regimeFull democracy  0.08022   0.72855   0.110  0.912
regimeHybrid regime  0.45902   0.34423   1.333  0.184
---
```

```
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 0.9987 on 162 degrees of freedom
Multiple R-squared:  0.6055, Adjusted R-squared:  0.5957
F-statistic: 62.15 on 4 and 162 DF, p-value: < 2.2e-16
```

```
[1] "Spearman correlation coefficient: 0.77199553987755"
```

4.2 Bivariate distribution of V-Dem internet censorship effort (v2mecenefi) and EIU democracy score 2020



```
Call:
lm(formula = v2mecenefi ~ democracy_index + regime, data = df)
```

```
Residuals:
    Min       1Q   Median       3Q      Max
-2.6550 -0.5329  0.1006  0.5778  1.9529
```

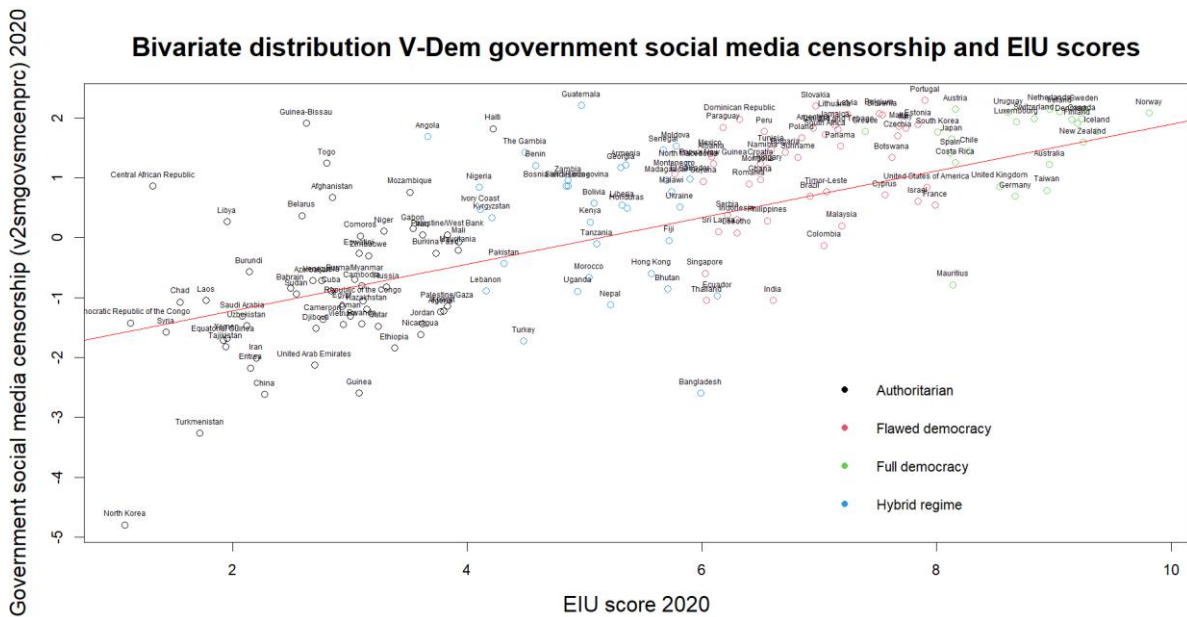
```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    -2.1373     0.3128  -6.833 1.60e-10 ***
democracy_index  0.4715     0.1038   4.541 1.09e-05 ***
regimeFlawed democracy  0.2694     0.4561   0.591  0.556
regimeFull democracy  -0.2930     0.6509  -0.450  0.653
regimeHybrid regime   0.3710     0.3076   1.206  0.229
---
```

```
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 0.8923 on 162 degrees of freedom
Multiple R-squared:  0.5943, Adjusted R-squared:  0.5843
F-statistic: 59.33 on 4 and 162 DF, p-value: < 2.2e-16
```

```
[1] "Spearman correlation coefficient: 0.776103827856062"
```

4.3 Bivariate distribution of V-Dem government social media censorship (v2smgovsmcenprc) and EIU democracy score 2020



Call:
`lm(formula = v2smgovsmcenprc ~ democracy_index + regime, data = df)`

Residuals:
 Min 1Q Median 3Q Max
 -3.2685 -0.6025 0.1462 0.5463 2.8851

Coefficients:

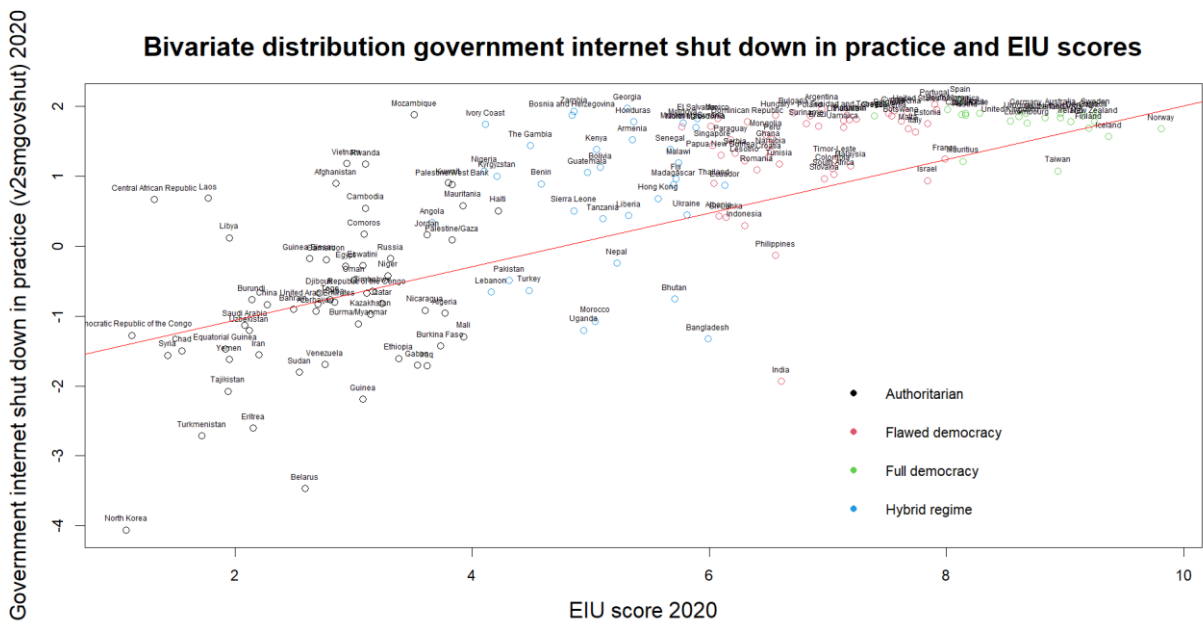
	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-1.9991	0.3340	-5.985	1.34e-08	***
democracy_index	0.3886	0.1109	3.505	0.000591	***
regimeFlawed democracy	0.4728	0.4870	0.971	0.333062	
regimeFull democracy	0.1959	0.6951	0.282	0.778472	
regimeHybrid regime	0.3430	0.3284	1.045	0.297804	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.9528 on 162 degrees of freedom
 Multiple R-squared: 0.5378, Adjusted R-squared: 0.5264
 F-statistic: 47.12 on 4 and 162 DF, p-value: < 2.2e-16

[1] "Spearman correlation coefficient: 0.735382443095179"

4.4 Bivariate distribution of V-Dem government internet shut down in practice and (v2smgovshut) and EIU democracy score 2020



```
call:
lm(formula = v2smgovshut ~ democracy_index + regime, data = df)
```

```
Residuals:
    Min       1Q   Median       3Q      Max
-3.2294 -0.3605  0.0882  0.4237  2.3640
```

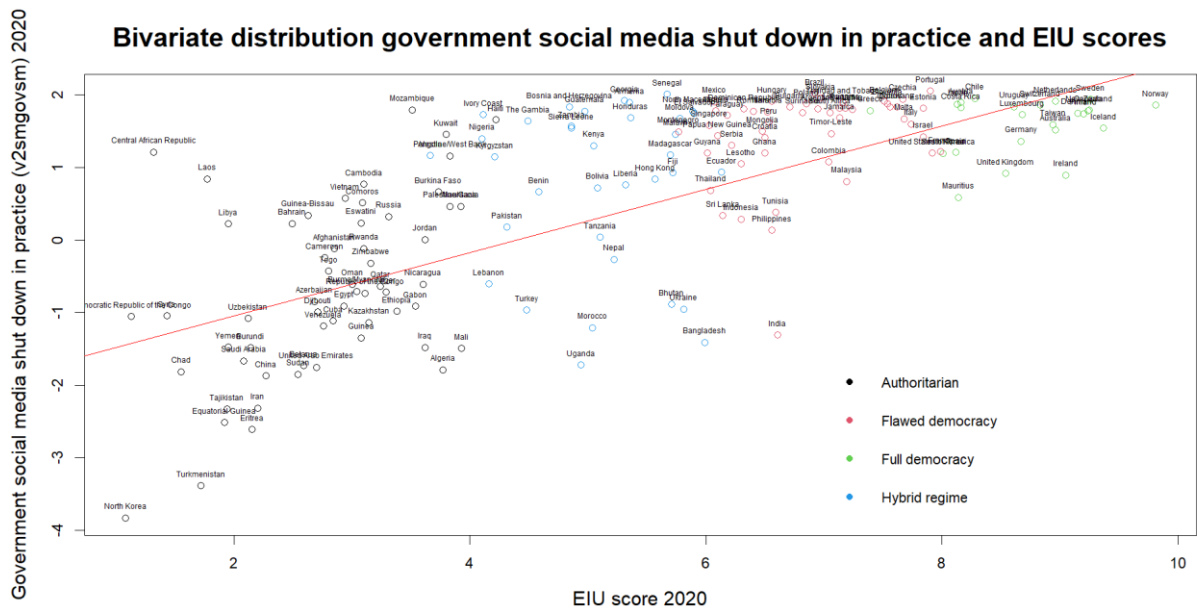
```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -1.8253    0.3026  -6.033 1.06e-08 ***
democracy_index  0.3836    0.1004   3.819 0.000191 ***
regimeFlawed democracy  0.5862    0.4412   1.329 0.185806
regimeFull democracy  0.2709    0.6297   0.430 0.667642
regimeHybrid regime  0.6026    0.2975   2.025 0.044470 *
```

```
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 0.8631 on 162 degrees of freedom
Multiple R-squared:  0.6023, Adjusted R-squared:  0.5925
F-statistic: 61.33 on 4 and 162 DF, p-value: < 2.2e-16
```

```
[1] "spearman correlation coefficient: 0.779195933028562"
```

4.5 Bivariate distribution of V-Dem government social media shut down in practice (v2smgovsm) and EIU democracy score 2020



```
Call:
lm(formula = v2smgovsm ~ democracy_index + regime, data = df)
```

```
Residuals:
    Min       1Q   Median       3Q      Max
-2.6526 -0.4561  0.1086  0.5393  2.5505
```

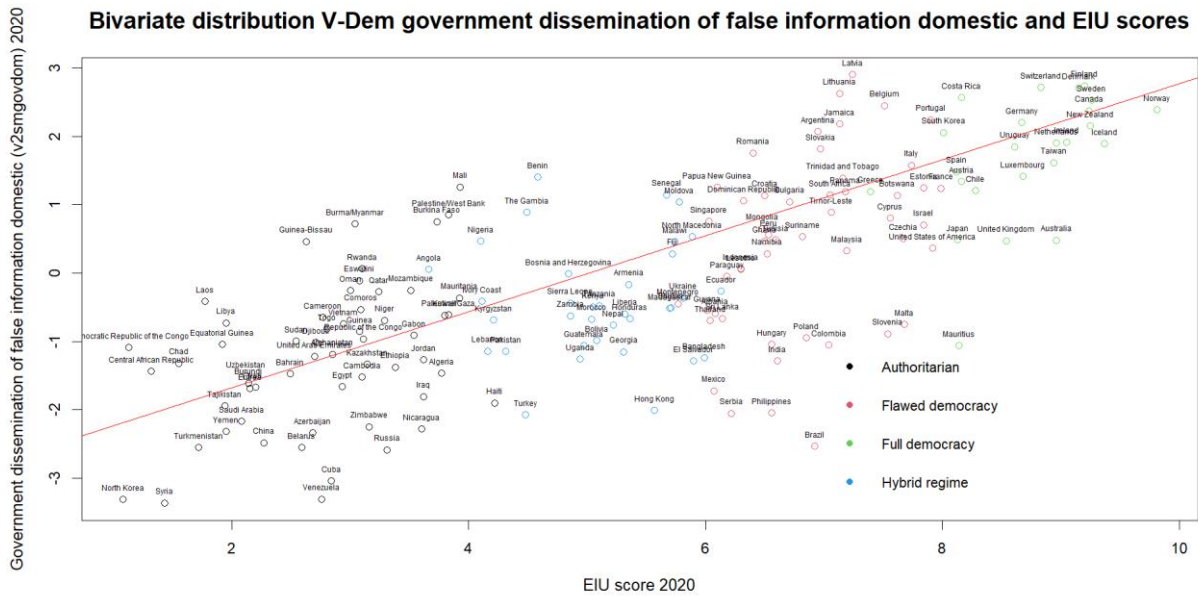
```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -1.9121    0.3186  -6.001 1.24e-08 ***
democracy_index  0.4361    0.1058   4.122 5.98e-05 ***
regimeFlawed democracy  0.3764    0.4647   0.810  0.419
regimeFull democracy  -0.2847    0.6631  -0.429  0.668
regimeHybrid regime   0.4677    0.3133   1.493  0.137
---
```

```
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 0.909 on 162 degrees of freedom
Multiple R-squared:  0.5637, Adjusted R-squared:  0.5529
F-statistic: 52.33 on 4 and 162 DF, p-value: < 2.2e-16
```

```
[1] "spearman correlation coefficient: 0.730073588717728"
```

4.6 Bivariate distribution of V-Dem government dissemination of false information domestic (v2smgovdom) and EIU democracy score 2020



Call:
lm(formula = v2smgovdom ~ democracy_index + regime, data = df)

Residuals:
Min 1Q Median 3Q Max
-2.99676 -0.51904 0.04897 0.60195 2.26011

Coefficients:

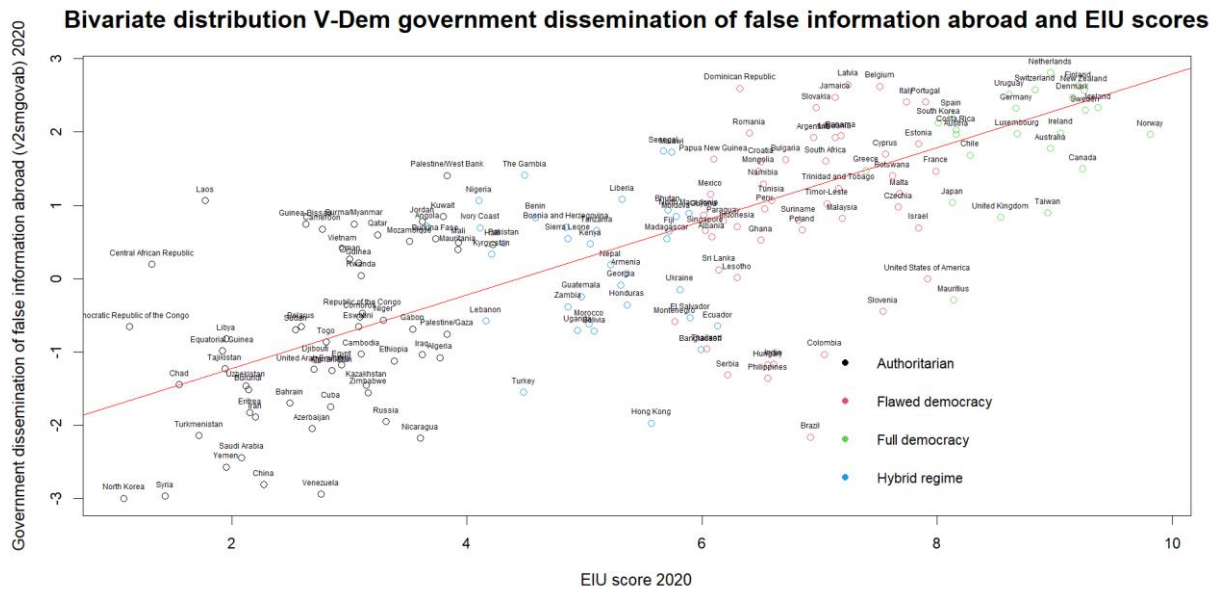
	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	-2.7910	0.3496	-7.984	2.47e-13 ***
democracy_index	0.5567	0.1161	4.797	3.64e-06 ***
regimeFlawed democracy	-0.5954	0.5098	-1.168	0.245
regimeFull democracy	-0.3610	0.7275	-0.496	0.620
regimeHybrid regime	-0.4767	0.3437	-1.387	0.167

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.9973 on 162 degrees of freedom
Multiple R-squared: 0.5443, Adjusted R-squared: 0.533
F-statistic: 48.37 on 4 and 162 DF, p-value: < 2.2e-16

[1] "spearman correlation coefficient: 0.718505220265149"

4.7 Bivariate distribution of V-Dem government dissemination of false information abroad (v2smgovab) and EIU democracy score 2020



```
Call:
lm(formula = v2smgovab ~ democracy_index + regime, data = df)
```

```
Residuals:
    Min       1Q   Median       3Q      Max
-3.10200 -0.65305  0.09154  0.66937  2.40038
```

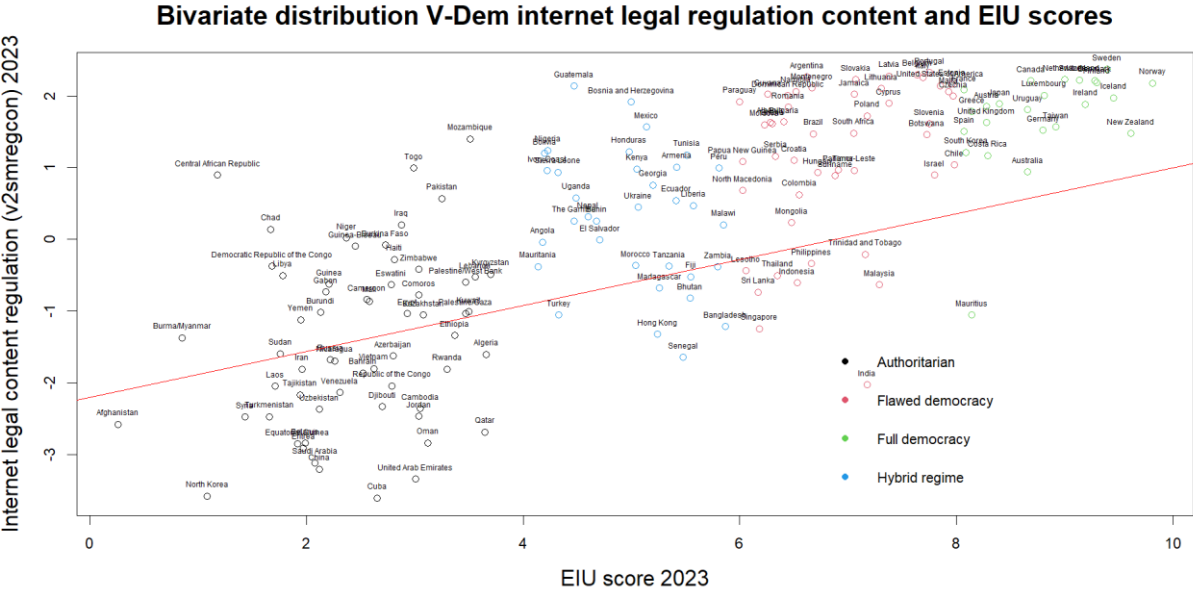
```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    -2.2255     0.3506  -6.347 2.11e-09 ***
democracy_index  0.5018     0.1164   4.310 2.82e-05 ***
regimeFlawed democracy -0.3066     0.5113  -0.600  0.550
regimeFull democracy -0.2355     0.7297  -0.323  0.747
regimeHybrid regime -0.1382     0.3448  -0.401  0.689
---
```

```
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 1 on 162 degrees of freedom
Multiple R-squared:  0.516,    Adjusted R-squared:  0.504
F-statistic: 43.17 on 4 and 162 DF,  p-value: < 2.2e-16
```

```
[1] "Spearman correlation coefficient: 0.729632514035579"
```


5.1 Bivariate distribution of V-Dem internet legal regulation content (v2smregcon) and EIU democracy score 2023



```
Call:
lm(formula = v2smregcon ~ democracy_index + regime, data = df)
```

Residuals:

Min	1Q	Median	3Q	Max
-3.3022	-0.5786	0.1414	0.6475	2.7237

Coefficients:

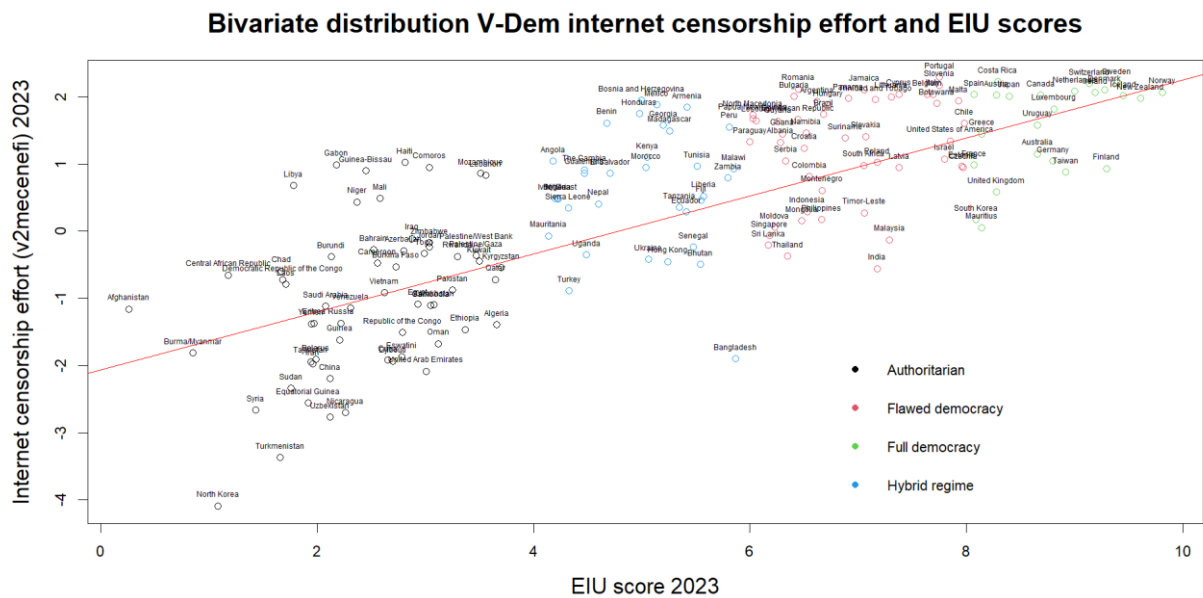
	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	-2.2074	0.3369	-6.551	7.23e-10 ***
democracy_index	0.3201	0.1243	2.575	0.0109 *
regimeFlawed democracy	1.1802	0.5838	2.022	0.0449 *
regimeFull democracy	1.1017	0.8193	1.345	0.1806
regimeHybrid regime	0.9085	0.3831	2.371	0.0189 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.032 on 162 degrees of freedom
 Multiple R-squared: 0.6049, Adjusted R-squared: 0.5951
 F-statistic: 62 on 4 and 162 DF, p-value: < 2.2e-16

[1] "spearman correlation coefficient: 0.767059410119441"

5.2 Bivariate distribution of V-Dem internet censorship effort (v2mecenefi) and EIU democracy score 2023



