Fake News Data - Stats and Correlations

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```
data_code <- read_csv("fake_news_data_code.csv") %>%
  select(-1)
```

Correlation with Dependent Variable

Dependent Variable = Shared Fake News (`shared_fake_news_19`)

P19 - Have you ever shared a political news story online that you thought at the time was made up? (Single Answer)

1 = Yes; 0 = No

PS: Statistically significant regarding each category to check if there are differences in observable characteristics between those who shared fake news. For example, is there a statistically significant difference between men than shared fake news and non-men that shared fake news? Analysis together with the correlation between each dummy variable with the dependent variable.

```
table_correlations <- data_code %>%
  select(-P19, -shared_fake_news_19) %>%
  select_if(is.numeric) %>%
  lapply(., function(i) tidy(cor(i, data_code$shared_fake_news_19))) %>%
  do.call(rbind, .) %>%
  rownames_to_column("variable") %>%
  rename("Correlation" = x)

table_balance <- data_code %>%
  select(-P19, -shared_fake_news_19) %>%
  select(is.numeric) %>%
  lapply(., function(i) tidy(t.test(i ~ data_code$shared_fake_news_19))) %>%
  do.call(rbind, .) %>%
  rownames_to_column("variable") %>%
  rename(mean_diff = estimate, mean_control = estimate1,
         mean_treatment = estimate2) %>%
  mutate(stat_05 = if_else(p.value < 0.05, "Yes", "No")) %>%
  select(variable, mean_diff, stat_05)
```

```r
table_correlations <- table_correlations %>%
  left_join(table_balance, by = c("variable" = "variable")) %>%
  arrange(desc(Correlation))

