

Supplementary Material for LREC 2022 Submission

Investigating Independence vs. Control: Agenda-Setting in Russian News Coverage on Social Media

1. Agenda-Setting: Correlation Analysis

In Table 2 (see next page), Spearman’s rank-order correlation coefficients between RTSI and normalized absolute news coverage values on word level are shown in weekly, five-day, and daily time resolutions.

2. Agenda-Setting: Regression Analysis

In Table 3 (see next page), linear regression analysis results for investigating the relationship between news coverage and RTSI values on post level are presented, using time slices of five days. Note that we also calculate results for three-day and one-day time slices that are not shown here, but similar with respect to significance and performance. Table 4 (see next page) and Table 1 list results for exploring the categorical variables STATUS and COUNTRY. Note that these results are representative of a larger set of models for investigating each variable that, however, do not reveal additional insights or significantly better performance.

	FREE; ALL COU.	CONT; ALL COU.
β	−0.45	0.32
Aus+Oc.	−2.81	−19.64
China	13.50	26.51
CIS	−22.23	−5.01
EU+NBS	−11.09	−8.57
Korea	56.52	12.95
Near East	−11.40	−2.61
NA	−18.32	−7.65
Russia	−21.77	−3.70
SA+Car.	−17.79	11.41
S.+E. Asia	−2.96	−3.31
Syria	26.29	−5.64
Ukraine	−1.03	−3.13
U.S.	−10.71	−2.67
Adjusted R ²	−0.04	−0.07

*p<0.1; **p<0.05; ***p<0.01.

Table 1: Regression analysis results: multiple models (Δ coverage $\sim \Delta$ RTSI + country) for time slices of five days. The factor level compared to is AFRICA. One model is fit for each subset (FREE) and (CONT), taking all countries into account (ALL COU.)

Label	Word Level											
	7 days				5 days				1 day			
	r_{t-1}	r_{t-2}			r_{t-1}	r_{t-2}			r_{t-1}	r_{t-2}		
	CONT	FREE	CONT	FREE	CONT	FREE	CONT	FREE	CONT	FREE	CONT	FREE
Africa	0	-0.29	0.61	0.13	-0.04	-0.24	0.32	-0.029	0.15	*-0.25	0.01	-0.16
Aus+Oc.	-0.24	0.048	-0.20	0.38	0.17	0.11	-0.07	0.33	0.12	0.13	0.12	0.10
China	0.48	0.24	-0.13	-0.01	0.15	-0.10	0.14	0.12	-0.01	0.03	-0.00	0.02
CIS	-0.36	-0.33	*-0.68	-0.59	-0.08	-0.15	** -0.70	-0.52	*0.25	0.10	0.13	0.04
EU+NBs	0.45	0.52	-0.43	0.22	0.48	0.45	0.51	*** 0.78	0.16	0.04	0.19	0.10
Korea	0.17	-0.40	0.51	0.29	0.05	*-0.59	0.32	0.03	0.10	-0.12	0.07	-0.10
Near East	*-0.64	*-0.71	-0.01	-0.22	-0.49	** -0.65	-0.24	-0.53*	0.05	-0.18	0.08	-0.07
NA	*-0.64	-0.51	-0.59	-0.47	-0.28	-0.34	-0.48	*** -0.78	0.04	0.17	-0.04	0.19
Russia	*** 0.93	0.36	0.43	-0.48	** 0.69	0.43	** 0.70	-0.06	0.09	0.23	*0.25	0.21
Sa+Car.	0.02	0.00	-0.44	-0.13	0.06	0.18	-0.46	0.08	0.11	0.22	0.15	0.20
S+E Asia	0.57	0.45	-0.11	0.53	0.45	0.30	0.34	*0.59	0.19	-0.03	*0.24	0.03
Syria	0.00	0.05	0.07	0.12	-0.09	-0.35	0.31	0.16	0.01	*-0.23	0.02	-0.20
Ukraine	-0.05	-0.07	0.28	0.20	0.01	-0.05	0.06	-0.17	-0.01	-0.13	0.11	-0.13
U.S.	0.60	0.14	0.12	-0.35	0.52	0.41	0.44	0.12	0.17	0.15	** 0.30	0.17

*p<0.1; **p<0.05; ***p<0.01.

Table 2: Spearman’s rank-order correlation coefficients between RTSI and normalized absolute news coverage values of a given label on word level in 7-,5-, and 1-day time resolutions, using lags of 1 and 2 time slices.

Labels														
FREE; SINGLE COUNTRIES														
	Africa	Aus+	China	CIS	EU+	Korea	NE	NA	Rus	SA+	Asia+	Syria	Ukr	US
β	0.39	** -4.03	1.37	0.12	-0.12	** -6.10	*** -4.33	0.24	0.48	1.99	0.40	2.17	1.35	-0.28
Adj. R ²	-0.10	0.48	-0.04	-0.11	-0.11	0.30	0.86	-0.11	0.15	0.17	-0.10	-0.05	-0.03	-0.10
CONT; SINGLE COUNTRIES														
β	-1.25	1.65	1.38	0.42	* 0.78	-1.78	* -1.60	2.25	-0.00	0.51	** 1.91	1.32	** -0.81	-0.25
Adj. R ²	-0.01	0.04	-0.08	-0.10	0.20	0.11	0.28	0.00	-0.111	-0.09	0.32	0.12	0.43	-0.09
BOTH; SINGLE COUNTRIES														
β	-0.43	-1.19	1.37	0.27	0.33	** -3.94	*** -2.96	1.25	0.24	1.25	1.15	1.75	0.27	-0.27
Adj. R ²	-0.04	0.01	-0.01	-0.05	-0.01	0.22	0.59	-0.01	0.01	0.05	0.07	0.02	-0.04	-0.03

*p<0.1; **p<0.05; ***p<0.01.

Table 3: Regression analysis results: simple models (Δ coverage $\sim \Delta$ RTSI). For all configurations, a model is fitted for each country (group) label, drawing on the state-independent FREE and state-controlled CONT subsets individually, as well as considering both subsets together (BOTH). For better readability, the following country labels have been shortened: Australia and Oceania (Aus+), EU and Neighbors (EU+), Near East (NE), Russia (Rus), South America and Caribbeans (SA+), South and East Asia (Asia+), Ukraine (Ukr), U.S. (US).

Labels														
BOTH; SINGLE COUNTRIES														
	Africa	Aus+	China	CIS	EU+	Korea	NE	NA	Rus	SA+	Asia+	Syria	Ukr	US
β	-0.43	-1.19	1.37	0.27	0.33	** -3.94	*** -2.96	1.246	0.24	1.25	1.15	1.75	0.27	-0.27
STATUS	10.56	27.38	-2.46	-6.66	8.04	54.13	1.77	-0.11	-7.51	-18.64	10.91	42.49	12.66	2.52
Adj. R ²	-0.09	-0.20	-0.06	-0.10	-0.04	0.22	0.57	-0.06	0.01	0.02	0.03	0.00	-0.09	-0.09

*p<0.1; **p<0.05; ***p<0.01.

Table 4: Regression analysis results: multiple models (Δ coverage $\sim \Delta$ RTSI + status) for time slices of five days. Note that the factor level compared to is 0, corresponding to the state-controlled subset. A model is fitted for each country (group) label, considering both subsets together (BOTH). For label explanations, see Table 3.