```
Call:
lm(formula = v2mecenefi ~ democracy_index + regime, data = df)
```

```
Residuals:
    Min     1Q   Median     3Q     Max
-2.8909 -0.6722  0.1257  0.5888  2.1155
```

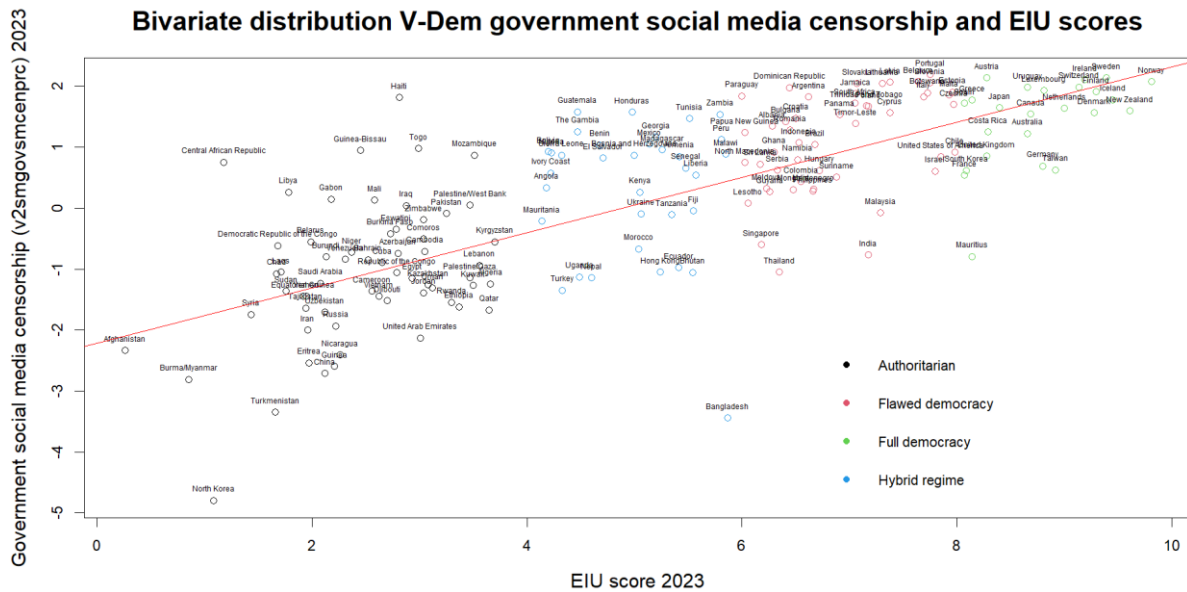
```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    -2.0675    0.2885  -7.166 2.58e-11 ***
democracy_index  0.4321    0.1064   4.060 7.63e-05 ***
regimeFlawed democracy  0.3291    0.4999   0.658  0.511
regimeFull democracy  -0.1520    0.7016  -0.217  0.829
regimeHybrid regime   0.5250    0.3281   1.600  0.111
---
```

```
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 0.8836 on 162 degrees of freedom
Multiple R-squared:  0.6106, Adjusted R-squared:  0.601
F-statistic: 63.51 on 4 and 162 DF, p-value: < 2.2e-16
```

```
[1] "Spearman correlation coefficient: 0.76998696224695"
```

5.3 Bivariate distribution of V-Dem government social media censorship (v2smgovsmcenprc) and EIU democracy score 2023



```
Call:
lm(formula = v2smgovsmcenprc ~ democracy_index + regime, data = df)
```

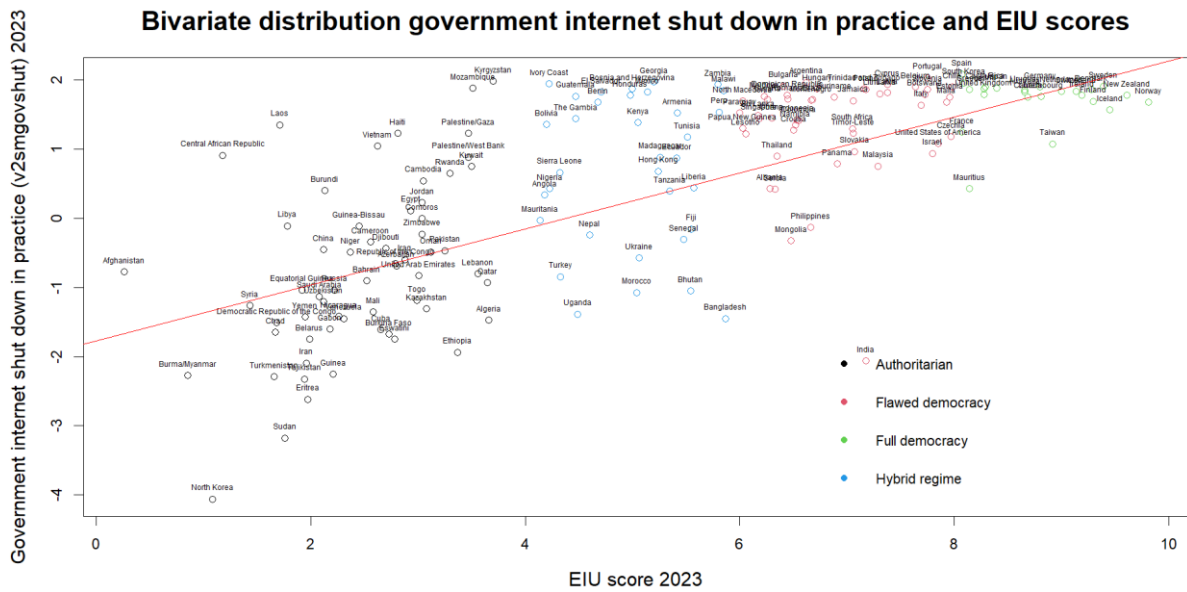
```
Residuals:
    Min       1Q   Median       3Q      Max
-4.1250 -0.5519  0.1212  0.5685  2.7558
```

```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -2.2107    0.3066  -7.211 2.01e-11 ***
democracy_index  0.4526    0.1131   4.002 9.53e-05 ***
regimeFlawed democracy  0.1945    0.5312   0.366  0.715
regimeFull democracy  -0.3199    0.7455  -0.429  0.668
regimeHybrid regime   0.2387    0.3486   0.685  0.494
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 0.9389 on 162 degrees of freedom
Multiple R-squared:  0.5718, Adjusted R-squared:  0.5612
F-statistic: 54.08 on 4 and 162 DF, p-value: < 2.2e-16
```

```
[1] "Spearman correlation coefficient: 0.753351082105073"
```

5.4 Bivariate distribution of V-Dem government internet shut down in practice and (v2smgovshut) and EIU democracy score 2023



```
Call:
lm(formula = v2smgovshut ~ democracy_index + regime, data = df)
```

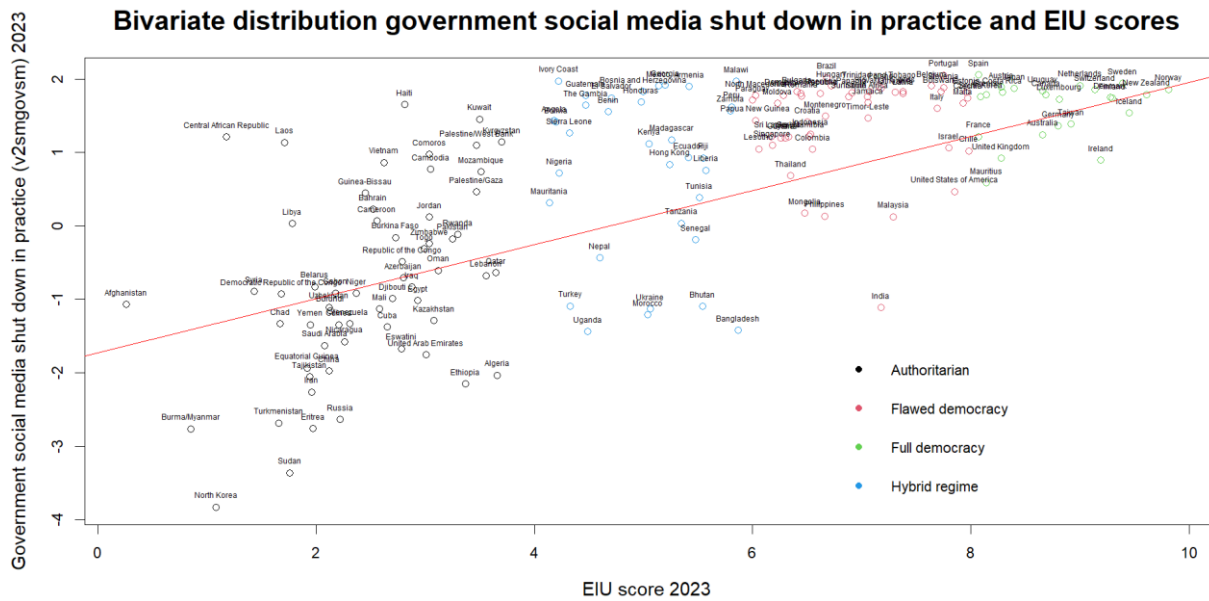
```
Residuals:
    Min       1Q   Median       3Q      Max
-3.5304 -0.5564  0.0598  0.5256  2.4344
```

```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -1.77298    0.30844  -5.748 4.37e-08 ***
democracy_index  0.40502    0.11378   3.560 0.000488 ***
regimeFlawed democracy  0.33533    0.53440   0.627 0.531224
regimeFull democracy  -0.06223    0.75004  -0.083 0.933979
regimeHybrid regime   0.46675    0.35072   1.331 0.185110
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 0.9446 on 162 degrees of freedom
Multiple R-squared:  0.5554, Adjusted R-squared:  0.5444
F-statistic: 50.59 on 4 and 162 DF, p-value: < 2.2e-16
```

```
[1] "spearman correlation coefficient: 0.725716663596758"
```

5.5 Bivariate distribution of V-Dem government social media shut down in practice (v2smgovsm) and EIU democracy score 2023



```
Call:
lm(formula = v2smgovsm ~ democracy_index + regime, data = df)
```

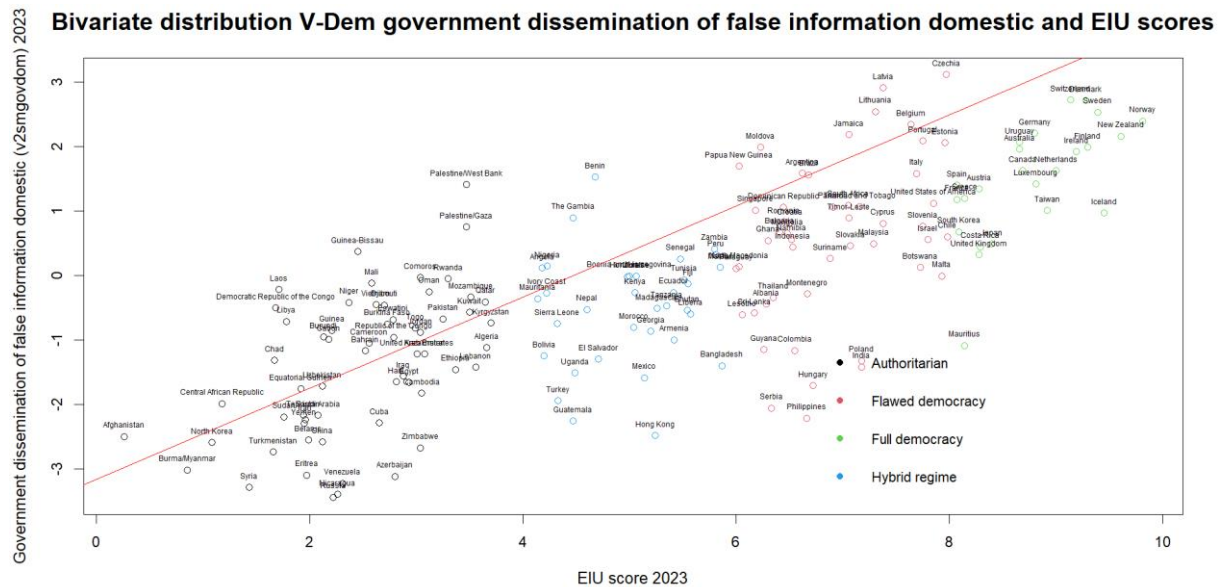
```
Residuals:
    Min     1Q   Median     3Q     Max
-2.6340 -0.3605  0.1048  0.5102  2.5052
```

```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -1.7255    0.3094  -5.577 1.01e-07 ***
democracy_index  0.3681    0.1141   3.225  0.00152 **
regimeFlawed democracy  0.6037    0.5361   1.126  0.26181
regimeFull democracy  0.1049    0.7524   0.139  0.88930
regimeHybrid regime  0.6606    0.3518   1.878  0.06224 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 0.9476 on 162 degrees of freedom
Multiple R-squared:  0.5607, Adjusted R-squared:  0.5498
F-statistic: 51.69 on 4 and 162 DF, p-value: < 2.2e-16
```

```
[1] "spearman correlation coefficient: 0.720455215973369"
```

5.6 Bivariate distribution of V-Dem government dissemination of false information domestic (v2smgovdom) and EIU democracy score 2023



```
Call:
lm(formula = v2smgovdom ~ democracy_index + regime, data = df)
```

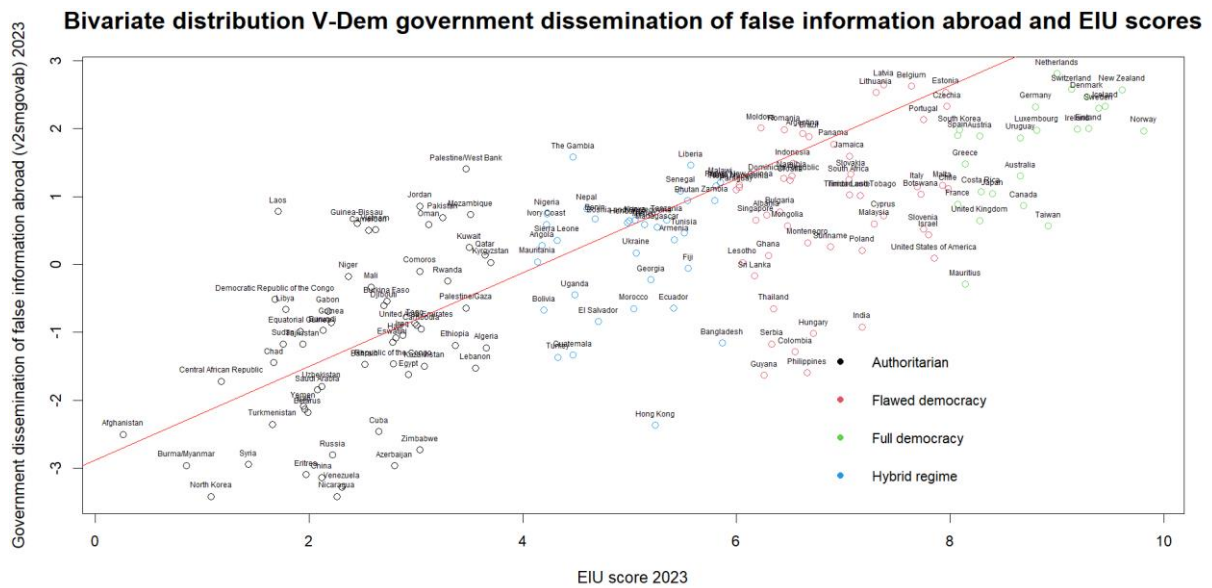
```
Residuals:
    Min       1Q   Median       3Q      Max
-2.6193 -0.5724  0.1264  0.5679  2.2656
```

```
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    -3.1582    0.3179  -9.934 < 2e-16 ***
democracy_index  0.7054    0.1173   6.015 1.16e-08 ***
regimeFlawed democracy -1.1351    0.5508  -2.061  0.0409 *
regimeFull democracy -1.5612    0.7731  -2.020  0.0451 *
regimeHybrid regime -0.8855    0.3615  -2.450  0.0154 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 0.9736 on 162 degrees of freedom
Multiple R-squared:  0.5894, Adjusted R-squared:  0.5793
F-statistic: 58.15 on 4 and 162 DF, p-value: < 2.2e-16
```