table_correlations %>%
  kable(caption = "Balance Table - Observable Characteristics with Dependent Variable",
      digits = 3,
      align = "c")
```

Table 1: Balance Table - Observable Characteristics with Dependent Variable

variable	Correlation	mean_diff	stat_05
P21_Yes	0.426	-0.453	Yes
share_news	0.198	-0.178	Yes
pand5_increased_interest_science	0.138	-0.151	Yes
trust_social_media	0.136	-0.101	Yes
frequency_news	0.133	-0.148	Yes
interest_news	0.128	-0.110	Yes
pand1_fakenews_youtube	0.126	-0.146	Yes
pand1_fakenews_facebook	0.124	-0.151	Yes
pand1_fakenews_wpp	0.116	-0.138	Yes
trust_magazine	0.113	-0.091	Yes
trust_newspaper	0.111	-0.116	Yes
trust_blogs	0.104	-0.054	Yes
frequency_fake_news	0.102	-0.109	Yes
trust_websites	0.097	-0.086	Yes
impact_television	0.096	-0.104	Yes
pand3_seek_science	0.096	-0.112	Yes
pand1_fakenews_twitter	0.092	-0.090	Yes
pand1_fakenews_instagram	0.090	-0.107	Yes
impact_websites	0.090	-0.096	Yes
interest_politics	0.083	-0.095	Yes
same_ideology_news	0.072	-0.066	Yes
source_alternative	0.069	-0.070	Yes
vote2_eletronic_best_option	0.062	-0.076	Yes
impact_social_media	0.052	-0.052	Yes
trust_agencies	0.049	-0.057	Yes
class_c	0.048	-0.059	Yes
pand3_trust_vaccine	0.048	-0.048	Yes
impact_newspaper	0.046	-0.052	Yes
religion_Evangelicals	0.045	-0.051	No
region_Southeast	0.045	-0.054	Yes
resp_gov	0.044	-0.046	Yes
pand3_preventive_treat	0.042	-0.040	No
pol_orientation_center	0.042	-0.030	No
vote1_trust_ballot	0.041	-0.050	No
trust_radio	0.038	-0.039	No
pand1_fakenews_tiktok	0.037	-0.035	No
trust_television	0.037	-0.038	No
source_radio	0.035	-0.024	No
resp_press	0.034	-0.034	No

variable	Correlation	mean_diff	stat_05
impact2_facebook	0.033	-0.031	No
pol_orientation_right	0.032	-0.033	No
source_online_newspaper	0.032	-0.029	No
age_full	0.028	-1.073	No
source_podcasts	0.028	-0.013	No
impact2_instagram	0.027	-0.030	No
fact_checking	0.026	-0.031	No
pol_orientation_left	0.025	-0.026	No
resp_social_media	0.025	-0.027	No
source_wpp	0.024	-0.021	No
resp_politicians	0.023	-0.024	No
source_family	0.022	-0.014	No
pand3_masks	0.020	-0.016	No
age_60_60 or more	0.020	-0.020	No
age_60_45-59 age	0.019	-0.020	No
impact2_wpp	0.019	-0.020	No
impact_radio	0.018	-0.021	No
source_printed_magazines	0.015	-0.004	No
evaluation_Excellent/Good	0.015	-0.016	No
evaluation_Bad/Terrible	0.015	-0.018	No
impact_blogs	0.015	-0.017	No
severity_fake_news	0.014	-0.011	No
region_North	0.013	-0.009	No
vote3_worried_hacker	0.013	-0.014	No
education_high	0.012	-0.014	No
impact2_twitter	0.008	-0.010	No
gov_trust	0.007	-0.008	No
income_low	0.007	-0.008	No
religion_Other religion	0.007	-0.005	No
religion_No religion	0.006	-0.005	No
approves_gov	0.006	-0.006	No
impact_cinema	0.005	-0.006	No
resp_population	0.004	-0.005	No
pand2_worse_perception_media	0.001	-0.001	No
source_television	-0.001	0.002	No
impact_magazines	-0.004	0.004	No
impact2_tiktok	-0.004	0.005	No
race_is_white	-0.006	0.007	No
has_religion	-0.006	0.005	No
idInterview	-0.007	176.266	No
class_ab	-0.007	0.008	No
source_online_magazine	-0.008	0.003	No
age_60_25-34 age	-0.009	0.009	No
age_60_16-24 age	-0.009	0.007	No
P21_Unsure	-0.013	0.005	No
sex_men	-0.014	0.017	No
impact2_youtube	-0.015	0.017	No
region_Center-West	-0.022	0.015	No
region_Northeast	-0.022	0.024	No
capital_metrop	-0.023	0.028	No
age_60_35-44 age	-0.024	0.024	No
evaluation_Regular	-0.024	0.025	No

variable	Correlation	mean_diff	stat_05
region_South	-0.028	0.024	No
vote3_worried_tech	-0.030	0.032	No
evaluation_Unsure	-0.031	0.009	No
vote3_worried_transparency	-0.035	0.036	No
source_social_media	-0.038	0.042	No
source_printed_newspaper	-0.038	0.017	Yes
vote3_worried_tse	-0.040	0.043	No
trust_traditional_press	-0.048	0.055	Yes
class_de	-0.049	0.051	Yes
religion_Catholic	-0.049	0.060	Yes
vote3_worried_politics	-0.052	0.053	Yes
pol_orientation_none	-0.058	0.068	Yes
source_none	-0.063	0.018	Yes
P21_No	-0.408	0.448	Yes
reaction_fake_news_NA	-0.426	0.453	Yes
reaction_fake_news_I didn't send a warning, but I also didn't share the same information anymore	NA	-0.011	No
reaction_fake_news_I just sent a message warning that the information was not true	NA	-0.069	No
reaction_fake_news_I kept sharing the information	NA	0.027	No
reaction_fake_news_I sent a message warning that the information was not true along with the correct information	NA	0.043	No
reaction_fake_news_Unsure	NA	0.009	No

Multicollinearity Between Variables

Correlation matrix to identify multicollinearity. Excluded correlations between same variables, or dummies for the same questions (perfect collinearity addressed by dropping a value in the regression).

Highlighted variables with correlation higher than 0.3 in absolute value.

```
data_code_numeric <- data_code %>%
  select_if(is.numeric) %>%
  select(-idInterview, -reaction_fake_news_Unsure, -reaction_fake_news_NA)

matrix_correlations <- as.data.frame(round(cor(data_code_numeric), 2)) %>%
  rownames_to_column("variable_1") %>%
  pivot_longer(cols = is.numeric,
               names_to = "variable_2",
               values_to = "Correlation") %>%
  mutate(absolute_correlation = abs(Correlation)) %>%
  arrange(desc(absolute_correlation)) %>%
  mutate(question_1 = substr(variable_1, 1, 7),
         question_2 = substr(variable_2, 1, 7)) %>%
  separate(question_1, into = c("question_1", "left1"), sep = "_") %>%
  separate(question_2, into = c("question_2", "left2"), sep = "_") %>%
  mutate(same = if_else(((variable_1 == variable_2) |
```

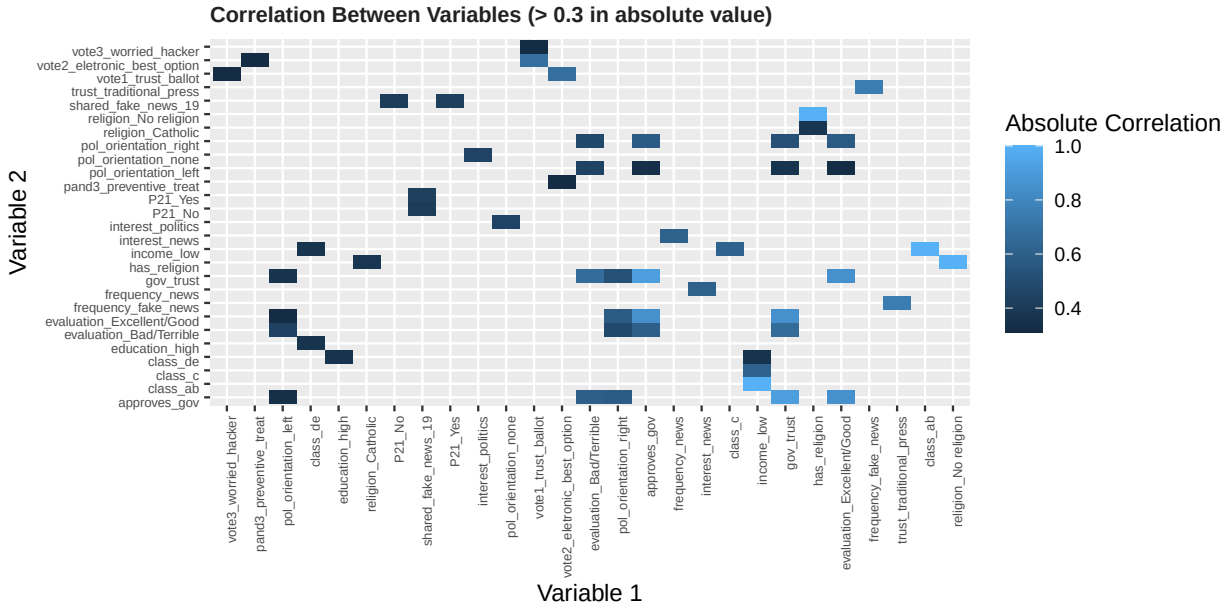
```
                          (question_1 == question_2)), 1, 0)) %>%
  filter(same == 0 & (absolute_correlation > 0.3)) %>%
  select(-same, -left1, -left2, -question_1, -question_2)