```
[1] "spearman correlation coefficient: 0.757596077874404"
```

5.7 Bivariate distribution of V-Dem government dissemination of false information abroad (v2smgovab) and EIU democracy score 2023



Call:
lm(formula = v2smgovab ~ democracy_index + regime, data = df)

Residuals:
Min 1Q Median 3Q Max
-2.7303 -0.5862 0.1843 0.6794 2.4811

Coefficients:

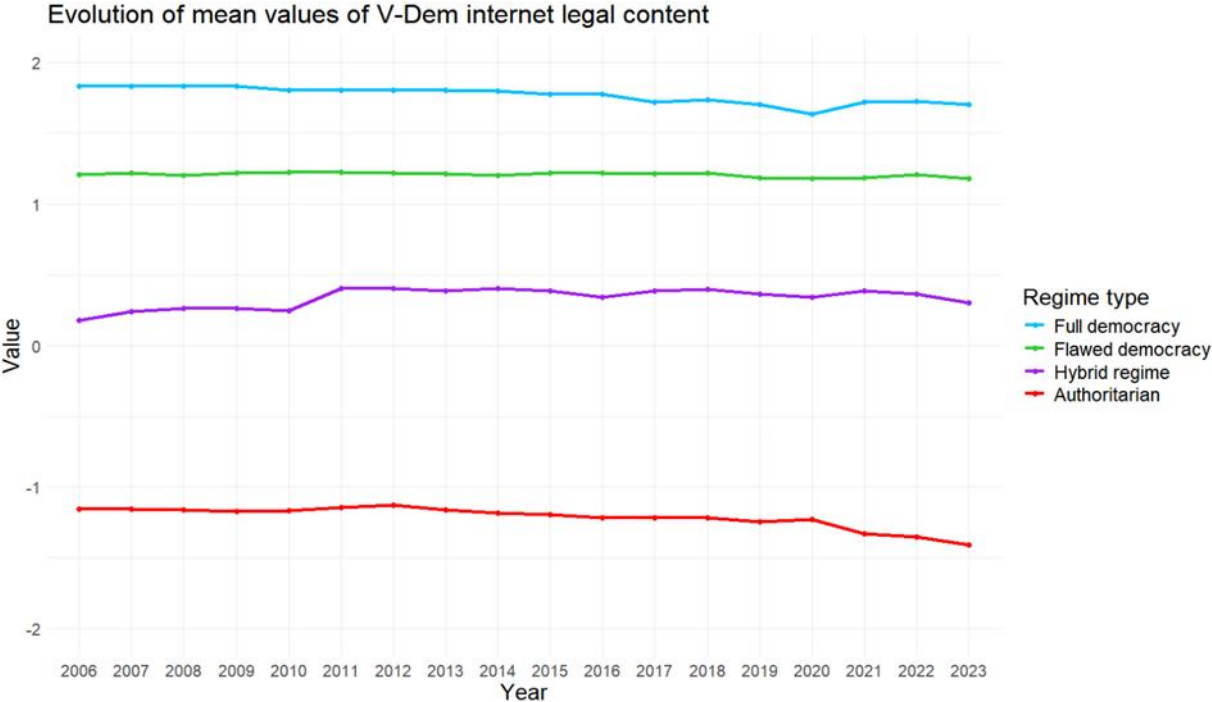
	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-2.8761	0.3212	-8.955	7.67e-16	***
democracy_index	0.6883	0.1185	5.810	3.23e-08	***
regimeFlawed democracy	-1.0329	0.5564	-1.856	0.0652	.
regimeFull democracy	-1.4713	0.7810	-1.884	0.0614	.
regimeHybrid regime	-0.3683	0.3652	-1.009	0.3147	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

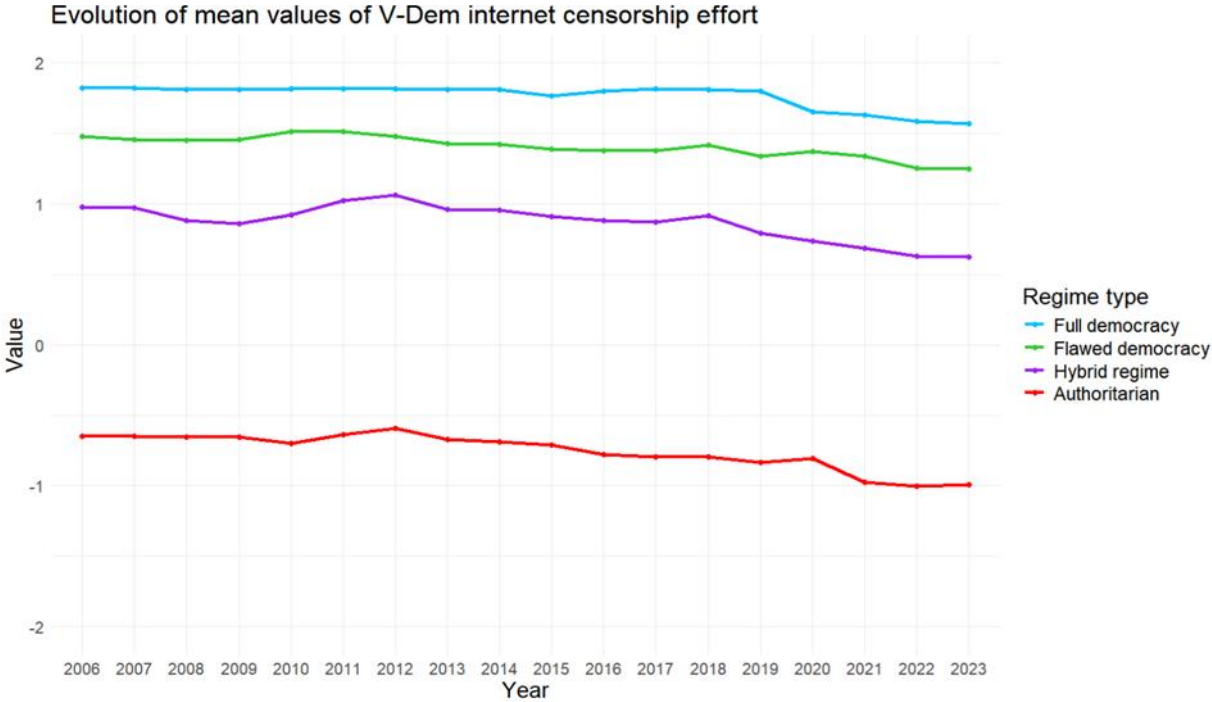
Residual standard error: 0.9836 on 162 degrees of freedom
Multiple R-squared: 0.5799, Adjusted R-squared: 0.5695
F-statistic: 55.9 on 4 and 162 DF, p-value: < 2.2e-16

[1] "spearman correlation coefficient: 0.74822985595465"

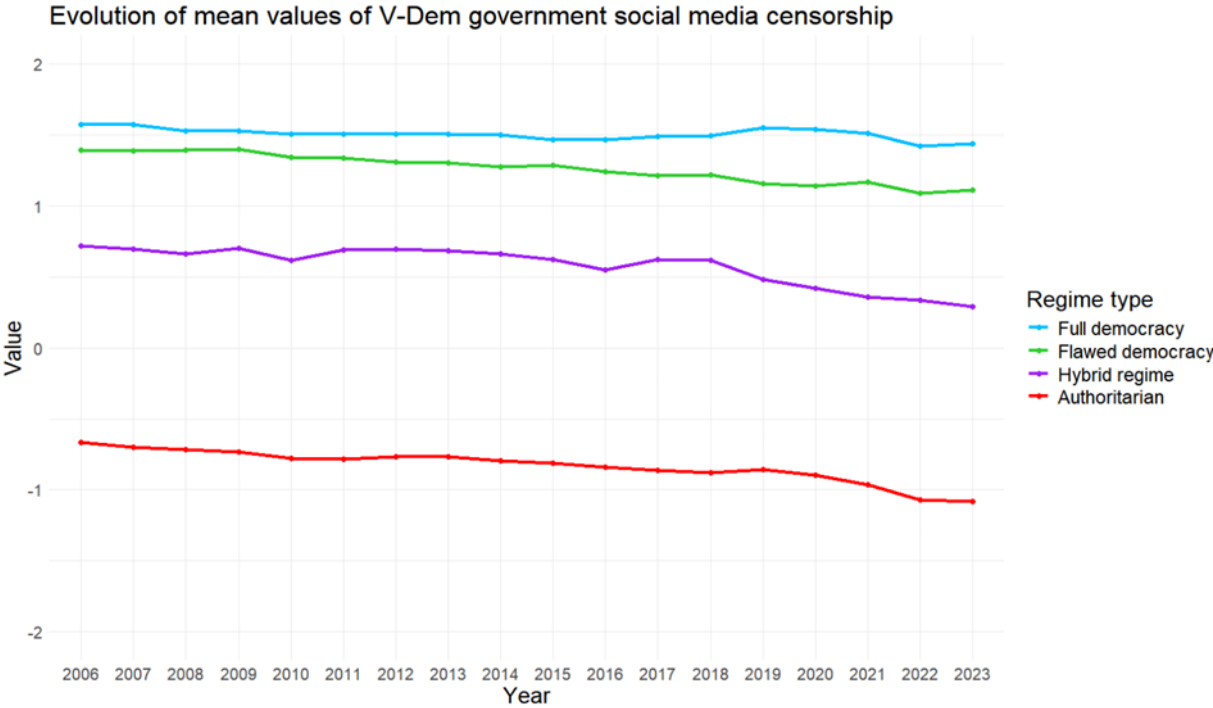
6.1 Evolution of mean values of V-Dem internet legal content (v2smregcon) per regime type for the period 2006–2023 according to the EIU democracy status



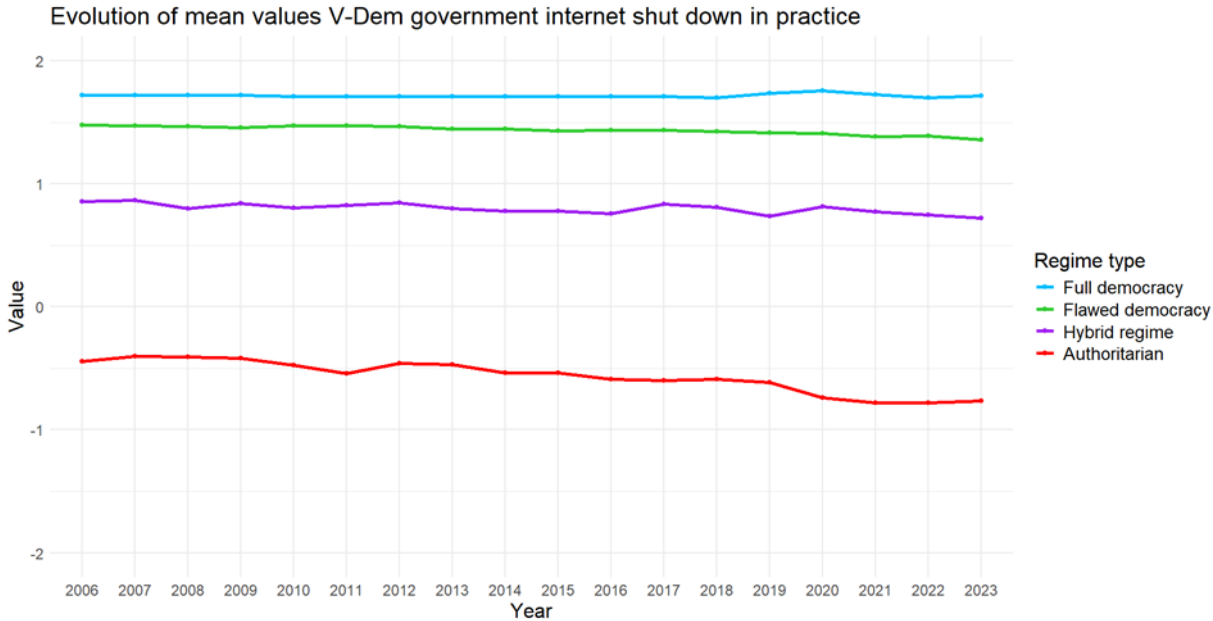
6.2 Evolution of mean values of V-Dem internet censorship effort (v2mecenefi) per regime type for the period 2006–2023 according to the EIU democracy status



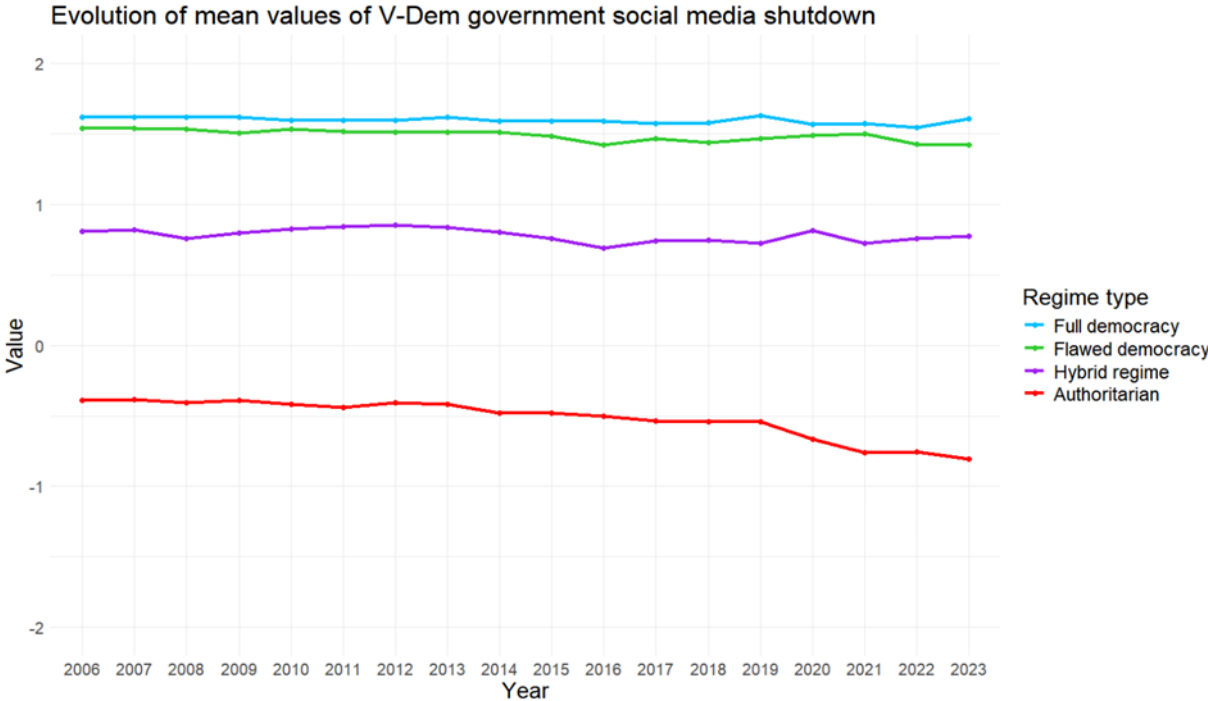
6.3 Evolution of mean values of V-Dem government social media censorship (v2smgovsmcenprc) per regime type for the years 2006–2023 according to the EIU democracy status



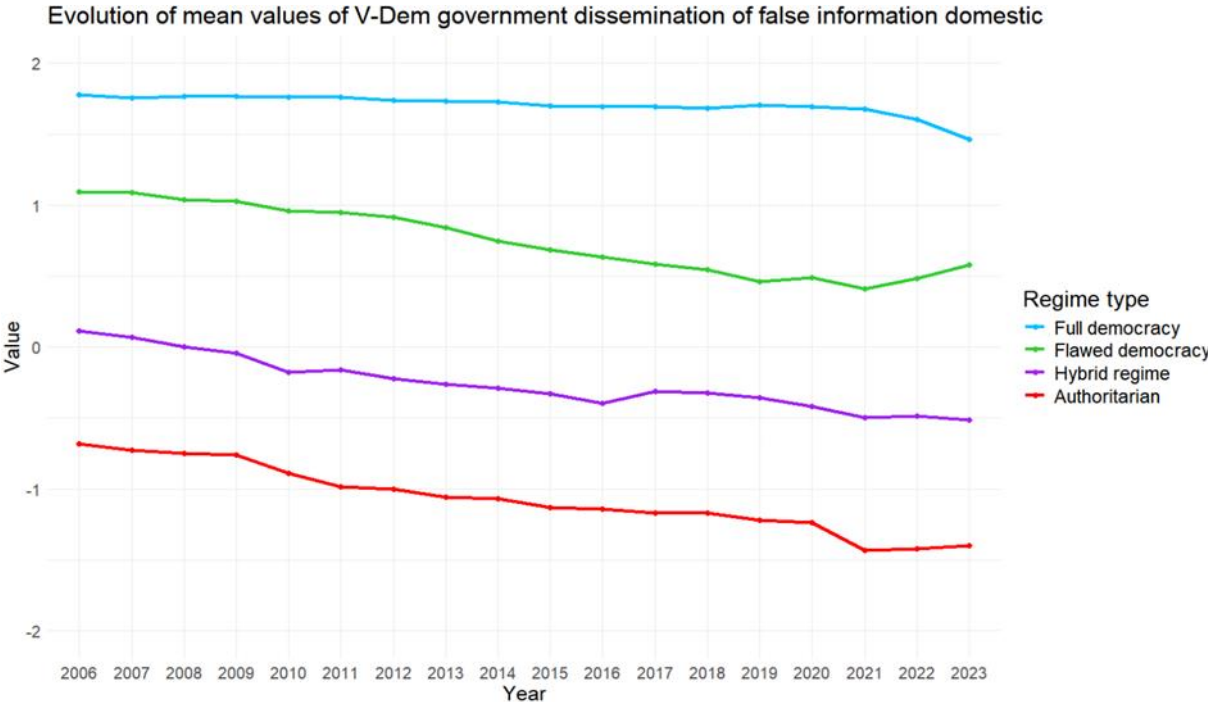
6.4 Evolution of mean values V-Dem government internet shut down in practice (v2smgovshut) per regime time in the years 2006–2023 according to the EIU democracy status



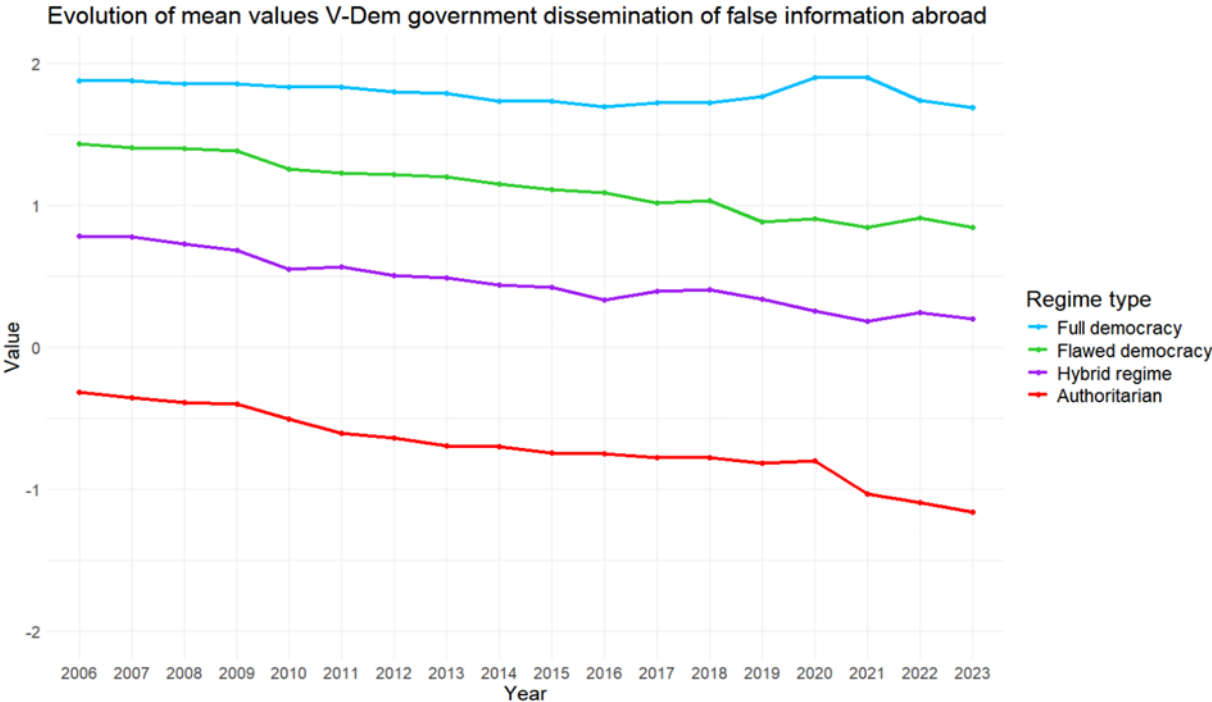
6.5 Evolution of mean values of V-Dem government social media shutdown (v2smgovsm) per regime type in the years 2006–2023 according to the EIU democracy status



6.6 Evolution of mean values of V-Dem government dissemination of false information domestic (v2smgovdom) per regime type for the years 2006–2023 according to the EIU democracy status



6.7 Evolution of mean values V-Dem government dissemination of false information abroad (v2smgovab) per regime type for the years 2006–2023 according to the EIU democracy status



7.1 Top 30 countries with biggest decreases of assessments for (v2smregcon): Legal internet regulation content 2019-2020 and 2022-2023

Country	v2smregcon2020	Country	v2smregcon2023
Mauritania	-1.183	Cuba	-3.611
Canada	-0.993	North Korea	-3.583
Belarus	-0.92	United Arab Emirates	-3.344
Iceland	-0.81	China	-3.207
Burkina Faso	-0.737	Saudi Arabia	-3.117
South Africa	-0.603	Eritrea	-2.912
United States	-0.596	Equatorial Guinea	-2.854
Timor-Leste	-0.591	Belarus	-2.847
Bangladesh	-0.549	Oman	-2.841
Netherlands	-0.547	Qatar	-2.688
Turkmenistan	-0.413	Afghanistan	-2.581
Panama	-0.406	Syria	-2.477
Spain	-0.395	Turkmenistan	-2.473
Togo	-0.347	Jordan	-2.471
India	-0.311	Uzbekistan	-2.373
Hungary	-0.27	Cambodia	-2.362
Uruguay	-0.265	Djibouti	-2.335
Haiti	-0.262	Tajikistan	-2.17
Armenia	-0.258	Venezuela	-2.139
Colombia	-0.226	Laos	-2.046
Niger	-0.22	Republic of the Congo	-2.044

Honduras	-0.166	India	-2.031
Russia	-0.139	Bahrain	-1.865
Nepal	-0.111	Iran	-1.811
Zimbabwe	-0.1	Rwanda	-1.81
Iran	-0.097	Vietnam	-1.803
Turkey	-0.048	Nicaragua	-1.697
Ukraine	-0.032	Russia	-1.678
Georgia	-0.02	Senegal	-1.646
Kazakhstan	-0.017		

7.2 Top 30 countries with biggest decreases of assessments for (v2mecenefi): Internet censorship effort 2019-2020 and 2022-2023

Country	v2mecenefi2020	Country	v2mecenefi2023
United Kingdom	-1.092	North Korea	-4.091
Algeria	-1.032	Turkmenistan	-3.371
Liberia	-0.999	Uzbekistan	-2.766
Guinea	-0.898	Nicaragua	-2.701
Bulgaria	-0.889	Syria	-2.665
Mauritius	-0.875	Equatorial Guinea	-2.558
Albania	-0.836	Sudan	-2.337
Cuba	-0.795	China	-2.194
Spain	-0.761	United Arab Emirates	-2.086
Belarus	-0.755	Iran	-1.977
Mozambique	-0.612	Tajikistan	-1.94
Georgia	-0.602	Djibouti	-1.937
United States	-0.559	Cuba	-1.92
El Salvador	-0.548	Belarus	-1.907
Tanzania	-0.443	Bangladesh	-1.897
Croatia	-0.397	Eswatini	-1.871
Latvia	-0.396	Burma/Myanmar	-1.811
Sri Lanka	-0.378	Oman	-1.675
Togo	-0.372	Guinea	-1.615
United Arab Emirates	-0.32	Republic of the Congo	-1.507
Burundi	-0.308	Ethiopia	-1.465
Senegal	-0.246	Algeria	-1.395
Bolivia	-0.227	Yemen	-1.377
Mongolia	-0.166	Russia	-1.37
Bangladesh	-0.15	Eritrea	-1.367
Qatar	-0.142	Afghanistan	-1.16
Central African Republic	-0.116	Venezuela	-1.142
Ukraine	-0.037	Saudi Arabia	-1.114
Afghanistan	0	Combodia	-1.109
Argentina	0	Kazakhstan	-1.097

7.3 Top 30 countries with biggest decreases of assessments for (v2smgovsmcenprc):
Government social media censorship in practice 2019-2020 and 2022-2023

Country	v2smgovsmcenprc2020	Country	v2smgovsmcenprc2023
Guinea	-3.152	North Korea	-4.796
Belarus	-0.993	Bangladesh	-3.44
Armenia	-0.867	Turkmenistan	-3.344
Romania	-0.797	Burma/Myanmar	-2.809
Côte d'Ivoire	-0.796	China	-2.71
Czechia	-0.611	Guinea	-2.595
Timor-Leste	-0.528	Eritrea	-2.536
Mauritius	-0.522	Nicaragua	-2.406
Kenya	-0.481	Afghanistan	-2.333
Honduras	-0.458	United Arab Emirates	-2.129
Brazil	-0.456	Iran	-2.001
El Salvador	-0.438	Russia	-1.931
Kyrgyzstan	-0.368	Syria	-1.742
Madagascar	-0.368	Uzbekistan	-1.704
Bhutan	-0.348	Qatar	-1.672
India	-0.322	Tajikistan	-1.637
Ethiopia	-0.29	Ethiopia	-1.616
Cyprus	-0.286	Rwanda	-1.545
Colombia	-0.256	Djibouti	-1.517
Fiji	-0.216	Vietnam	-1.448
Venezuela	-0.208	Jordan	-1.388
Bangladesh	-0.195	Cameroon	-1.362
Azerbaijan	-0.192	Sudan	-1.362
Thailand	-0.175	Equatorial Guinea	-1.447
Morocco	-0.116	Yemen	-1.443
Kazakhstan	-0.108	Turkey	-1.345
Nigeria	-0.098	Kuwait	-1.267
Georgia	-0.09	Kazakhstan	-1.258
Serbia	-0.086	Algeria	-1.241
Ukraine	-0.076		

7.4 Top 25 countries with strongest increases of internet control from 2019 to 2023

Legal internet regulation content		Social media censorship		Internet censorship effort		Internet shut down		Social media shut down		Dissemination of false information domestic		Dissemination of false information abroad	
Afghanistan	-2.71	Burma/ Myanmar	- 2.70	Burma/ Myanmar	-2.34	Belarus	-3.42	Russia	-3.09	Burma/ Myanmar	-3.87	Burma/ Myanmar	-3.76
El Salvador	-2.10	Afghanistan	- 2.42	Hong Kong	-2.04	Senegal	-2.2	Belarus	-2.68	Belarus	-2.81	Belarus	-2.88
Belarus	-1.76	Belarus	- 2.14	Senegal	-1.93	Mongolia	-1.92	Burma/ Myanmar	-2.23	Costa Rica	-2.13	Guyana	-2.5
Hong Kong	-1.66	Guinea	- 1.76	Belarus	-1.58	Guinea	-1.88	Senegal	-2.19	Nicaragua	-1.78	Nicaragua	-2.17
Nicaragua	-1.19	Hong Kong	- 1.50	Ethiopia	-1.48	Eswatini	-1.47	Eswatini	-1.91	Armenia	-1.62	Central African Republic	-1.91
Burkina Faso	-1.19	Angola	- 1.35	Afghanistan	-1.47	Ukraine	-1.38	Guinea	-1.67	Burkina Faso	-1.51	Haiti	-1.82
Trinidad and Tobago	-1.13	Moldova	- 1.20	Guinea	-1.40	Mali	-1.36	United States of America	-1.40	Zimbabwe	-1.42	Azerbaijan	-1.33
Senegal	- 0.851	South Korea	- 1.14	Burkina Faso	-1.31	Sudan	-1.23	Mongolia	-1.33	Mali	-1.38	Slovenia	-1.23
Armenia	- 0.677	Chile	- 1.14	Central African Republic	-1.19	Burma/ Myanmar	-1.16	Colombia	-0.97	South Korea	-1.38	Zimbabwe	-1.18
Sri Lanka	-0.66	Palestine/ Gaza	- 1.13	United Kingdom	-1.12	Fiji	-1.12	Nicaragua	-0.967	Slovakia	-1.28	Guinea	-1.16
Jordan	- 0.646	Russia	- 1.10	Russia	-1.12	Panama	-1.02	Ethiopia	-0.954	Guatemala	-1.19	Eritrea	-1.15
Turkmenistan	- 0.601	Nicaragua	- 1.08	Finland	-1.07	Slovakia	- 0.958	Sudan	-0.932	Ghana	-1.15	Mali	-1.14
Hungary	- 0.598	Kyrgyzstan	- 1.06	Liberia	-1.07	Serbia	- 0.914	Chile	-0.929	Peru	-1.14	Guatemala	-1.09
Guinea	-0.57	Bangladesh	- 0.977	Mongolia	-1.02	Uganda	- 0.907	Mali	-0.88	Haiti	-1.14	Burkina Faso	-1.08
Israel	- 0.561	Armenia	- 0.966	Sudan	- 0.967	Afghanistan	- 0.899	Nigeria	-0.861	Botswana	-1.12	Slovakia	-1.08

United States of America	-0.52	Guinea-Bissau	-0.962	Mauritius	-0.964	United States of America	-0.877	Ireland	-0.854	Afghanistan	-1.11	Lebanon	-1.07
Kuwait	-0.478	Mongolia	-0.835	Kyrgyzstan	-0.958	Cuba	-0.864	Eritrea	-0.837	Sudan	-1.01	Cyprus	-0.976
Vietnam	-0.467	Suriname	-0.834	Moldova	-0.956	Russia	-0.859	Burkina Faso	-0.808	Iceland	-0.926	Costa Rica	-0.954
India	-0.442	Senegal	-0.805	Latvia	-0.951	Czechia	-0.734	Malaysia	-0.8	Netherlands	-0.911	Peru	-0.95
Suriname	-0.439	Palestine/West Bank	-0.767	Ivory Coast	-0.912	Iran	-0.709	Uganda	-0.777	Senegal	-0.894	Mongolia	-0.9
Timo-Leste	-0.394	Guyana	-0.673	Eswatini	-0.887	Nigeria	-0.648	Afghanistan	-0.71	Slovenia	-0.888	El Salvador	-0.879
Russia	-0.391	Peru	-0.647	Nicaragua	-0.854	Ethiopia	-0.595	Cuba	-0.643	Russia	-0.858	Russia	-0.857
Uruguay	-0.384	Guatemala	-0.627	Montenegro	-0.834	North Korea	-0.574	Algeria	-0.593	Azerbaijan	-0.784	Bulgaria	-0.846
Poland	-0.382	Ukraine	-0.623	Estonia	-0.829	Mauritius	-0.564	Namibia	-0.544	Guyana	-0.783	Afghanistan	-0.843
Rwanda	-0.38	Malaysia	-0.598	Nigeria	-0.813	Croatia	-0.555	Azerbaijan	-0.537	Finland	-0.756	Kyrgyzstan	-0.731

Legal internet regulation content

country	`2019`	`2023`	Difference
<fct>	<dbl>	<dbl>	<dbl>
1 Afghanistan	0.132	-2.58	-2.71
2 El Salvador	2.09	-0.01	-2.10
3 Belarus	-1.08	-2.85	-1.76
4 Hong Kong	0.34	-1.32	-1.66
5 Nicaragua	-0.503	-1.70	-1.19
6 Burkina Faso	1.11	-0.079	-1.19
7 Trinidad and Tobago	0.916	-0.211	-1.13
8 Senegal	-0.795	-1.65	-0.851
9 Armenia	1.68	1.01	-0.677
10 Sri Lanka	-0.077	-0.737	-0.66
11 Jordan	-1.82	-2.47	-0.646
12 Turkmenistan	-1.87	-2.47	-0.601
13 Hungary	1.53	0.929	-0.598
14 Guinea	-0.058	-0.628	-0.57
15 Israel	1.46	0.896	-0.561
16 United States of America	2.66	2.14	-0.52
17 Kuwait	-0.531	-1.01	-0.478
18 Vietnam	-1.34	-1.80	-0.467
19 India	-1.59	-2.03	-0.442
20 Suriname	1.32	0.883	-0.439
21 Timor-Leste	1.36	0.962	-0.394
22 Russia	-1.29	-1.68	-0.391
23 Uruguay	2.19	1.81	-0.384
24 Poland	1.86	1.48	-0.382
25 Rwanda	-1.43	-1.81	-0.38

Internet censorship effort

country	`2019`	`2023`	Difference
<fct>	<dbl>	<dbl>	<dbl>
1 Burma/Myanmar	0.529	-1.81	-2.34
2 Hong Kong	1.59	-0.452	-2.04
3 Senegal	1.69	-0.235	-1.93
4 Belarus	-0.329	-1.91	-1.58
5 Ethiopia	0.018	-1.46	-1.48
6 Afghanistan	0.312	-1.16	-1.47
7 Guinea	-0.211	-1.62	-1.40
8 Burkina Faso	0.779	-0.528	-1.31
9 Central African Republic	0.543	-0.651	-1.19
10 United Kingdom	1.70	0.583	-1.12
11 Russia	-0.255	-1.37	-1.12
12 Finland	2.00	0.932	-1.07
13 Liberia	1.59	0.521	-1.07
14 Mongolia	1.17	0.152	-1.02
15 Sudan	-1.37	-2.34	-0.967
16 Mauritius	1.02	0.053	-0.964
17 Kyrgyzstan	0.416	-0.542	-0.958
18 Moldova	1.01	0.058	-0.956
19 Latvia	1.90	0.946	-0.951
20 Ivory Coast	1.40	0.486	-0.912
21 Eswatini	-0.984	-1.87	-0.887
22 Nicaragua	-1.85	-2.70	-0.854
23 Montenegro	1.44	0.606	-0.834
24 Estonia	1.79	0.963	-0.829
25 Nigeria	1.30	0.485	-0.813

Social media censorship

country	`2019`	`2023`	Difference
<fct>	<dbl>	<dbl>	<dbl>
1 Burma/Myanmar	-0.107	-2.81	-2.70
2 Afghanistan	0.09	-2.33	-2.42
3 Belarus	1.58	-0.554	-2.14

4	Guinea	-0.832	-2.60	-1.76
5	Hong Kong	0.448	-1.05	-1.50
6	Angola	1.68	0.334	-1.35
7	Moldova	1.53	0.322	-1.20
8	South Korea	1.76	0.618	-1.14
9	Chile	2.05	0.914	-1.14
10	Palestine/Gaza	-0.012	-1.14	-1.13
11	Russia	-0.826	-1.93	-1.10
12	Nicaragua	-1.33	-2.41	-1.08
13	Kyrgyzstan	0.508	-0.551	-1.06
14	Bangladesh	-2.46	-3.44	-0.977
15	Armenia	1.81	0.846	-0.966
16	Guinea-Bissau	1.91	0.946	-0.962
17	Mongolia	1.14	0.303	-0.835
18	Suriname	1.34	0.507	-0.834
19	Senegal	1.46	0.659	-0.805
20	Palestine/West Bank	0.815	0.048	-0.767
21	Guyana	0.94	0.267	-0.673
22	Peru	1.77	1.13	-0.647
23	Guatemala	2.21	1.58	-0.627
24	Ukraine	0.53	-0.093	-0.623
25	Malaysia	0.522	-0.076	-0.598

Internet shut down

country	`2019`	`2023`	Difference	
<fct>	<dbl>	<dbl>	<dbl>	
1	Belarus	1.68	-1.74	-3.42
2	Senegal	1.89	-0.306	-2.2
3	Mongolia	1.60	-0.322	-1.92
4	Guinea	-0.374	-2.25	-1.88
5	Eswatini	-0.277	-1.74	-1.47
6	Ukraine	0.815	-0.569	-1.38
7	Mali	0.014	-1.35	-1.36
8	Sudan	-1.95	-3.18	-1.23
9	Burma/Myanmar	-1.11	-2.27	-1.16
10	Fiji	0.969	-0.154	-1.12
11	Panama	1.81	0.791	-1.02
12	Slovakia	1.93	0.969	-0.958
13	Serbia	1.34	0.423	-0.914
14	Uganda	-0.479	-1.39	-0.907
15	Afghanistan	0.127	-0.772	-0.899
16	United States of America	1.96	1.08	-0.877
17	Cuba	-0.744	-1.61	-0.864
18	Russia	-0.177	-1.04	-0.859
19	Czechia	1.92	1.18	-0.734
20	Iran	-1.38	-2.09	-0.709
21	Nigeria	1.08	0.429	-0.648
22	Ethiopia	-1.34	-1.94	-0.595
23	North Korea	-3.49	-4.06	-0.574
24	Mauritius	0.996	0.432	-0.564
25	Croatia	1.83	1.28	-0.555

Social media shut down

country	`2019`	`2023`	Difference	
<fct>	<dbl>	<dbl>	<dbl>	
1	Russia	0.451	-2.64	-3.09
2	Belarus	1.86	-0.824	-2.68
3	Burma/Myanmar	-0.535	-2.76	-2.23
4	Senegal	2.01	-0.186	-2.19
5	Eswatini	0.235	-1.67	-1.91
6	Guinea	0.323	-1.35	-1.67
7	United States of America	1.87	0.469	-1.40
8	Mongolia	1.5	0.173	-1.33
9	Colombia	2.02	1.05	-0.97
10	Nicaragua	-0.609	-1.58	-0.967

11	Ethiopia	-1.20	-2.15	-0.954
12	Sudan	-2.43	-3.36	-0.932
13	Chile	1.95	1.02	-0.929
14	Mali	-0.251	-1.13	-0.88
15	Nigeria	1.58	0.718	-0.861
16	Ireland	1.75	0.897	-0.854
17	Eritrea	-1.92	-2.76	-0.837
18	Burkina Faso	0.653	-0.155	-0.808
19	Malaysia	0.925	0.125	-0.8
20	Uganda	-0.661	-1.44	-0.777
21	Afghanistan	-0.36	-1.07	-0.71
22	Cuba	-0.734	-1.38	-0.643
23	Algeria	-1.44	-2.03	-0.593
24	Namibia	1.77	1.22	-0.544
25	Azerbaijan	-0.168	-0.705	-0

Dissemination of false information domestic

country	`2019`	`2023`	Difference	
<fct>	<dbl>	<dbl>	<dbl>	
1	Burma/Myanmar	0.853	-3.02	-3.87
2	Belarus	0.258	-2.55	-2.81
3	Costa Rica	2.57	0.44	-2.13
4	Nicaragua	-1.61	-3.39	-1.78
5	Armenia	0.624	-0.999	-1.62
6	Burkina Faso	0.755	-0.756	-1.51
7	Zimbabwe	-1.25	-2.67	-1.42
8	Mali	1.26	-0.125	-1.38
9	South Korea	2.06	0.677	-1.38
10	Slovakia	1.73	0.454	-1.28
11	Guatemala	-1.06	-2.26	-1.19
12	Ghana	1.69	0.539	-1.15
13	Peru	1.46	0.316	-1.14
14	Haiti	-0.509	-1.65	-1.14
15	Botswana	1.24	0.122	-1.12
16	Afghanistan	-1.39	-2.50	-1.11
17	Sudan	-1.19	-2.19	-1.01
18	Iceland	1.89	0.966	-0.926
19	Netherlands	2.54	1.62	-0.911
20	Senegal	1.15	0.255	-0.894
21	Slovenia	1.65	0.758	-0.888
22	Russia	-2.58	-3.44	-0.858
23	Azerbaijan	-2.33	-3.12	-0.784
24	Guyana	-0.367	-1.15	-0.783
25	Finland	2.74	1.99	-0.756

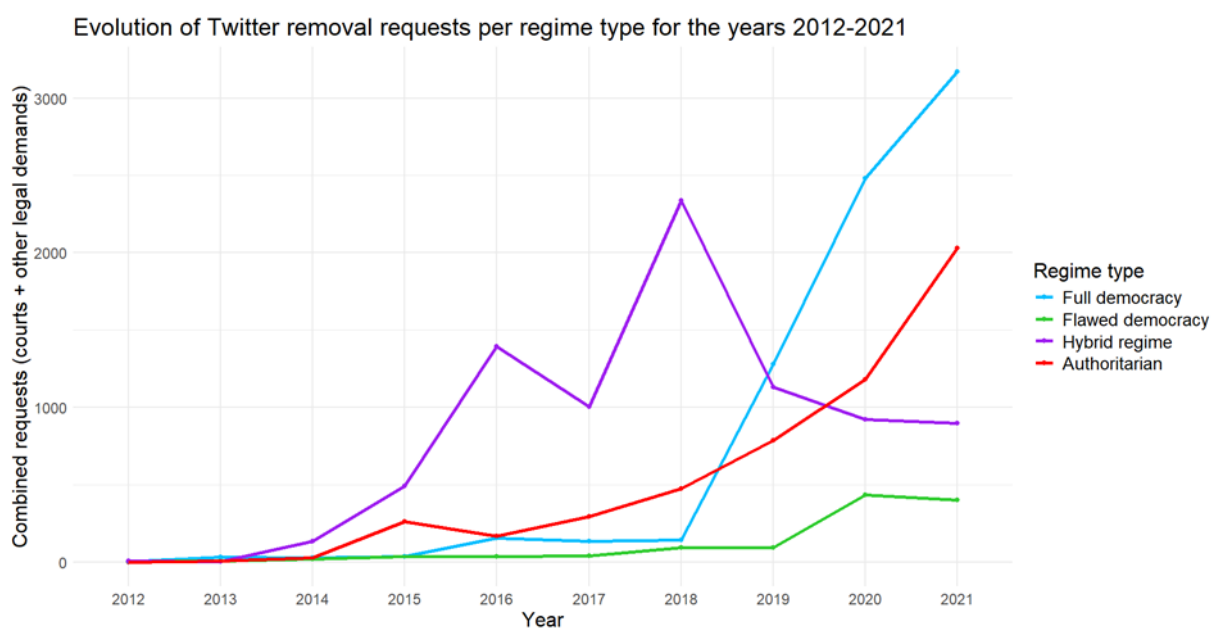
Dissemination of false information abroad

country	`2019`	`2023`	Difference	
<fct>	<dbl>	<dbl>	<dbl>	
1	Burma/Myanmar	0.808	-2.96	-3.76
2	Belarus	0.708	-2.18	-2.88
3	Guyana	0.87	-1.63	-2.5
4	Nicaragua	-1.24	-3.41	-2.17
5	Central African Republic	0.195	-1.72	-1.91
6	Haiti	0.739	-1.08	-1.82
7	Azerbaijan	-1.63	-2.96	-1.33
8	Slovenia	1.75	0.524	-1.23
9	Zimbabwe	-1.56	-2.73	-1.18
10	Guinea	0.303	-0.854	-1.16
11	Eritrea	-1.94	-3.09	-1.15
12	Mali	0.811	-0.33	-1.14
13	Guatemala	-0.244	-1.33	-1.09
14	Burkina Faso	0.542	-0.54	-1.08
15	Slovakia	2.41	1.33	-1.08
16	Lebanon	-0.454	-1.52	-1.07
17	Cyprus	1.70	0.72	-0.976
18	Costa Rica	2.03	1.08	-0.954
19	Peru	2.10	1.15	-0.95

20	Mongolia	1.47	0.57	-0.9
21	El Salvador	0.039	-0.84	-0.879
22	Russia	-1.95	-2.81	-0.857
23	Bulgaria	1.62	0.777	-0.846
24	Afghanistan	-1.66	-2.50	-0.843
25	Kyrgyzstan	0.762	0.031	-0.731

Transparency Report Data

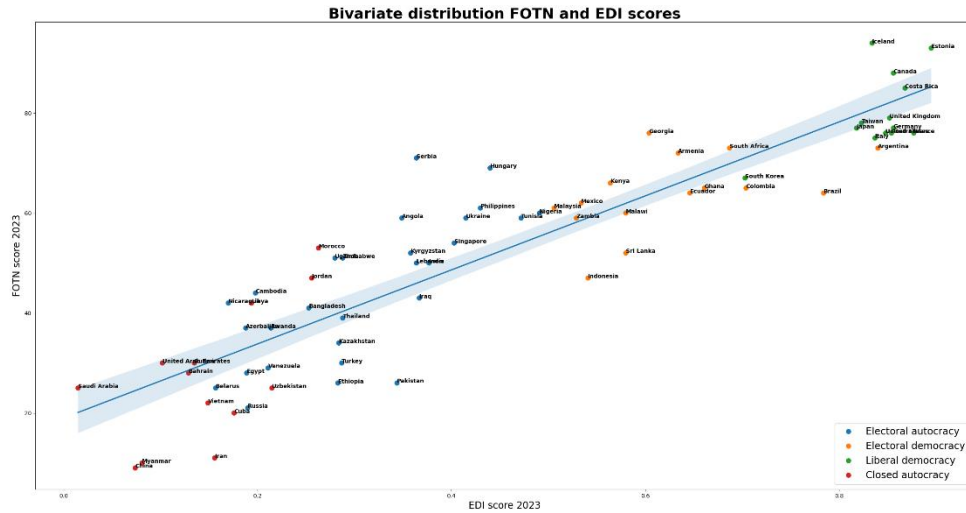
8 Evolution of Twitter removal requests per regime type for the years 2012–2021



Appendix B

Freedom on the Net Reports

9.1 Bivariate distribution of FOTN and EDI scores 2023



Residuals:

```
count  6.900000e+01
mean   -3.054602e-14
std    6.279144e-02
min    -1.269490e-01
25%    -4.194923e-02
50%     5.193792e-03
75%     3.314279e-02
max     1.709906e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:      EDI_score  R-squared:          0.942
Model:              OLS        Adj. R-squared:       0.939
Method:             Least Squares  F-statistic:       261.2
Date:               Wed, 07 Aug 2024  Prob (F-statistic):  7.15e-39
Time:               13:59:54   Log-Likelihood:    93.585
No. Observations:  69         AIC:                -177.2
Df Residuals:      64         BIC:                -166.0
Df Model:          4
Covariance Type:   nonrobust
=====
```

	coef	std err	t	P> t	[0.025	0.975]
Intercept	0.0220	0.026	0.858	0.394	-0.029	0.073
C(Political_regime)[T.Electoral autocracy]	0.0770	0.025	3.114	0.003	0.028	0.126
C(Political_regime)[T.Electoral democracy]	0.3029	0.035	8.673	0.000	0.233	0.373
C(Political_regime)[T.Liberal democracy]	0.4406	0.044	10.047	0.000	0.353	0.528
FOTN_score	0.0047	0.001	6.988	0.000	0.003	0.006

Omnibus: 1.223 Durbin-Watson: 2.045
 Prob(Omnibus): 0.543 Jarque-Bera (JB): 0.833
 Skew: 0.265 Prob(JB): 0.659
 Kurtosis: 3.091 Cond. No. 411.

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.9250781850547468

Robust regression model:

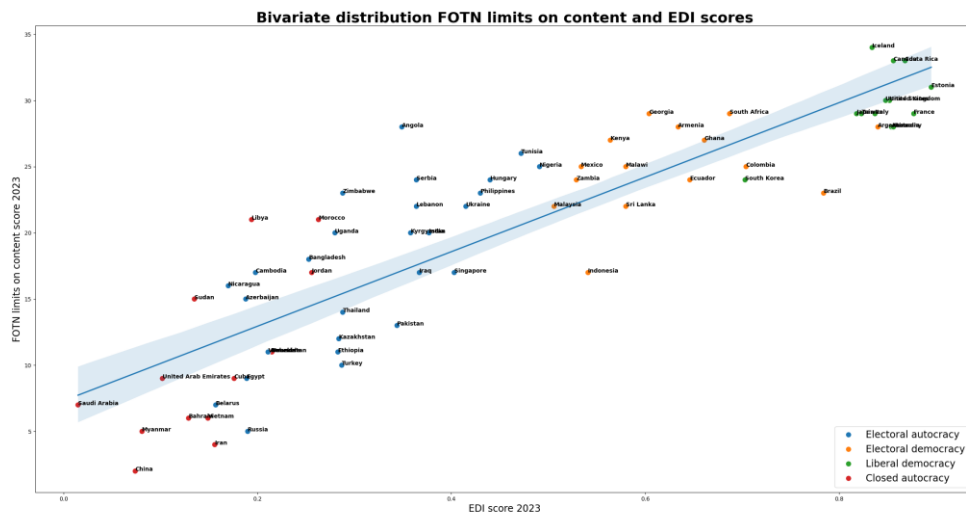
Robust linear Model Regression Results

Dep. Variable: EDI_score No. Observations: 69
 Model: RLM Df Residuals: 64
 Method: IRLS Df Model: 4
 Norm: HuberT
 Scale Est.: mad
 Cov Type: H1
 Date: Wed, 07 Aug 2024
 Time: 13:59:54
 No. Iterations: 14

	coef	std err	z	P> z	[0.025	0.975]	
Intercept	0.0289	0.025	1.141	0.254	-0.021	0.078	
C(Political_regime)[T.Electoral autocracy]	0.0754	0.024	3.090	0.002	0.028	0.123	
C(Political_regime)[T.Electoral democracy]	0.2922	0.034	8.478	0.000	0.225	0.360	
C(Political_regime)[T.Liberal democracy]	0.4437	0.043	10.253	0.000	0.359	0.529	
FOTN_score	0.0046	0.001	6.893	0.000	0.003	0.006	

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

9.2 Bivariate distribution of FOTN limits on content and EDI scores 2023



Residuals:
 count 6.900000e+01

```

mean -5.937280e-15
std 6.350725e-02
min -1.268890e-01
25% -4.626667e-02
50% 5.122755e-03
75% 3.950410e-02
max 1.817546e-01
dtype: float64

```

OLS Regression Results

```

=====
Dep. Variable:      EDI_score  R-squared:      0.941
Model:              OLS  Adj. R-squared:    0.937
Method:             Least Squares  F-statistic:    255.0
Date:               Wed, 07 Aug 2024  Prob (F-statistic): 1.47e-38
Time:               13:59:54  Log-Likelihood: 92.802
No. Observations:  69  AIC:          -175.6
Df Residuals:      64  BIC:          -164.4
Df Model:           4
Covariance Type:   nonrobust
=====

```

```

=====
                    coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.0406   0.024   1.675   0.099  -0.008   0.089
C(Political_regime)[T.Electoral autocracy]  0.0858   0.024   3.502   0.001   0.037   0.135
C(Political_regime)[T.Electoral democracy]  0.3192   0.034   9.410   0.000   0.251   0.387
C(Political_regime)[T.Liberal democracy]    0.4822   0.040  12.069   0.000   0.402   0.562
FOTN_limits_on_content_score                0.0107   0.002   6.804   0.000   0.008   0.014
=====

```

```

Omnibus:                2.094  Durbin-Watson:      2.207
Prob(Omnibus):          0.351  Jarque-Bera (JB):    1.434
Skew:                   0.325  Prob(JB):            0.488
Kurtosis:               3.275  Cond. No.            145.
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.9096604138570328

Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:      EDI_score  No. Observations:      69
Model:              RLM  Df Residuals:      64
Method:             IRLS  Df Model:      4
Norm:               HuberT
Scale Est.:         mad
Cov Type:           H1
Date:               Wed, 07 Aug 2024
Time:               13:59:54
No. Iterations:    19
=====

```

```

=====
                    coef  std err      z  P>|z|  [0.025  0.975]
-----
Intercept                0.0441   0.024   1.859   0.063  -0.002   0.091
C(Political_regime)[T.Electoral autocracy]  0.0883   0.024   3.678   0.000   0.041   0.135
C(Political_regime)[T.Electoral democracy]  0.3054   0.033   9.186   0.000   0.240   0.371
C(Political_regime)[T.Liberal democracy]    0.4850   0.039  12.384   0.000   0.408   0.562
=====

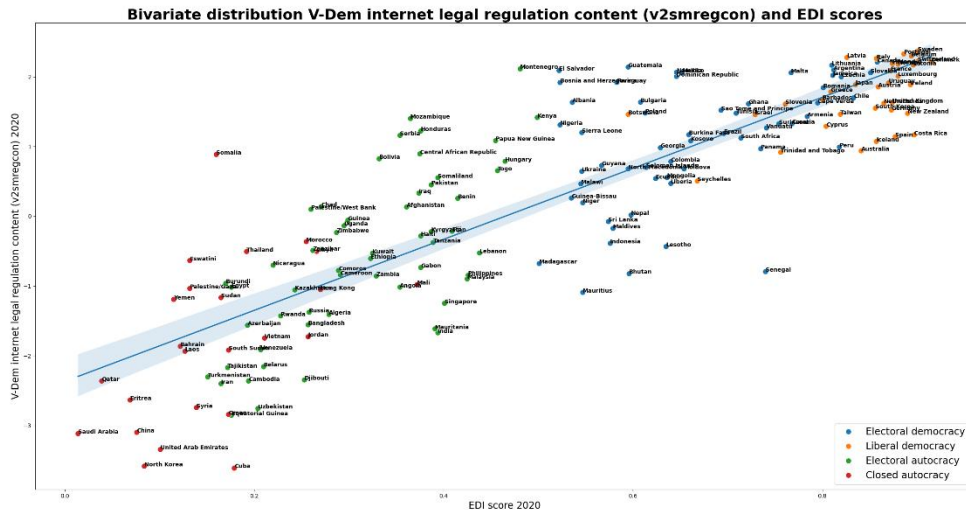
```

FOTN_limits_on_content_score 0.0104 0.002 6.803 0.000 0.007 0.013

=====
 =====
 If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

V-Dem Data

10.1 Bivariate distribution of V-Dem internet legal regulation content (v2smregcon) and EDI score 2020



Residuals:

count 1.710000e+02
 mean 2.986565e-16
 std 7.443453e-02
 min -2.327631e-01
 25% -4.922989e-02
 50% 3.891738e-03
 75% 4.901394e-02
 max 1.771622e-01
 dtype: float64

OLS Regression Results

=====
 Dep. Variable: EDI_score R-squared: 0.918
 Model: OLS Adj. R-squared: 0.916
 Method: Least Squares F-statistic: 462.4
 Date: Wed, 07 Aug 2024 Prob (F-statistic): 7.77e-89
 Time: 14:00:06 Log-Likelihood: 202.09
 No. Observations: 171 AIC: -394.2
 Df Residuals: 166 BIC: -378.5
 Df Model: 4
 Covariance Type: nonrobust
 =====

	coef	std err	t	P> t	[0.025	0.975]	
Intercept	0.2547	0.019	13.572	0.000	0.218	0.292	
C(Political_regime)[T.Electoral autocracy]	0.0953	0.020	4.826	0.000	0.056	0.134	
C(Political_regime)[T.Electoral democracy]	0.3504	0.025	13.959	0.000	0.301	0.400	

C(Political_regime)[T.Liberal democracy]	0.4956	0.029	17.039	0.000	0.438	0.553
v2smregcon	0.0531	0.006	8.868	0.000	0.041	0.065

```

=====
Omnibus:          0.937  Durbin-Watson:          1.796
Prob(Omnibus):    0.626  Jarque-Bera (JB):          0.734
Skew:             -0.158 Prob(JB):          0.693
Kurtosis:         3.061  Cond. No.          12.3De
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.8507973766195018

Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:           RLM  Df Residuals:    166
Method:          IRLS  Df Model:      4
Norm:            HuberT
Scale Est.:      mad
Cov Type:        H1
Date:            Wed, 07 Aug 2024
Time:            14:00:06
No. Iterations:  19
=====

```

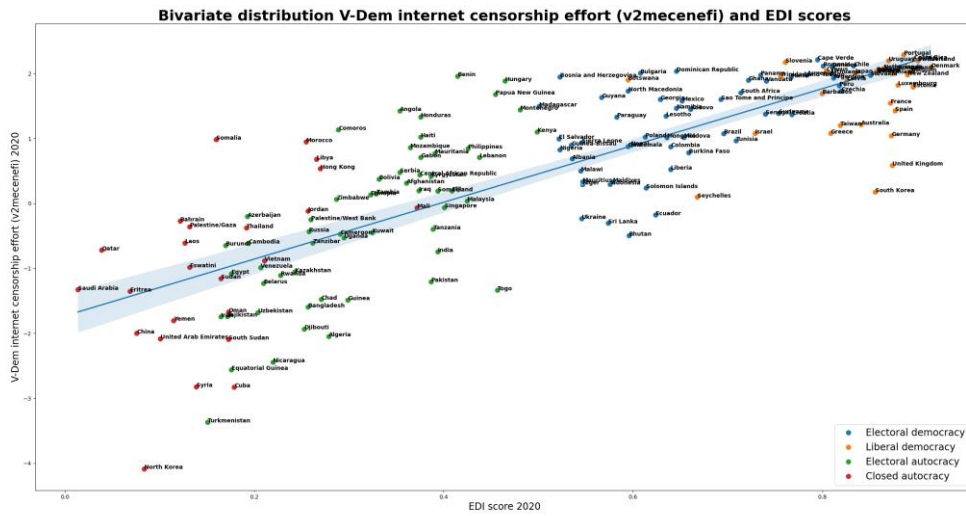
```

=====
                    coef  std err      z  P>|z|  [0.025  0.975]
-----+-----
Intercept                0.2588   0.019  13.772  0.000   0.222   0.296
C(Political_regime)[T.Electoral autocracy]  0.0906   0.020   4.584  0.000   0.052   0.129
C(Political_regime)[T.Electoral democracy]  0.3452   0.025  13.733  0.000   0.296   0.395
C(Political_regime)[T.Liberal democracy]    0.4904   0.029  16.835  0.000   0.433   0.547
v2smregcon                0.0566   0.006   9.440  0.000   0.045   0.068
=====

```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

10.2 Bivariate distribution of V-Dem internet censorship effort (v2mecenefi) and EDI score 2020



Residuals:

```
count 1.710000e+02
mean -4.733056e-16
std 7.244426e-02
min -2.571123e-01
25% -4.507757e-02
50% 3.329544e-03
75% 4.387731e-02
max 1.980425e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:      EDI_score  R-squared:      0.922
Model:              OLS  Adj. R-squared:    0.920
Method:             Least Squares  F-statistic:    490.5
Date:               Wed, 07 Aug 2024  Prob (F-statistic): 8.68e-91
Time:               14:00:06  Log-Likelihood: 206.73
No. Observations:  171  AIC:              -403.5
Df Residuals:      166  BIC:              -387.7
Df Model:           4
Covariance Type:   nonrobust
=====
```

```
=====
              coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.2170   0.016  13.457  0.000   0.185   0.249
C(Political_regime)[T.Electoral autocracy]  0.1175   0.018   6.383  0.000   0.081   0.154
C(Political_regime)[T.Electoral democracy]  0.3746   0.022  16.826  0.000   0.331   0.419
C(Political_regime)[T.Liberal democracy]    0.5277   0.025  20.850  0.000   0.478   0.578
v2mecenefi                0.0565   0.006   9.606  0.000   0.045   0.068
=====
```

```
=====
Omnibus:                2.931  Durbin-Watson:      1.869
Prob(Omnibus):          0.231  Jarque-Bera (JB):    2.501
Skew:                   -0.225  Prob(JB):            0.286
Kurtosis:                3.385  Cond. No.            10.8
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.8434800348610799

Robust regression model:

Robust linear Model Regression Results

```

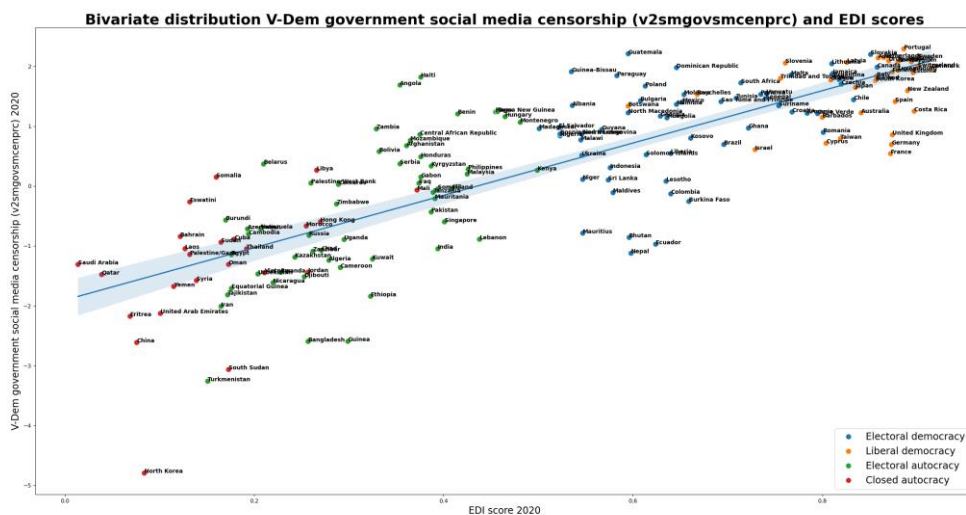
=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:           RLM      Df Residuals:        166
Method:         IRLS     Df Model:          4
Norm:           HuberT
Scale Est.:     mad
Cov Type:      H1
Date:          Wed, 07 Aug 2024
Time:          14:00:06
No. Iterations: 19
=====

```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.2180	0.017	12.955	0.000	0.185	0.251
C(Political_regime)[T.Electoral autocracy]	0.1159	0.019	6.032	0.000	0.078	0.154
C(Political_regime)[T.Electoral democracy]	0.3728	0.023	16.043	0.000	0.327	0.418
C(Political_regime)[T.Liberal democracy]	0.5306	0.026	20.084	0.000	0.479	0.582
v2mecenefi	0.0577	0.006	9.403	0.000	0.046	0.070

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

10.3 Bivariate distribution of V-Dem government social media censorship (v2smgovsmcenprc) and EDI score 2020



Residuals:

```

count  1.710000e+02
mean   -1.752984e-16
std    7.661196e-02
min    -2.315669e-01
25%    -4.783764e-02
50%    4.655040e-03

```

75% 5.530974e-02
max 1.496957e-01
dtype: float64

OLS Regression Results

```

=====
Dep. Variable:    EDI_score  R-squared:        0.913
Model:           OLS  Adj. R-squared:    0.911
Method:         Least Squares  F-statistic:      434.2
Date:           Wed, 07 Aug 2024  Prob (F-statistic):  9.27e-87
Time:           14:00:06  Log-Likelihood:   197.16
No. Observations: 171  AIC:                -384.3
Df Residuals:    166  BIC:                -368.6
Df Model:        4
Covariance Type: nonrobust
=====

```

```

=====
                    coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.2289   0.018  12.695  0.000   0.193   0.264
C(Political_regime)[T.Electoral autocracy]  0.1108   0.020   5.579  0.000   0.072   0.150
C(Political_regime)[T.Electoral democracy]  0.3796   0.024  15.646  0.000   0.332   0.427
C(Political_regime)[T.Liberal democracy]    0.5283   0.028  18.774  0.000   0.473   0.584
v2smgovsmcenprc          0.0520   0.006   8.058  0.000   0.039   0.065
=====

```

```

=====
Omnibus:            2.718  Durbin-Watson:        1.849
Prob(Omnibus):      0.257  Jarque-Bera (JB):      2.722
Skew:               -0.265  Prob(JB):              0.256
Kurtosis:           2.682  Cond. No.              10.7
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.8326750264093878

Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:           RLM  Df Residuals:    166
Method:         IRLS  Df Model:        4
Norm:           HuberT
Scale Est.:     mad
Cov Type:       H1
Date:           Wed, 07 Aug 2024
Time:           14:00:06
No. Iterations:  20
=====

```

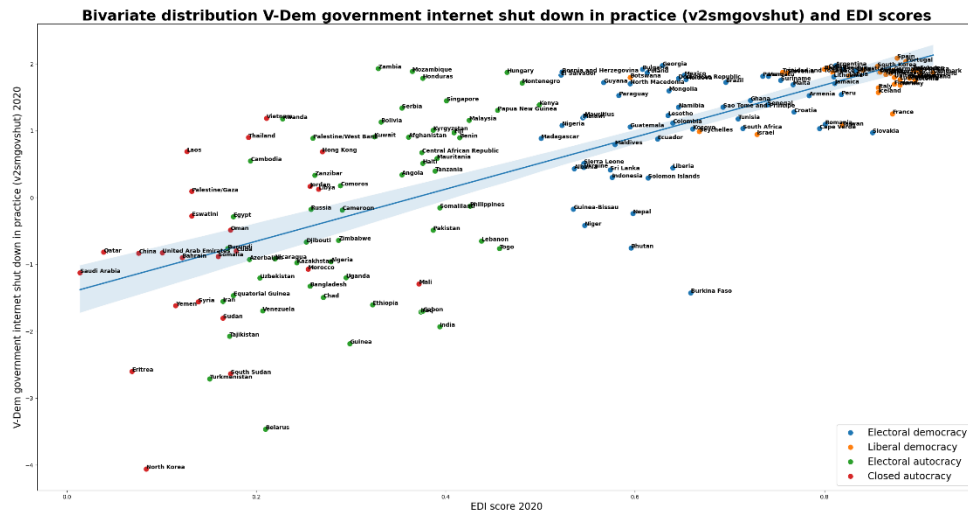
```

=====
                    coef  std err      z  P>|z|  [0.025  0.975]
-----
Intercept                0.2285   0.019  11.903  0.000   0.191   0.266
C(Political_regime)[T.Electoral autocracy]  0.1109   0.021   5.249  0.000   0.070   0.152
C(Political_regime)[T.Electoral democracy]  0.3822   0.026  14.797  0.000   0.332   0.433
C(Political_regime)[T.Liberal democracy]    0.5354   0.030  17.870  0.000   0.477   0.594
v2smgovsmcenprc          0.0515   0.007   7.496  0.000   0.038   0.065
=====

```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

10.4 Bivariate distribution of V-Dem government internet shut down in practice and (v2smgovshut) and EDI score 2020



Residuals:

```
count 1.710000e+02
mean 4.090295e-16
std 8.154495e-02
min -2.482044e-01
25% -5.899848e-02
50% 4.217211e-03
75% 5.335139e-02
max 2.313695e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:      EDI_score  R-squared:      0.901
Model:              OLS  Adj. R-squared:    0.899
Method:             Least Squares  F-statistic:    378.4
Date:               Wed, 07 Aug 2024  Prob (F-statistic): 2.89e-82
Time:               14:00:07  Log-Likelihood: 186.49
No. Observations:  171  AIC:              -363.0
Df Residuals:      166  BIC:              -347.3
Df Model:          4
Covariance Type:   nonrobust
=====
```

```
=====
              coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.1920   0.018  10.870   0.000   0.157   0.227
C(Political_regime)[T.Electoral autocracy]  0.1329   0.021   6.453   0.000   0.092   0.173
C(Political_regime)[T.Electoral democracy]  0.4232   0.024  17.735   0.000   0.376   0.470
C(Political_regime)[T.Liberal democracy]    0.5798   0.028  21.020   0.000   0.525   0.634
v2smgovshut              0.0398   0.006   6.151   0.000   0.027   0.053
=====
```

```
=====
Omnibus:                0.031  Durbin-Watson:      1.936
Prob(Omnibus):          0.985  Jarque-Bera (JB):    0.098
Skew:                   0.031  Prob(JB):            0.952
Kurtosis:               2.900  Cond. No.           10.4
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.7763918247875301

Robust regression model:

Robust linear Model Regression Results

```

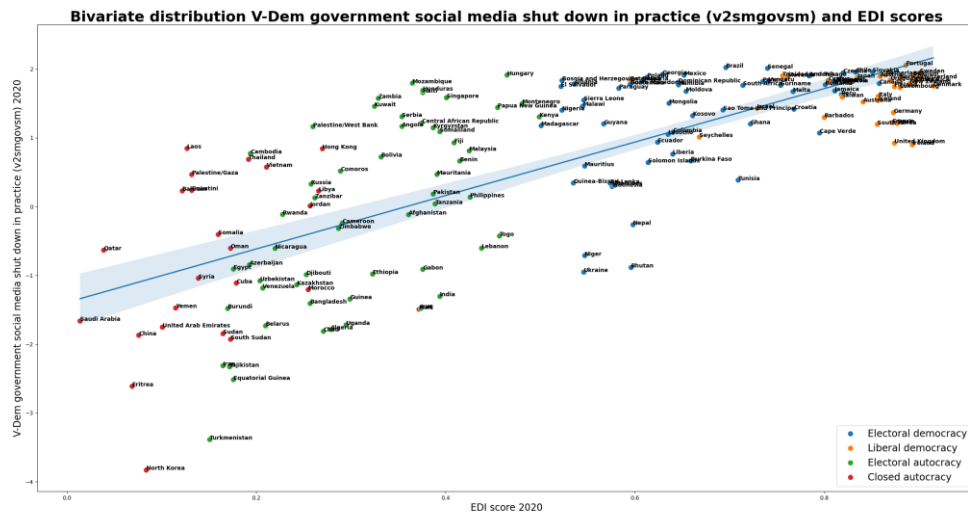
=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:           RLM        Df Residuals:          166
Method:         IRLS       Df Model:           4
Norm:           HuberT
Scale Est.:     mad
Cov Type:       H1
Date:           Wed, 07 Aug 2024
Time:           14:00:07
No. Iterations: 19
=====

```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.1889	0.019	10.062	0.000	0.152	0.226
C(Political_regime)[T.Electoral autocracy]	0.1354	0.022	6.192	0.000	0.093	0.178
C(Political_regime)[T.Electoral democracy]	0.4214	0.025	16.622	0.000	0.372	0.471
C(Political_regime)[T.Liberal democracy]	0.5863	0.029	20.006	0.000	0.529	0.644
v2smgovshut	0.0410	0.007	5.975	0.000	0.028	0.054

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

10.5 Bivariate distribution of V-Dem government social media shut down in practice (v2smgovsm) and EDI score 2020



Residuals:
count 1.710000e+02
mean 7.920889e-17
std 7.944199e-02
min -2.550044e-01
25% -4.810018e-02
50% -1.928608e-03

75% 5.013753e-02
max 2.425746e-01
dtype: float64

OLS Regression Results

```

=====
Dep. Variable:    EDI_score  R-squared:    0.906
Model:           OLS  Adj. R-squared:  0.904
Method:         Least Squares  F-statistic:  400.9
Date:           Wed, 07 Aug 2024  Prob (F-statistic):  3.79e-84
Time:           14:00:07  Log-Likelihood:  190.96
No. Observations:  171  AIC:          -371.9
Df Residuals:     166  BIC:          -356.2
Df Model:         4
Covariance Type:  nonrobust
=====

```

```

=====

```

	coef	std err	t	P> t	[0.025	0.975]	
Intercept	0.1945	0.017	11.329	0.000	0.161	0.228	
C(Political_regime)[T.Electoral autocracy]	0.1292	0.020	6.431	0.000	0.090	0.169	
C(Political_regime)[T.Electoral democracy]	0.4109	0.024	17.447	0.000	0.364	0.457	
C(Political_regime)[T.Liberal democracy]	0.5757	0.026	21.885	0.000	0.524	0.628	
v2smgovsm	0.0436	0.006	6.984	0.000	0.031	0.056	

```

=====

```

```

=====
Omnibus:         0.374  Durbin-Watson:    1.895
Prob(Omnibus):   0.829  Jarque-Bera (JB):    0.130
Skew:            -0.017  Prob(JB):            0.937
Kurtosis:        3.131  Cond. No.            10.5
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
Spearman correlation coefficient: 0.7682337433275997
Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:    EDI_score  No. Observations:  171
Model:           RLM  Df Residuals:    166
Method:         IRLS  Df Model:        4
Norm:           HuberT
Scale Est.:     mad
Cov Type:       H1
Date:           Wed, 07 Aug 2024
Time:           14:00:07
No. Iterations:  20
=====

```

```

=====

```

	coef	std err	z	P> z	[0.025	0.975]	
Intercept	0.1893	0.017	10.846	0.000	0.155	0.223	
C(Political_regime)[T.Electoral autocracy]	0.1330	0.020	6.516	0.000	0.093	0.173	
C(Political_regime)[T.Electoral democracy]	0.4129	0.024	17.247	0.000	0.366	0.460	
C(Political_regime)[T.Liberal democracy]	0.5863	0.027	21.926	0.000	0.534	0.639	
v2smgovsm	0.0445	0.006	7.021	0.000	0.032	0.057	

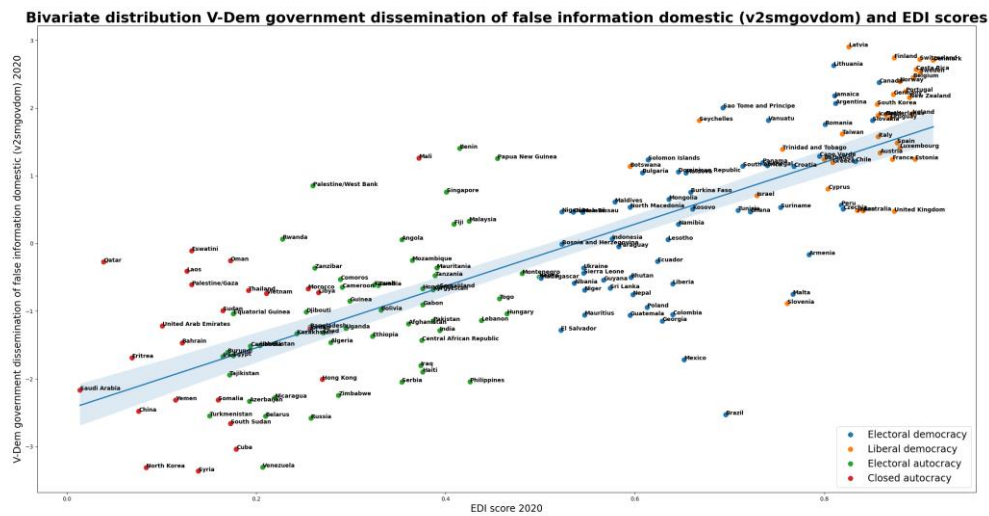
```

=====

```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

10.6 Bivariate distribution of V-Dem government dissemination of false information domestic (v2smgovdom) and EDI score 2020



Residuals:

```
count 1.710000e+02
mean -3.700743e-17
std 7.735138e-02
min -2.227994e-01
25% -5.413352e-02
50% 4.135708e-03
75% 4.933776e-02
max 1.662712e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:      EDI_score  R-squared:      0.911
Model:             OLS  Adj. R-squared:    0.909
Method:           Least Squares  F-statistic:    425.1
Date:             Wed, 07 Aug 2024  Prob (F-statistic): 4.56e-86
Time:             14:00:08  Log-Likelihood: 195.52
No. Observations: 171  AIC:              -381.0
Df Residuals:     166  BIC:              -365.3
Df Model:         4
Covariance Type:  nonrobust
=====
```

```
=====
              coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.2242   0.018  12.438   0.000   0.189   0.260
C(Political_regime)[T.Electoral autocracy]  0.1427   0.019   7.426   0.000   0.105   0.181
C(Political_regime)[T.Electoral democracy]  0.4231   0.022  19.577   0.000   0.380   0.466
C(Political_regime)[T.Liberal democracy]    0.5408   0.028  19.543   0.000   0.486   0.595
v2smgovdom                0.0464   0.006   7.781   0.000   0.035   0.058
=====
```

```
=====
Omnibus:             0.804  Durbin-Watson:      1.957
Prob(Omnibus):      0.669  Jarque-Bera (JB):    0.920
Skew:               -0.109  Prob(JB):            0.631
Kurtosis:           2.715  Cond. No.            10.1
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.796874690685349

Robust regression model:

Robust linear Model Regression Results

```

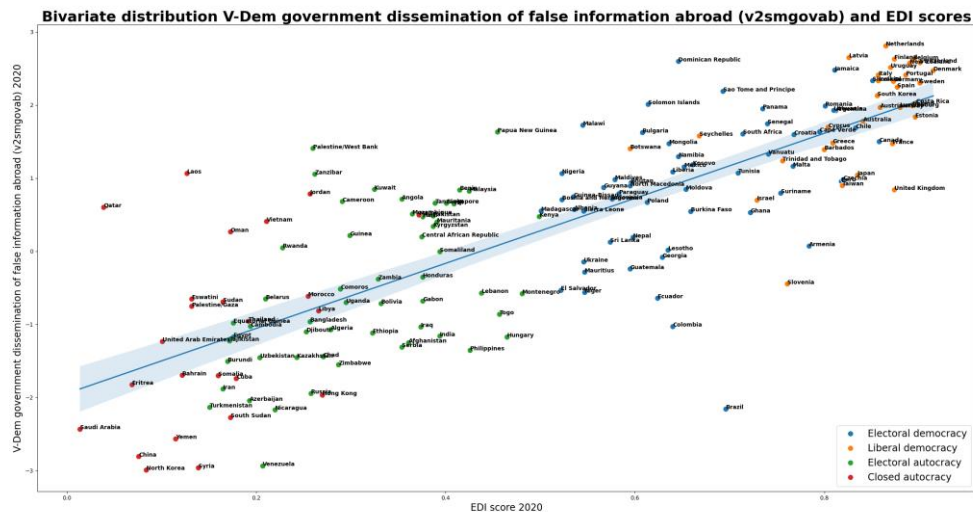
=====
Dep. Variable:      EDI_score  No. Observations:      171
Model:             RLM  Df Residuals:      166
Method:           IRLS  Df Model:          4
Norm:              HuberT
Scale Est.:        mad
Cov Type:          H1
Date:              Wed, 07 Aug 2024
Time:              14:00:08
No. Iterations:    18
=====

```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.2293	0.018	12.508	0.000	0.193	0.265
C(Political_regime)[T.Electoral autocracy]	0.1389	0.020	7.107	0.000	0.101	0.177
C(Political_regime)[T.Electoral democracy]	0.4137	0.022	18.828	0.000	0.371	0.457
C(Political_regime)[T.Liberal democracy]	0.5384	0.028	19.134	0.000	0.483	0.594
v2smgovdom	0.0487	0.006	8.017	0.000	0.037	0.061

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

10.7 Bivariate distribution of V-Dem government dissemination of false information abroad (v2smgovab) and EDI score 2020



Residuals:

```

count  1.710000e+02
mean    7.466412e-17
std     7.963244e-02
min    -2.255466e-01
25%    -5.347371e-02
50%     3.834004e-03

```


75% 4.683625e-02
max 1.750047e-01
dtype: float64

OLS Regression Results

```

=====
Dep. Variable:    EDI_score  R-squared:        0.906
Model:           OLS  Adj. R-squared:    0.903
Method:         Least Squares  F-statistic:      398.8
Date:          Wed, 07 Aug 2024  Prob (F-statistic):  5.64e-84
Time:          14:00:08  Log-Likelihood:   190.55
No. Observations: 171  AIC:           -371.1
Df Residuals:   166  BIC:           -355.4
Df Model:       4
Covariance Type: nonrobust
=====

```

```

=====

```

	coef	std err	t	P> t	[0.025	0.975]	
Intercept	0.2091	0.018	11.643	0.000	0.174	0.245	
C(Political_regime)[T.Electoral autocracy]	0.1327	0.020	6.626	0.000	0.093	0.172	
C(Political_regime)[T.Electoral democracy]	0.4128	0.024	17.551	0.000	0.366	0.459	
C(Political_regime)[T.Liberal democracy]	0.5496	0.029	19.081	0.000	0.493	0.606	
v2smgovab	0.0441	0.006	6.910	0.000	0.031	0.057	

```

=====

```

```

=====
Omnibus:         0.070  Durbin-Watson:      2.048
Prob(Omnibus):   0.965  Jarque-Bera (JB):    0.207
Skew:            -0.015  Prob(JB):            0.902
Kurtosis:        2.832  Cond. No.            10.5
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.8195535955949647

Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:           RLM  Df Residuals:        166
Method:         IRLS  Df Model:           4
Norm:           HuberT
Scale Est.:     mad
Cov Type:       H1
Date:          Wed, 07 Aug 2024
Time:          14:00:08
No. Iterations: 21
=====

```

```

=====

```

	coef	std err	z	P> z	[0.025	0.975]	
Intercept	0.2163	0.018	11.699	0.000	0.180	0.253	
C(Political_regime)[T.Electoral autocracy]	0.1240	0.021	6.010	0.000	0.084	0.164	
C(Political_regime)[T.Electoral democracy]	0.3976	0.024	16.423	0.000	0.350	0.445	
C(Political_regime)[T.Liberal democracy]	0.5409	0.030	18.243	0.000	0.483	0.599	
v2smgovab	0.0480	0.007	7.308	0.000	0.035	0.061	

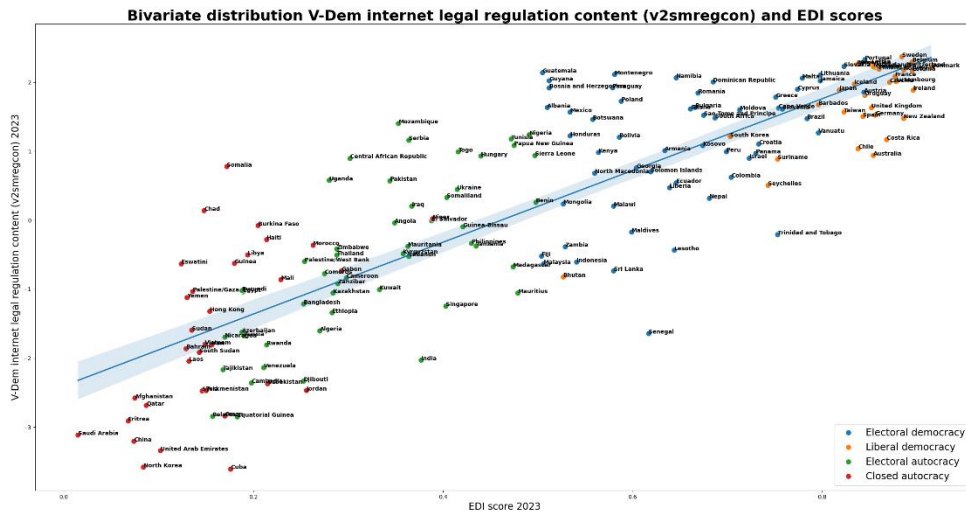
```

=====

```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

11.1 Bivariate distribution of V-Dem internet legal regulation content (v2smregcon) and EDI score 2023



Residuals:

```
count 1.710000e+02
mean 1.623133e-16
std 7.495512e-02
min -2.034929e-01
25% -4.264546e-02
50% -4.142606e-03
75% 4.995242e-02
max 1.762599e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable: EDI_score R-squared: 0.918
Model: OLS Adj. R-squared: 0.916
Method: Least Squares F-statistic: 463.9
Date: Wed, 07 Aug 2024 Prob (F-statistic): 6.06e-89
Time: 14:00:09 Log-Likelihood: 200.90
No. Observations: 171 AIC: -391.8
Df Residuals: 166 BIC: -376.1
Df Model: 4
Covariance Type: nonrobust
=====
```

	coef	std err	t	P> t	[0.025	0.975]	
Intercept	0.2478	0.016	15.150	0.000	0.215	0.280	
C(Political_regime)[T.Electoral autocracy]	0.1101	0.018	6.065	0.000	0.074	0.146	
C(Political_regime)[T.Electoral democracy]	0.3493	0.023	15.135	0.000	0.304	0.395	
C(Political_regime)[T.Liberal democracy]	0.5022	0.027	18.507	0.000	0.449	0.556	
v2smregcon	0.0521	0.006	9.054	0.000	0.041	0.063	

```
=====
Omnibus: 0.679 Durbin-Watson: 1.909
Prob(Omnibus): 0.712 Jarque-Bera (JB): 0.611
Skew: -0.146 Prob(JB): 0.737
Kurtosis: 2.971 Cond. No. 11.2
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.8552359604241441

Robust regression model:

Robust linear Model Regression Results

```

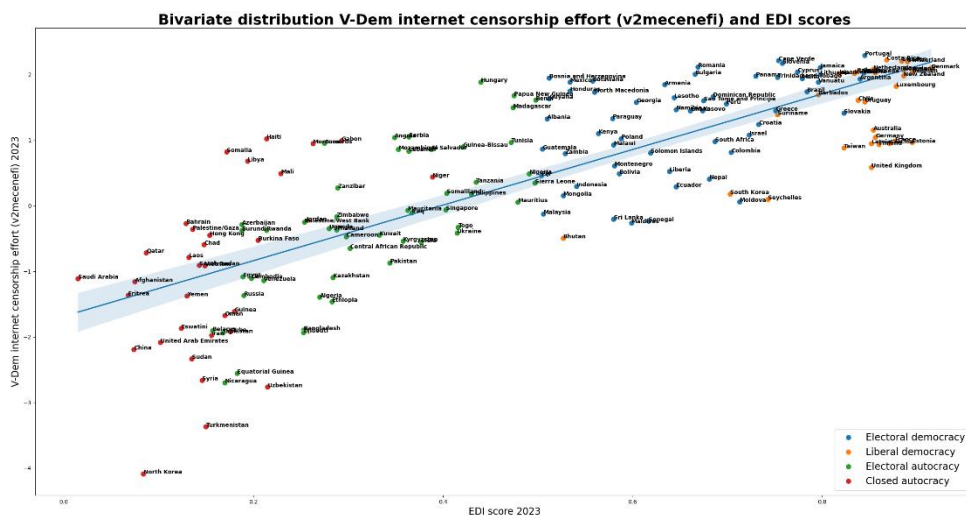
=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:           RLM        Df Residuals:          166
Method:         IRLS       Df Model:             4
Norm:           HuberT
Scale Est.:     mad
Cov Type:      H1
Date:          Wed, 07 Aug 2024
Time:          14:00:09
No. Iterations: 34
=====

```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.2512	0.016	15.334	0.000	0.219	0.283
C(Political_regime)[T.Electoral autocracy]	0.1042	0.018	5.732	0.000	0.069	0.140
C(Political_regime)[T.Electoral democracy]	0.3500	0.023	15.135	0.000	0.305	0.395
C(Political_regime)[T.Liberal democracy]	0.4962	0.027	18.254	0.000	0.443	0.549
v2smregcon	0.0558	0.006	9.683	0.000	0.045	0.067

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

11.2 Bivariate distribution of V-Dem internet censorship effort (v2mecenefi) and EDI score 2023



Residuals:

```

count  1.710000e+02
mean   7.304099e-17
std    7.425928e-02
min    -2.018229e-01
25%    -5.250018e-02
50%    2.151721e-03

```

75% 5.126808e-02
max 1.607555e-01
dtype: float64

OLS Regression Results

```

=====
Dep. Variable:    EDI_score  R-squared:        0.919
Model:            OLS      Adj. R-squared:    0.917
Method:          Least Squares  F-statistic:      473.4
Date:            Wed, 07 Aug 2024  Prob (F-statistic):    1.29e-89
Time:            14:00:09  Log-Likelihood:   202.50
No. Observations: 171      AIC:                -395.0
Df Residuals:    166      BIC:                -379.3
Df Model:        4
Covariance Type: nonrobust
=====

```

```

=====

```

	coef	std err	t	P> t	[0.025	0.975]	
Intercept	0.2179	0.014	15.061	0.000	0.189	0.246	
C(Political_regime)[T.Electoral autocracy]	0.1236	0.017	7.063	0.000	0.089	0.158	
C(Political_regime)[T.Electoral democracy]	0.3656	0.021	17.007	0.000	0.323	0.408	
C(Political_regime)[T.Liberal democracy]	0.5387	0.024	22.432	0.000	0.491	0.586	
v2mecenefi	0.0558	0.006	9.308	0.000	0.044	0.068	

```

=====

```

```

=====
Omnibus:          1.320  Durbin-Watson:        1.782
Prob(Omnibus):    0.517  Jarque-Bera (JB):        1.390
Skew:             -0.160  Prob(JB):                0.499
Kurtosis:         2.695  Cond. No.                9.48
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
Spearman correlation coefficient: 0.8192487347837611
Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:            RLM      Df Residuals:        166
Method:          IRLS     Df Model:            4
Norm:            HuberT
Scale Est.:      mad
Cov Type:        H1
Date:            Wed, 07 Aug 2024
Time:            14:00:09
No. Iterations:  18
=====

```

```

=====

```

	coef	std err	z	P> z	[0.025	0.975]	
Intercept	0.2149	0.015	14.447	0.000	0.186	0.244	
C(Political_regime)[T.Electoral autocracy]	0.1263	0.018	7.022	0.000	0.091	0.162	
C(Political_regime)[T.Electoral democracy]	0.3727	0.022	16.861	0.000	0.329	0.416	
C(Political_regime)[T.Liberal democracy]	0.5460	0.025	22.112	0.000	0.498	0.594	
v2mecenefi	0.0551	0.006	8.945	0.000	0.043	0.067	

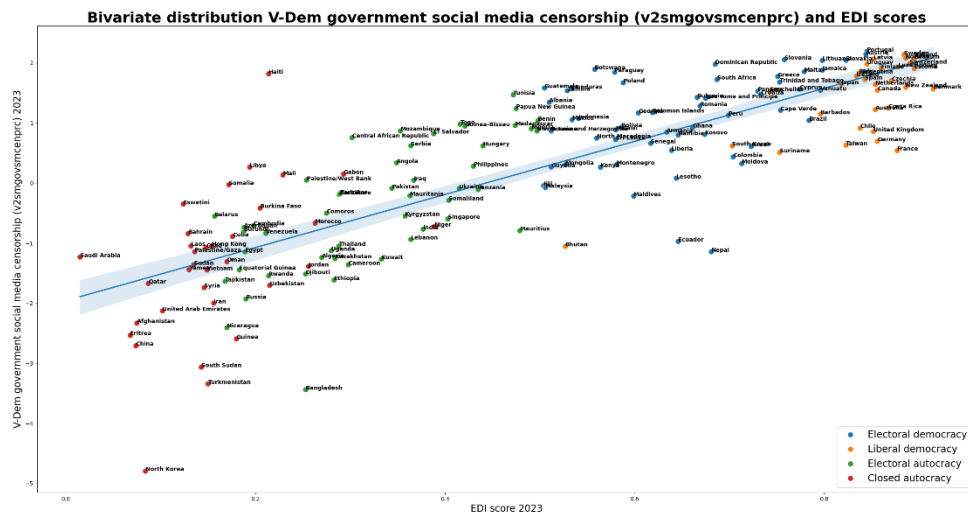
```

=====

```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

11.3 Bivariate distribution of V-Dem government social media censorship (v2smgovsmcenprc) and EDI score 2023



Residuals:

```
count 1.710000e+02
mean 5.518652e-18
std 7.568934e-02
min -1.777462e-01
25% -4.881528e-02
50% 1.820412e-03
75% 5.634377e-02
max 1.938016e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:      EDI_score  R-squared:      0.916
Model:              OLS  Adj. R-squared:    0.914
Method:             Least Squares  F-statistic:    454.2
Date:               Wed, 07 Aug 2024  Prob (F-statistic): 3.05e-88
Time:               14:00:09  Log-Likelihood: 199.23
No. Observations:  171  AIC:              -388.5
Df Residuals:      166  BIC:              -372.8
Df Model:           4
Covariance Type:   nonrobust
=====
```

	coef	std err	t	P> t	[0.025	0.975]
Intercept	0.2353	0.016	14.867	0.000	0.204	0.267
C(Political_regime)[T.Electoral autocracy]	0.1147	0.018	6.304	0.000	0.079	0.151
C(Political_regime)[T.Electoral democracy]	0.3600	0.023	15.859	0.000	0.315	0.405
C(Political_regime)[T.Liberal democracy]	0.5244	0.026	20.229	0.000	0.473	0.576
v2smgovsmcenprc	0.0553	0.006	8.786	0.000	0.043	0.068

```
=====
Omnibus:           1.656  Durbin-Watson:      1.934
Prob(Omnibus):     0.437  Jarque-Bera (JB):      1.568
Skew:              -0.135  Prob(JB):              0.457
Kurtosis:          2.616  Cond. No.              9.67
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.8370174679896615

Robust regression model:

Robust linear Model Regression Results

```

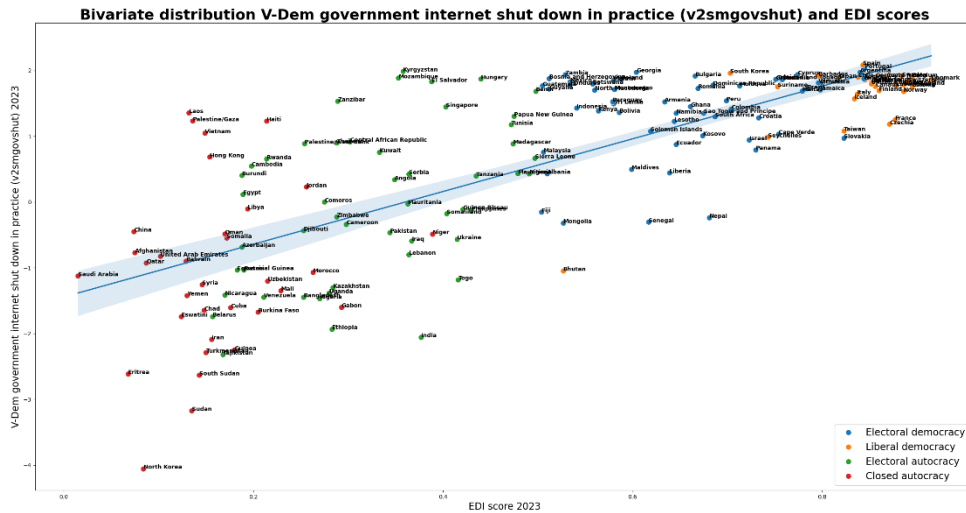
=====
Dep. Variable:      EDI_score  No. Observations:      171
Model:              RLM      Df Residuals:      166
Method:             IRLS     Df Model:      4
Norm:               HuberT
Scale Est.:         mad
Cov Type:           H1
Date:               Wed, 07 Aug 2024
Time:               14:00:10
No. Iterations:    16
=====

```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.2342	0.016	14.326	0.000	0.202	0.266
C(Political_regime)[T.Electoral autocracy]	0.1164	0.019	6.192	0.000	0.080	0.153
C(Political_regime)[T.Electoral democracy]	0.3644	0.023	15.538	0.000	0.318	0.410
C(Political_regime)[T.Liberal democracy]	0.5277	0.027	19.703	0.000	0.475	0.580
v2smgovsmcncprc	0.0554	0.007	8.515	0.000	0.043	0.068

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

11.4 Bivariate distribution of V-Dem government internet shut down in practice (v2smgovshut) and EDI score 2023



Residuals:

```

count  1.710000e+02
mean   2.217200e-16
std    8.581410e-02
min    -2.187350e-01
25%    -7.035267e-02
50%     4.027165e-03
75%     5.289428e-02

```

max 2.094150e-01
dtype: float64

OLS Regression Results

```

=====
Dep. Variable:    EDI_score  R-squared:        0.892
Model:           OLS  Adj. R-squared:    0.890
Method:         Least Squares  F-statistic:      344.1
Date:          Wed, 07 Aug 2024  Prob (F-statistic):  3.34e-79
Time:          14:00:10  Log-Likelihood:   177.77
No. Observations: 171  AIC:                -345.5
Df Residuals:    166  BIC:                -329.8
Df Model:        4
Covariance Type: nonrobust
=====

```

```

=====

```

	coef	std err	t	P> t	[0.025	0.975]	
Intercept	0.1964	0.017	11.645	0.000	0.163	0.230	
C(Political_regime)[T.Electoral autocracy]	0.1319	0.021	6.334	0.000	0.091	0.173	
C(Political_regime)[T.Electoral democracy]	0.4112	0.026	15.990	0.000	0.360	0.462	
C(Political_regime)[T.Liberal democracy]	0.5854	0.029	20.192	0.000	0.528	0.643	
v2smgovshut	0.0344	0.007	4.815	0.000	0.020	0.049	

```

=====
Omnibus:         4.304  Durbin-Watson:      2.037
Prob(Omnibus):   0.116  Jarque-Bera (JB):    2.579
Skew:            -0.039  Prob(JB):            0.275
Kurtosis:        2.403  Cond. No.            10.3
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
Spearman correlation coefficient: 0.7632232639772659
Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:           RLM  Df Residuals:    166
Method:         IRLS  Df Model:        4
Norm:           HuberT
Scale Est.:     mad
Cov Type:       H1
Date:          Wed, 07 Aug 2024
Time:          14:00:10
No. Iterations: 16
=====

```

```

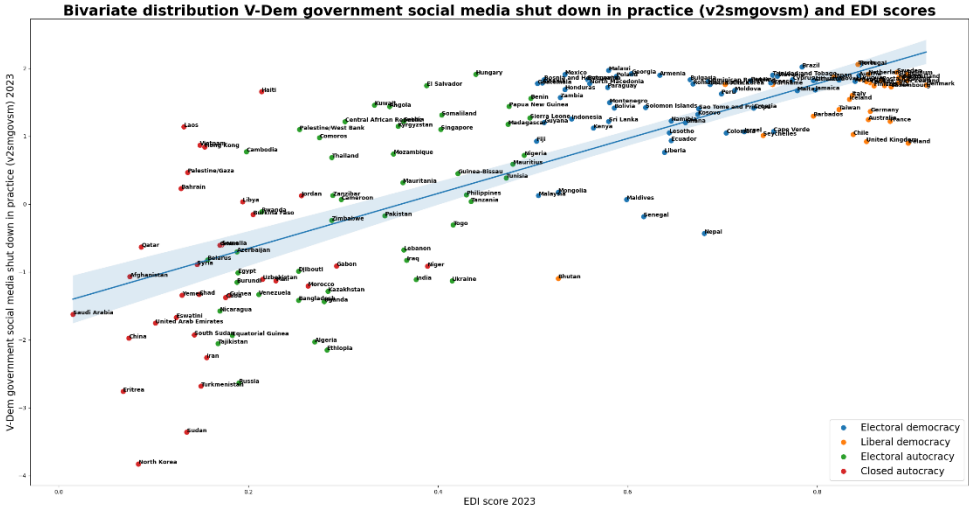
=====

```

	coef	std err	z	P> z	[0.025	0.975]	
Intercept	0.1911	0.018	10.476	0.000	0.155	0.227	
C(Political_regime)[T.Electoral autocracy]	0.1376	0.023	6.112	0.000	0.093	0.182	
C(Political_regime)[T.Electoral democracy]	0.4180	0.028	15.029	0.000	0.363	0.472	
C(Political_regime)[T.Liberal democracy]	0.5983	0.031	19.082	0.000	0.537	0.660	
v2smgovshut	0.0323	0.008	4.183	0.000	0.017	0.047	

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

11.5 Bivariate distribution of V-Dem government social media shut down in practice (v2smgovsm) and EDI score 2023



Residuals:
 count 1.710000e+02
 mean 3.161863e-16
 std 8.227494e-02
 min -1.995447e-01
 25% -6.927363e-02
 50% 5.698090e-03
 75% 5.536680e-02
 max 2.248433e-01
 dtype: float64

OLS Regression Results

```

=====
Dep. Variable:      EDI_score  R-squared:      0.901
Model:              OLS        Adj. R-squared:  0.899
Method:             Least Squares  F-statistic:    378.0
Date:               Wed, 07 Aug 2024  Prob (F-statistic): 3.10e-82
Time:               14:00:10   Log-Likelihood: 184.97
No. Observations:  171        AIC:            -359.9
Df Residuals:      166        BIC:            -344.2
Df Model:          4
Covariance Type:   nonrobust
=====
    
```

	coef	std err	t	P> t	[0.025	0.975]
Intercept	0.2032	0.016	12.698	0.000	0.172	0.235
C(Political_regime)[T.Electoral autocracy]	0.1262	0.020	6.383	0.000	0.087	0.165
C(Political_regime)[T.Electoral democracy]	0.3904	0.025	15.875	0.000	0.342	0.439
C(Political_regime)[T.Liberal democracy]	0.5701	0.027	21.171	0.000	0.517	0.623
v2smgovsm	0.0426	0.007	6.310	0.000	0.029	0.056

```

=====
Omnibus:           2.582  Durbin-Watson:      2.015
Prob(Omnibus):     0.275  Jarque-Bera (JB):    1.844
Skew:              -0.017  Prob(JB):            0.398
Kurtosis:          2.492  Cond. No.            10.1
=====
    
```


Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.774474274125811

Robust regression model:

Robust linear Model Regression Results

```

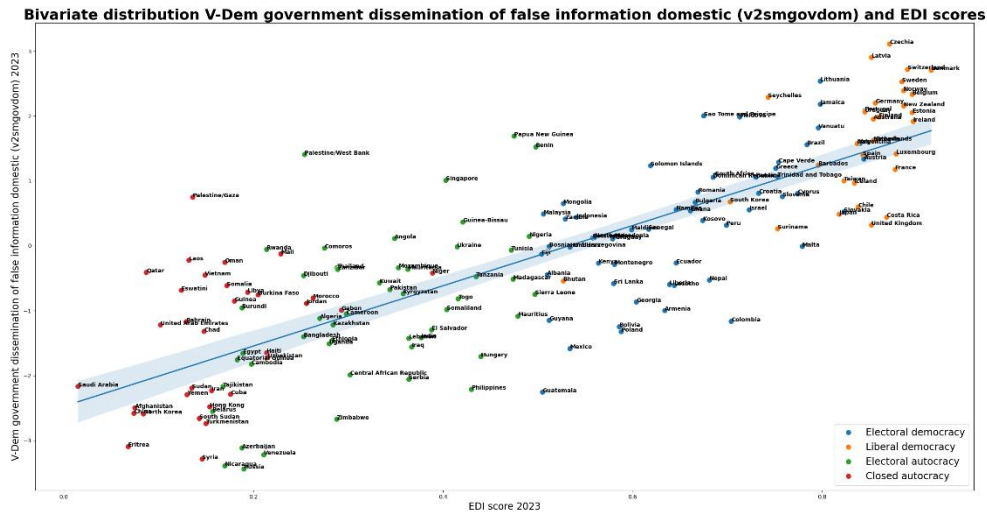
=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:           RLM        Df Residuals:          166
Method:         IRLS       Df Model:            4
Norm:           HuberT
Scale Est.:     mad
Cov Type:      H1
Date:          Wed, 07 Aug 2024
Time:          14:00:10
No. Iterations: 15
=====

```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.1986	0.017	11.617	0.000	0.165	0.232
C(Political_regime)[T.Electoral autocracy]	0.1316	0.021	6.229	0.000	0.090	0.173
C(Political_regime)[T.Electoral democracy]	0.3965	0.026	15.093	0.000	0.345	0.448
C(Political_regime)[T.Liberal democracy]	0.5801	0.029	20.166	0.000	0.524	0.636
v2smgovsm	0.0412	0.007	5.707	0.000	0.027	0.055

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

11.6 Bivariate distribution of V-Dem government dissemination of false information domestic (v2smgovdom) and EDI score 2023



Residuals:

```

count  1.710000e+02
mean   1.535484e-16
std    7.528614e-02
min    -2.040774e-01
25%    -4.745958e-02
50%    -1.205180e-04
75%    5.217507e-02

```

max 1.774095e-01
dtype: float64

OLS Regression Results

```

=====
Dep. Variable:    EDI_score  R-squared:        0.917
Model:            OLS      Adj. R-squared:    0.915
Method:           Least Squares  F-statistic:      459.5
Date:            Wed, 07 Aug 2024  Prob (F-statistic):    1.26e-88
Time:           14:00:11  Log-Likelihood:   200.15
No. Observations: 171      AIC:                -390.3
Df Residuals:    166      BIC:                -374.6
Df Model:        4
Covariance Type: nonrobust
=====

```

```

=====

```

	coef	std err	t	P> t	[0.025	0.975]
Intercept	0.2326	0.016	14.976	0.000	0.202	0.263
C(Political_regime)[T.Electoral autocracy]	0.1457	0.017	8.440	0.000	0.112	0.180
C(Political_regime)[T.Electoral democracy]	0.4044	0.019	20.755	0.000	0.366	0.443
C(Political_regime)[T.Liberal democracy]	0.5256	0.026	20.559	0.000	0.475	0.576
v2smgovdom	0.0500	0.006	8.933	0.000	0.039	0.061

```

=====
Omnibus:         0.613  Durbin-Watson:      1.965
Prob(Omnibus):   0.736  Jarque-Bera (JB):    0.695
Skew:            -0.137  Prob(JB):            0.706
Kurtosis:        2.852  Cond. No.            9.32
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
Spearman correlation coefficient: 0.8078655703867655
Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:    EDI_score  No. Observations:    171
Model:            RLM      Df Residuals:        166
Method:           IRLS    Df Model:            4
Norm:             HuberT
Scale Est.:       mad
Cov Type:         H1
Date:            Wed, 07 Aug 2024
Time:           14:00:11
No. Iterations:   16
=====

```

```

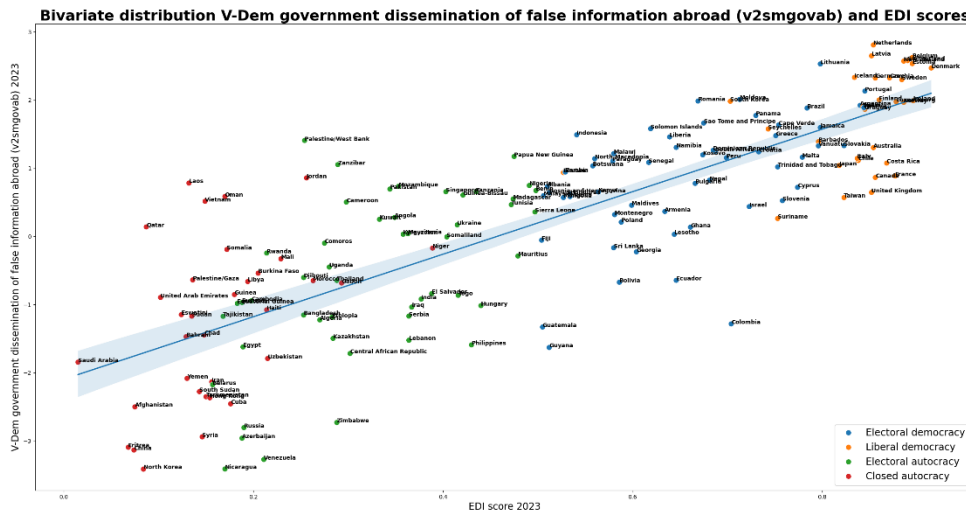
=====

```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.2333	0.016	14.325	0.000	0.201	0.265
C(Political_regime)[T.Electoral autocracy]	0.1451	0.018	8.020	0.000	0.110	0.181
C(Political_regime)[T.Electoral democracy]	0.4037	0.020	19.762	0.000	0.364	0.444
C(Political_regime)[T.Liberal democracy]	0.5282	0.027	19.708	0.000	0.476	0.581
v2smgovdom	0.0509	0.006	8.664	0.000	0.039	0.062

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

11.7 Bivariate distribution of V-Dem government dissemination of false information abroad (v2smgovab) and EDI score 2023



Residuals:

```
count 1.710000e+02
mean -3.174848e-16
std 7.845017e-02
min -2.735784e-01
25% -4.416392e-02
50% 5.360067e-03
75% 5.927974e-02
max 1.779048e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:      EDI_score  R-squared:      0.910
Model:             OLS  Adj. R-squared:    0.908
Method:           Least Squares  F-statistic:    419.9
Date:            Wed, 07 Aug 2024  Prob (F-statistic):  1.16e-85
Time:            14:00:11  Log-Likelihood: 193.11
No. Observations: 171  AIC:            -376.2
Df Residuals:    166  BIC:            -360.5
Df Model:        4
Covariance Type: nonrobust
=====
```

```
=====
              coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.2191   0.016  13.911  0.000   0.188   0.250
C(Political_regime)[T.Electoral autocracy]  0.1367   0.018   7.495  0.000   0.101   0.173
C(Political_regime)[T.Electoral democracy]  0.3957   0.022  18.377  0.000   0.353   0.438
C(Political_regime)[T.Liberal democracy]    0.5376   0.027  20.037  0.000   0.485   0.591
v2smgovab                 0.0468   0.006   7.770  0.000   0.035   0.059
=====
```

```
=====
Omnibus:           2.340  Durbin-Watson:      1.966
Prob(Omnibus):    0.310  Jarque-Bera (JB):    2.225
Skew:             -0.279  Prob(JB):            0.329
Kurtosis:         2.963  Cond. No.            9.49
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: 0.819188568332442

Robust regression model:

Robust linear Model Regression Results

```
=====
Dep. Variable:      EDI_score  No. Observations:      171
Model:              RLM      Df Residuals:      166
Method:             IRLS     Df Model:        4
Norm:               HuberT
Scale Est.:         mad
Cov Type:           H1
Date:               Wed, 07 Aug 2024
Time:               14:00:11
No. Iterations:    19
=====
```

```
=====
=====
              coef  std err      z  P>|z|  [0.025  0.975]
-----
Intercept                0.2187   0.017  12.763  0.000   0.185   0.252
C(Political_regime)[T.Electoral autocracy]  0.1386   0.020   6.987  0.000   0.100   0.177
C(Political_regime)[T.Electoral democracy]  0.3953   0.023  16.879  0.000   0.349   0.441
C(Political_regime)[T.Liberal democracy]    0.5468   0.029  18.735  0.000   0.490   0.604
v2smgovab                0.0464   0.007   7.086  0.000   0.034   0.059
=====
```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

Appendix C

PanDem Data

In order to cover the entire period, data from the cross-sectional format (CS), which contains the maximum value of the PanDem index, was used. In terms of violations, the focus was on type 6 (Official Disinformation Campaigns) and type 7 (Restrictions on Media Freedom). In the data set of the time series format (TS), which is divided into five coding periods, the component indicators of the types are also listed. To enable a more in-depth analysis, these indicators were also taken into account in the bivariate regressions. In order to include the current values, the most recently recorded data was used (Q2 2021).

Type 6:

- Government disinformation (govdis)

Type 7:

- Media limitations (melim) (de-jure restriction)
- Limitations on media reporting about Covid-19 (merepfact) (de-facto restriction)
- Limitations on media reporting about the government response to Covid-19 (merepgov) (de-facto restriction)

- Limitations on media reporting about non-Covid-19 related news (merepoth) (de-facto restriction)
- Limitations on access to information (meinf) (de-facto restriction)

12.1 Bivariate distribution of The Pandemic Violations of Democratic Standards Index (PanDem) and EDI score 2021

Residuals:

```
count 2.740000e+02
mean -2.475716e-16
std 9.790978e-02
min -2.582002e-01
25% -5.808836e-02
50% -8.736432e-04
75% 6.090363e-02
max 4.137101e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:      EDI_score  R-squared:      0.858
Model:              OLS      Adj. R-squared:   0.856
Method:             Least Squares  F-statistic:    405.4
Date:               Wed, 07 Aug 2024  Prob (F-statistic): 1.45e-112
Time:               14:00:12  Log-Likelihood: 248.41
No. Observations:  274      AIC:              -486.8
Df Residuals:      269      BIC:              -468.8
Df Model:           4
Covariance Type:   nonrobust
=====
```

```
=====
                    coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.2630   0.021  12.442  0.000   0.221   0.305
C(Political_regime)[T.Electoral autocracy]  0.1415   0.018   7.884  0.000   0.106   0.177
C(Political_regime)[T.Electoral democracy]  0.4536   0.018  24.760  0.000   0.418   0.490
C(Political_regime)[T.Liberal democracy]    0.6142   0.023  26.378  0.000   0.568   0.660
pandem                   -0.2538   0.047  -5.364  0.000  -0.347  -0.161
=====
```

```
=====
Omnibus:                9.236  Durbin-Watson:      1.786
Prob(Omnibus):          0.010  Jarque-Bera (JB):    11.016
Skew:                   0.307  Prob(JB):            0.00405
Kurtosis:                3.768  Cond. No.            10.1
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.5481338887955999

Robust regression model:

Robust linear Model Regression Results

```
=====
Dep. Variable:      EDI_score  No. Observations:  274
Model:              RLM      Df Residuals:      269
Method:             IRLS     Df Model:           4
Norm:               HuberT
Scale Est.:         mad
Cov Type:           H1
=====
```

Date: Wed, 07 Aug 2024
 Time: 14:00:12
 No. Iterations: 19

```
=====
```

	coef	std err	z	P> z	[0.025	0.975]	
Intercept	0.2419	0.022	11.130	0.000	0.199	0.284	
C(Political_regime)[T.Electoral autocracy]	0.1561	0.018	8.460	0.000	0.120	0.192	
C(Political_regime)[T.Electoral democracy]	0.4676	0.019	24.834	0.000	0.431	0.505	
C(Political_regime)[T.Liberal democracy]	0.6364	0.024	26.590	0.000	0.589	0.683	
pandem	-0.2302	0.049	-4.734	0.000	-0.326	-0.135	

```
=====
```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

12.2 Bivariate distribution of PanDem type 6 (Official disinformation campaigns) and EDI score 2021

Residuals:
 count 2.740000e+02
 mean -1.851722e-16
 std 1.019464e-01
 min -2.649500e-01
 25% -7.195005e-02
 50% -3.248497e-03
 75% 6.457485e-02
 max 4.365638e-01
 dtype: float64

OLS Regression Results

```
=====
```

Dep. Variable:	EDI_score	R-squared:	0.846
Model:	OLS	Adj. R-squared:	0.843
Method:	Least Squares	F-statistic:	368.7
Date:	Wed, 07 Aug 2024	Prob (F-statistic):	7.49e-108
Time:	14:00:12	Log-Likelihood:	237.34
No. Observations:	274	AIC:	-464.7
Df Residuals:	269	BIC:	-446.6
Df Model:	4		
Covariance Type:	nonrobust		

```
=====
```

	coef	std err	t	P> t	[0.025	0.975]	
Intercept	0.1894	0.016	12.094	0.000	0.159	0.220	
C(Political_regime)[T.Electoral autocracy]	0.1507	0.019	7.963	0.000	0.113	0.188	
C(Political_regime)[T.Electoral democracy]	0.4705	0.019	25.046	0.000	0.434	0.507	
C(Political_regime)[T.Liberal democracy]	0.6662	0.022	30.930	0.000	0.624	0.709	
Official_disinformation_campaigns	-0.0197	0.008	-2.379	0.018	-0.036	-0.003	

```
=====
```

Omnibus:	13.173	Durbin-Watson:	1.823
Prob(Omnibus):	0.001	Jarque-Bera (JB):	18.807
Skew:	0.344	Prob(JB):	8.24e-05
Kurtosis:	4.083	Cond. No.	6.67

```
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.2580193445311092

Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:      EDI_score  No. Observations:      274
Model:              RLM      Df Residuals:          269
Method:             IRLS     Df Model:           4
Norm:               HuberT
Scale Est.:         mad
Cov Type:           H1
Date:               Wed, 07 Aug 2024
Time:               14:00:12
No. Iterations:    20
=====
=====

```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.1764	0.016	11.341	0.000	0.146	0.207
C(Political_regime)[T.Electoral autocracy]	0.1607	0.019	8.551	0.000	0.124	0.197
C(Political_regime)[T.Electoral democracy]	0.4850	0.019	26.000	0.000	0.448	0.522
C(Political_regime)[T.Liberal democracy]	0.6822	0.021	31.889	0.000	0.640	0.724
Official_disinformation_campaigns	-0.0193	0.008	-2.352	0.019	-0.035	-0.003

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

12.3 Bivariate distribution of PanDem type 7 (Restrictions on media freedom) and EDI score 2021

Residuals:
count 2.740000e+02
mean -5.105405e-16
std 9.385732e-02
min -3.281049e-01
25% -5.824113e-02
50% -3.907352e-03
75% 6.187426e-02
max 3.412353e-01
dtype: float64

OLS Regression Results

```

=====
Dep. Variable:      EDI_score  R-squared:          0.869
Model:              OLS      Adj. R-squared:    0.867
Method:             Least Squares  F-statistic:      447.1
Date:               Wed, 07 Aug 2024  Prob (F-statistic): 1.69e-117
Time:               14:00:13  Log-Likelihood:    259.99
No. Observations:  274      AIC:                -510.0
Df Residuals:      269      BIC:                -491.9
Df Model:           4
Covariance Type:   nonrobust
=====
=====

```

	coef	std err	t	P> t	[0.025	0.975]
Intercept	0.3044	0.022	14.000	0.000	0.262	0.347

C(Political_regime)[T.Electoral autocracy]	0.1381	0.017	8.024	0.000	0.104	0.172
C(Political_regime)[T.Electoral democracy]	0.4288	0.018	23.566	0.000	0.393	0.465
C(Political_regime)[T.Liberal democracy]	0.5806	0.023	24.925	0.000	0.535	0.626
Restrictions_on_Media_freedom	-0.0419	0.006	-7.419	0.000	-0.053	-0.031

```

=====
Omnibus:          8.146  Durbin-Watson:          1.687
Prob(Omnibus):    0.017  Jarque-Bera (JB):          9.712
Skew:             0.272  Prob(JB):                  0.00778
Kurtosis:         3.745  Cond. No.                  16.9
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.6911356036059788

Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:    EDI_score  No. Observations:    274
Model:           RLM  Df Residuals:    269
Method:          IRLS  Df Model:      4
Norm:            HuberT
Scale Est.:      mad
Cov Type:        H1
Date:            Wed, 07 Aug 2024
Time:            14:00:13
No. Iterations:  17
=====

```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.2902	0.021	13.606	0.000	0.248	0.332
C(Political_regime)[T.Electoral autocracy]	0.1451	0.017	8.594	0.000	0.112	0.178
C(Political_regime)[T.Electoral democracy]	0.4438	0.018	24.868	0.000	0.409	0.479
C(Political_regime)[T.Liberal democracy]	0.5952	0.023	26.048	0.000	0.550	0.640
Restrictions_on_Media_freedom	-0.0408	0.006	-7.376	0.000	-0.052	-0.030

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore .

12.4 Bivariate distribution of PanDem type 6 component indicator government disinformation (govdis) and EDI score 2021

Residuals:

```

count  1.440000e+02
mean   -7.979728e-17
std     8.631564e-02
min    -1.740028e-01
25%    -5.925702e-02
50%     1.107151e-03
75%     6.823502e-02
max     1.957113e-01
dtype: float64

```

OLS Regression Results

```

=====
Dep. Variable:    EDI  R-squared:    0.889
Model:           OLS  Adj. R-squared:  0.886
=====

```


Method: Least Squares F-statistic: 279.5
 Date: Wed, 07 Aug 2024 Prob (F-statistic): 2.14e-65
 Time: 16:25:24 Log-Likelihood: 148.94
 No. Observations: 144 AIC: -287.9
 Df Residuals: 139 BIC: -273.0
 Df Model: 4
 Covariance Type: nonrobust

```
=====
=====
              coef  std err      t  P>|t|  [0.025  0.975]
-----+-----
Intercept                0.1647   0.018   8.970  0.000   0.128   0.201
C(political_regime)[T.Electoral autocracy]  0.1683   0.022   7.578  0.000   0.124   0.212
C(political_regime)[T.Electoral democracy]  0.4933   0.022  21.983  0.000   0.449   0.538
C(political_regime)[T.Liberal democracy]    0.6944   0.025  27.654  0.000   0.645   0.744
govdis                   -0.0159   0.011  -1.389  0.167  -0.038   0.007
=====
=====
```

```
=====
Omnibus:                 3.933 Durbin-Watson:          1.849
Prob(Omnibus):           0.140 Jarque-Bera (JB):        2.436
Skew:                    0.088 Prob(JB):              0.296
Kurtosis:                2.388 Cond. No.             6.15
=====
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.12322516730091734

Robust regression model:

Robust linear Model Regression Results

```
=====
=====
Dep. Variable:          EDI No. Observations:          144
Model:                 RLM Df Residuals:              139
Method:                IRLS Df Model:                 4
Norm:                  HuberT
Scale Est.:            mad
Cov Type:              H1
Date:                  Wed, 07 Aug 2024
Time:                  16:25:24
No. Iterations:        16
=====
=====
```

```
=====
=====
              coef  std err      z  P>|z|  [0.025  0.975]
-----+-----
Intercept                0.1645   0.020   8.266  0.000   0.125   0.203
C(political_regime)[T.Electoral autocracy]  0.1713   0.024   7.118  0.000   0.124   0.218
C(political_regime)[T.Electoral democracy]  0.4898   0.024  20.143  0.000   0.442   0.537
C(political_regime)[T.Liberal democracy]    0.6947   0.027  25.533  0.000   0.641   0.748
govdis                   -0.0184   0.012  -1.487  0.137  -0.043   0.006
=====
=====
```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

12.5 Bivariate distribution of PanDem type 7 component indicator de jure restrictions on media (melim) and EDI score 2021

Residuals:

count 1.440000e+02
 mean 5.801686e-17

```

std      8.689800e-02
min     -1.756889e-01
25%    -6.896226e-02
50%     3.127391e-03
75%     6.856111e-02
max     1.962111e-01
dtype: float64

```

OLS Regression Results

```

=====
Dep. Variable:          EDI  R-squared:          0.888
Model:                  OLS  Adj. R-squared:      0.885
Method:                 Least Squares  F-statistic:      275.3
Date:                   Wed, 07 Aug 2024  Prob (F-statistic):  5.45e-65
Time:                   16:26:20  Log-Likelihood:    147.97
No. Observations:      144  AIC:              -285.9
Df Residuals:          139  BIC:              -271.1
Df Model:               4
Covariance Type:       nonrobust
=====

```

```

=====
              coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.1608   0.019   8.377   0.000   0.123   0.199
C(political_regime)[T.Electoral autocracy]  0.1649   0.022   7.419   0.000   0.121   0.209
C(political_regime)[T.Electoral democracy]  0.4940   0.023  21.590   0.000   0.449   0.539
C(political_regime)[T.Liberal democracy]    0.6976   0.026  27.100   0.000   0.647   0.749
melim                    0.0023   0.011   0.219   0.827  -0.019   0.023
=====

```

```

Omnibus:                 5.102  Durbin-Watson:          1.824
Prob(Omnibus):           0.078  Jarque-Bera (JB):        2.806
Skew:                    0.074  Prob(JB):                 0.246
Kurtosis:                2.332  Cond. No.                 6.39
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.19431490227766776

Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:          EDI  No. Observations:      144
Model:                  RLM  Df Residuals:            139
Method:                 IRLS  Df Model:                4
Norm:                   HuberT
Scale Est.:             mad
Cov Type:               H1
Date:                   Wed, 07 Aug 2024
Time:                   16:26:20
No. Iterations:         20
=====

```

```

=====
              coef  std err      z  P>|z|  [0.025  0.975]
-----
Intercept                0.1598   0.021   7.705   0.000   0.119   0.200
C(political_regime)[T.Electoral autocracy]  0.1666   0.024   6.936   0.000   0.120   0.214
C(political_regime)[T.Electoral democracy]  0.4908   0.025  19.851   0.000   0.442   0.539
C(political_regime)[T.Liberal democracy]    0.6986   0.028  25.114   0.000   0.644   0.753
melim                    0.0030   0.011   0.261   0.794  -0.019   0.025
=====

```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

12.6 Bivariate distribution of PanDem type 7 component indicator limitations on media reporting about COVID-19 (merepfact) and EDI score 2021

Residuals:

```
count 1.440000e+02
mean -3.633282e-16
std 8.332154e-02
min -1.618131e-01
25% -5.810213e-02
50% 3.771757e-04
75% 5.695782e-02
max 1.971869e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:          EDI R-squared:          0.897
Model:                 OLS Adj. R-squared:     0.894
Method:               Least Squares F-statistic: 302.5
Date:                 Wed, 07 Aug 2024 Prob (F-statistic): 1.60e-67
Time:                 16:27:01 Log-Likelihood: 154.02
No. Observations:    144 AIC:                 -298.0
Df Residuals:         139 BIC:                 -283.2
Df Model:              4
Covariance Type:     nonrobust
=====
```

```
=====
                    coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.2373   0.028   8.529  0.000   0.182   0.292
C(political_regime)[T.Electoral autocracy]  0.1570   0.021   7.336  0.000   0.115   0.199
C(political_regime)[T.Electoral democracy]  0.4253   0.029  14.614  0.000   0.368   0.483
C(political_regime)[T.Liberal democracy]    0.6212   0.032  19.184  0.000   0.557   0.685
merepfact                 -0.0825   0.024  -3.499  0.001  -0.129  -0.036
=====
```

```
=====
Omnibus:                 3.016 Durbin-Watson:          1.768
Prob(Omnibus):           0.221 Jarque-Bera (JB):          2.356
Skew:                    0.174 Prob(JB):              0.308
Kurtosis:                 2.479 Cond. No.              9.36
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.7819010698596692

Robust regression model:

Robust linear Model Regression Results

```
=====
Dep. Variable:          EDI No. Observations:    144
Model:                 RLM Df Residuals:         139
Method:               IRLS Df Model:              4
Norm:                 HuberT
Scale Est.:           mad
Cov Type:             H1
Date:                 Wed, 07 Aug 2024
Time:                 16:27:01
=====
```

No. Iterations: 20

```
=====
=====
              coef  std err      z  P>|z|  [0.025  0.975]
-----
Intercept                0.2391  0.030  7.948  0.000  0.180  0.298
C(political_regime)[T.Electoral autocracy]  0.1529  0.023  6.605  0.000  0.108  0.198
C(political_regime)[T.Electoral democracy]  0.4198  0.031  13.341  0.000  0.358  0.481
C(political_regime)[T.Liberal democracy]    0.6196  0.035  17.697  0.000  0.551  0.688
merepfact                -0.0832  0.025  -3.262  0.001  -0.133  -0.033
=====
=====
```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

12.7 Bivariate distribution of PanDem type 7 component indicator limitations on media reporting about the government response to COVID-19 (merepgov) and EDI score 2021

Residuals:

```
count  1.440000e+02
mean   -1.412836e-16
std     8.461787e-02
min    -1.669921e-01
25%    -5.792651e-02
50%    -1.743889e-03
75%     5.910609e-02
max     2.038251e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:          EDI  R-squared:          0.894
Model:                  OLS  Adj. R-squared:      0.891
Method:                 Least Squares  F-statistic:      292.3
Date:                   Wed, 07 Aug 2024  Prob (F-statistic):  1.36e-66
Time:                   16:28:00  Log-Likelihood:    151.80
No. Observations:      144  AIC:                -293.6
Df Residuals:          139  BIC:                -278.7
Df Model:               4
Covariance Type:       nonrobust
=====
=====
```

```
              coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.2171  0.027  8.100  0.000  0.164  0.270
C(political_regime)[T.Electoral autocracy]  0.1603  0.022  7.392  0.000  0.117  0.203
C(political_regime)[T.Electoral democracy]  0.4475  0.028  16.252  0.000  0.393  0.502
C(political_regime)[T.Liberal democracy]    0.6437  0.031  20.677  0.000  0.582  0.705
merepgov                -0.0604  0.022  -2.764  0.006  -0.104  -0.017
=====
=====
```

```
Omnibus:                2.369  Durbin-Watson:          1.810
Prob(Omnibus):          0.306  Jarque-Bera (JB):        1.932
Skew:                   0.144  Prob(JB):                0.381
Kurtosis:               2.511  Cond. No.                 8.83
=====
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.7374868130625827
 Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:          EDI  No. Observations:          144
Model:                 RLM  Df Residuals:              139
Method:                IRLS  Df Model:              4
Norm:                  HuberT
Scale Est.:            mad
Cov Type:              H1
Date:                  Wed, 07 Aug 2024
Time:                  16:28:00
No. Iterations:       21
=====
  
```

	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.2230	0.029	7.675	0.000	0.166	0.280
C(political_regime)[T.Electoral autocracy]	0.1578	0.024	6.713	0.000	0.112	0.204
C(political_regime)[T.Electoral democracy]	0.4378	0.030	14.667	0.000	0.379	0.496
C(political_regime)[T.Liberal democracy]	0.6382	0.034	18.912	0.000	0.572	0.704
merepgov	-0.0657	0.024	-2.772	0.006	-0.112	-0.019

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

12.8 Bivariate distribution of PanDem type 7 component indicator limitations on media reporting about non-COVID-19 related news (merepoth) and EDI score 2021

Residuals:
 count 1.440000e+02
 mean -2.129855e-16
 std 8.676803e-02
 min -1.780189e-01
 25% -6.535088e-02
 50% 3.591822e-03
 75% 6.968191e-02
 max 1.964394e-01
 dtype: float64

OLS Regression Results

```

=====
Dep. Variable:          EDI  R-squared:          0.888
Model:                 OLS  Adj. R-squared:        0.885
Method:                Least Squares  F-statistic:      276.3
Date:                  Wed, 07 Aug 2024  Prob (F-statistic):  4.43e-65
Time:                  16:29:10  Log-Likelihood:    148.19
No. Observations:     144  AIC:              -286.4
Df Residuals:         139  BIC:              -271.5
Df Model:              4
Covariance Type:      nonrobust
=====
  
```

	coef	std err	t	P> t	[0.025	0.975]
Intercept	0.1582	0.019	8.257	0.000	0.120	0.196
C(political_regime)[T.Electoral autocracy]	0.1644	0.022	7.414	0.000	0.121	0.208

```

C(political_regime)[T.Electoral democracy] 0.4964 0.023 21.566 0.000 0.451 0.542
C(political_regime)[T.Liberal democracy] 0.6997 0.026 27.305 0.000 0.649 0.750
merepoth 0.0144 0.021 0.682 0.497 -0.027 0.056

```

```

=====
Omnibus: 5.570 Durbin-Watson: 1.801
Prob(Omnibus): 0.062 Jarque-Bera (JB): 2.932
Skew: 0.063 Prob(JB): 0.231
Kurtosis: 2.313 Cond. No. 6.17
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.2514962095940836

Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable: EDI No. Observations: 144
Model: RLM Df Residuals: 139
Method: IRLS Df Model: 4
Norm: HuberT
Scale Est.: mad
Cov Type: H1
Date: Wed, 07 Aug 2024
Time: 16:29:10
No. Iterations: 16
=====

```

```

=====
coef std err z P>|z| [0.025 0.975]
-----+-----
Intercept 0.1578 0.021 7.593 0.000 0.117 0.198
C(political_regime)[T.Electoral autocracy] 0.1668 0.024 6.935 0.000 0.120 0.214
C(political_regime)[T.Electoral democracy] 0.4924 0.025 19.730 0.000 0.444 0.541
C(political_regime)[T.Liberal democracy] 0.7002 0.028 25.196 0.000 0.646 0.755
merepoth 0.0130 0.023 0.567 0.570 -0.032 0.058
=====

```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

12.9 Bivariate distribution of PanDem type 7 component indicator limitations on access to information (meinf) and EDI score 2021

Residuals:

```

count 1.440000e+02
mean 1.619075e-16
std 8.461388e-02
min -1.645164e-01
25% -5.780993e-02
50% -5.945244e-03
75% 5.360839e-02
max 2.080871e-01
dtype: float64

```

OLS Regression Results

```

=====
Dep. Variable: EDI R-squared: 0.894
Model: OLS Adj. R-squared: 0.891
Method: Least Squares F-statistic: 292.3
Date: Wed, 07 Aug 2024 Prob (F-statistic): 1.35e-66
=====

```

Time: 16:31:33 Log-Likelihood: 151.81
 No. Observations: 144 AIC: -293.6
 Df Residuals: 139 BIC: -278.8
 Df Model: 4
 Covariance Type: nonrobust

```

=====
=====
              coef  std err      t  P>|t|  [0.025  0.975]
-----+-----
Intercept                0.1795   0.019   9.455  0.000   0.142   0.217
C(political_regime)[T.Electoral autocracy]  0.1719   0.022   7.892  0.000   0.129   0.215
C(political_regime)[T.Electoral democracy]  0.4841   0.022  21.762  0.000   0.440   0.528
C(political_regime)[T.Liberal democracy]    0.6819   0.025  27.132  0.000   0.632   0.732
meinf                    -0.0252   0.009  -2.767  0.006  -0.043  -0.007
=====
=====

```

```

=====
Omnibus:                2.573  Durbin-Watson:          1.904
Prob(Omnibus):          0.276  Jarque-Bera (JB):          2.467
Skew:                   0.252  Prob(JB):                  0.291
Kurtosis:               2.605  Cond. No.                  7.28
=====

```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
 Spearman correlation coefficient: -0.38667524774529305
 Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:          EDI  No. Observations:      144
Model:                  RLM  Df Residuals:           139
Method:                 IRLS  Df Model:              4
Norm:                   HuberT
Scale Est.:             mad
Cov Type:               H1
Date:                   Wed, 07 Aug 2024
Time:                   16:31:33
No. Iterations:        23
=====
=====

```

```

=====
              coef  std err      z  P>|z|  [0.025  0.975]
-----+-----
Intercept                0.1829   0.020   8.996  0.000   0.143   0.223
C(political_regime)[T.Electoral autocracy]  0.1691   0.023   7.253  0.000   0.123   0.215
C(political_regime)[T.Electoral democracy]  0.4774   0.024  20.047  0.000   0.431   0.524
C(political_regime)[T.Liberal democracy]    0.6798   0.027  25.266  0.000   0.627   0.732
meinf                    -0.0306   0.010  -3.137  0.002  -0.050  -0.011
=====
=====

```

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

12.10 Bivariate distribution of PanDem type 7 component indicator verbal harassment of journalists (mevhar) and EDI score 2021

Residuals:

```

count  1.440000e+02
mean   9.251859e-18
std    8.661468e-02
min    -1.808513e-01
25%    -6.401753e-02

```

50% 1.778577e-03
 75% 6.644675e-02
 max 2.014337e-01
 dtype: float64

OLS Regression Results

```

=====
Dep. Variable:          EDI R-squared:          0.889
Model:                 OLS Adj. R-squared:    0.885
Method:               Least Squares F-statistic: 277.4
Date:                 Wed, 07 Aug 2024 Prob (F-statistic): 3.46e-65
Time:                 16:33:37 Log-Likelihood: 148.44
No. Observations:    144 AIC:                -286.9
Df Residuals:        139 BIC:                -272.0
Df Model:             4
Covariance Type:     nonrobust
=====
  
```

	coef	std err	t	P> t	[0.025	0.975]	
Intercept	0.1640	0.018	8.895	0.000	0.128	0.200	
C(political_regime)[T.Electoral autocracy]	0.1669	0.022	7.502	0.000	0.123	0.211	
C(political_regime)[T.Electoral democracy]	0.4938	0.023	21.922	0.000	0.449	0.538	
C(political_regime)[T.Liberal democracy]	0.6945	0.025	27.523	0.000	0.645	0.744	
mevhar	-0.0233	0.024	-0.979	0.329	-0.070	0.024	

```

=====
Omnibus:              3.726 Durbin-Watson:      1.858
Prob(Omnibus):        0.155 Jarque-Bera (JB):    2.371
Skew:                 0.094 Prob(JB):          0.306
Kurtosis:             2.400 Cond. No.           6.00
=====
  
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.15389557134307913

Robust regression model:

Robust linear Model Regression Results

```

=====
Dep. Variable:          EDI No. Observations:    144
Model:                 RLM Df Residuals:        139
Method:               IRLS Df Model:            4
Norm:                 HuberT
Scale Est.:           mad
Cov Type:             H1
Date:                 Wed, 07 Aug 2024
Time:                 16:33:37
No. Iterations:      19
=====
  
```

	coef	std err	z	P> z	[0.025	0.975]	
Intercept	0.1644	0.020	8.329	0.000	0.126	0.203	
C(political_regime)[T.Electoral autocracy]	0.1688	0.024	7.087	0.000	0.122	0.215	
C(political_regime)[T.Electoral democracy]	0.4896	0.024	20.299	0.000	0.442	0.537	
C(political_regime)[T.Liberal democracy]	0.6940	0.027	25.686	0.000	0.641	0.747	
mevhar	-0.0309	0.025	-1.214	0.225	-0.081	0.019	

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

12.11 Bivariate distribution of PanDem type 7 component indicator physical harassment of journalists (mephar) and EDI score 2021

Residuals:

```
mean  5.100087e-16
std   8.625242e-02
min   -1.843812e-01
25%   -5.428798e-02
50%   5.901147e-04
75%   6.733483e-02
max   2.097151e-01
dtype: float64
```

OLS Regression Results

```
=====
Dep. Variable:          EDI  R-squared:          0.890
Model:                  OLS  Adj. R-squared:      0.886
Method:                 Least Squares  F-statistic:    280.0
Date:                   Wed, 07 Aug 2024  Prob (F-statistic):  1.94e-65
Time:                   16:35:16  Log-Likelihood:  149.04
No. Observations:      144  AIC:            -288.1
Df Residuals:           139  BIC:            -273.2
Df Model:                4
Covariance Type:       nonrobust
=====
```

```
=====
                    coef  std err      t  P>|t|  [0.025  0.975]
-----
Intercept                0.1650   0.018   8.987  0.000   0.129   0.201
C(political_regime)[T.Electoral autocracy]  0.1694   0.022   7.605  0.000   0.125   0.213
C(political_regime)[T.Electoral democracy]  0.4918   0.022  21.907  0.000   0.447   0.536
C(political_regime)[T.Liberal democracy]    0.6948   0.025  27.715  0.000   0.645   0.744
mephar                   -0.0351   0.024  -1.462  0.146  -0.083   0.012
=====
```

```
Omnibus:                2.539  Durbin-Watson:          1.897
Prob(Omnibus):          0.281  Jarque-Bera (JB):        1.912
Skew:                   0.109  Prob(JB):                 0.384
Kurtosis:               2.479  Cond. No.                 5.99
=====
```

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Spearman correlation coefficient: -0.19987818592399917

Robust regression model:

Robust linear Model Regression Results

```
=====
Dep. Variable:          EDI  No. Observations:      144
Model:                  RLM  Df Residuals:           139
Method:                 IRLS  Df Model:                4
Norm:                   HuberT
Scale Est.:             mad
Cov Type:               H1
Date:                   Wed, 07 Aug 2024
Time:                   16:35:16
No. Iterations:         14
=====
```

```
=====
                    coef  std err      z  P>|z|  [0.025  0.975]
-----
Intercept                0.1658   0.020   8.483  0.000   0.128   0.204
=====
```

C(political_regime)[T.Electoral autocracy]	0.1714	0.024	7.230	0.000	0.125	0.218
C(political_regime)[T.Electoral democracy]	0.4870	0.024	20.380	0.000	0.440	0.534
C(political_regime)[T.Liberal democracy]	0.6944	0.027	26.019	0.000	0.642	0.747
mephar	-0.0455	0.026	-1.781	0.075	-0.096	0.005

=====

=====

If the model instance has been used for another fit with different fit parameters, then the fit options might not be the correct ones anymore.

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