matrix_correlations %>%
  kable(caption = "Correlation Between Variables (> 0.3 in absolute value)",
      align = "c")
```

Table 2: Correlation Between Variables (> 0.3 in absolute value)

variable_1	variable_2	Correlation	absolute_correlation
religion_No religion	has_religion	-1.00	1.00
income_low	class_ab	-1.00	1.00
class_ab	income_low	-1.00	1.00
has_religion	religion_No religion	-1.00	1.00
gov_trust	approves_gov	0.91	0.91
approves_gov	gov_trust	0.91	0.91
gov_trust	evaluation_Excellent/Good	0.85	0.85
evaluation_Excellent/Good	gov_trust	0.85	0.85
evaluation_Excellent/Good	approves_gov	0.85	0.85
approves_gov	evaluation_Excellent/Good	0.85	0.85
trust_traditional_press	frequency_fake_news	-0.75	0.75
frequency_fake_news	trust_traditional_press	-0.75	0.75
vote1_trust_ballot	vote2_eletronic_best_option	0.68	0.68
vote2_eletronic_best_option	vote1_trust_ballot	0.68	0.68
gov_trust	evaluation_Bad/Terrible	-0.66	0.66
evaluation_Bad/Terrible	gov_trust	-0.66	0.66
income_low	class_c	0.62	0.62
class_c	income_low	0.62	0.62
interest_news	frequency_news	0.61	0.61
frequency_news	interest_news	0.61	0.61
evaluation_Bad/Terrible	approves_gov	-0.60	0.60
approves_gov	evaluation_Bad/Terrible	-0.60	0.60
approves_gov	pol_orientation_right	0.58	0.58
pol_orientation_right	approves_gov	0.58	0.58
evaluation_Excellent/Good	pol_orientation_right	0.57	0.57
pol_orientation_right	evaluation_Excellent/Good	0.57	0.57
gov_trust	pol_orientation_right	0.52	0.52
pol_orientation_right	gov_trust	0.52	0.52
evaluation_Bad/Terrible	pol_orientation_right	-0.48	0.48
pol_orientation_right	evaluation_Bad/Terrible	-0.48	0.48
interest_politics	pol_orientation_none	-0.45	0.45
pol_orientation_none	interest_politics	-0.45	0.45
evaluation_Bad/Terrible	pol_orientation_left	0.44	0.44
pol_orientation_left	evaluation_Bad/Terrible	0.44	0.44
shared_fake_news_19	P21_Yes	0.43	0.43
P21_Yes	shared_fake_news_19	0.43	0.43
shared_fake_news_19	P21_No	-0.41	0.41
P21_No	shared_fake_news_19	-0.41	0.41
religion_Catholic	has_religion	0.37	0.37
has_religion	religion_Catholic	0.37	0.37
gov_trust	pol_orientation_left	-0.36	0.36

variable_1	variable_2	Correlation	absolute_correlation
pol_orientation_left	gov_trust	-0.36	0.36
education_high	class_de	-0.36	0.36
income_low	class_de	0.36	0.36
class_de	education_high	-0.36	0.36
class_de	income_low	0.36	0.36
approves_gov	pol_orientation_left	-0.34	0.34
pol_orientation_left	approves_gov	-0.34	0.34
pand3_preventive_treat	vote2_eletronic_best_option	-0.32	0.32
vote2_eletronic_best_option	pand3_preventive_treat	-0.32	0.32
evaluation_Excellent/Good	pol_orientation_left	-0.32	0.32
pol_orientation_left	evaluation_Excellent/Good	-0.32	0.32
vote1_trust_ballot	vote3_worried_hacker	-0.31	0.31
vote3_worried_hacker	vote1_trust_ballot	-0.31	0.31

```
matrix_correlations %>%
  ggplot(aes(x = fct_reorder(variable_1, absolute_correlation),
             y = variable_2, fill = absolute_correlation)) +
  geom_tile() +
  theme(axis.text.x = element_text(angle = 90, vjust = 1, hjust = 1, size = 6),
        axis.text.y = element_text(vjust = 1, hjust = 1, size = 6),
        plot.title = element_text(color = "grey13", size = 10, face = "bold")) +
  labs(x = "Variable 1", y = "Variable 2", fill = "Absolute Correlation",
       title = "Correlation Between Variables (> 0.3 in absolute value)")
```



Regressions - All categories

Dependent variable: `shared_fake_news_19`

Model 1 - Only demographics

```
model_19_1 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                    education_high + class_ab + class_c + has_religion,
                  family = binomial(link = 'logit'),
                  data = data_code)

#Left out: No religion, women
```

Model 2 - Demographics + Region and City

```
model_19_2 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                    education_high + class_ab + class_c + has_religion +
                    region_North + region_Northeast +
                    region_Southeast + region_South + capital_metrop,
                  family = binomial(link = 'logit'),
                  data = data_code)
```

Model 3 - Demographics + Region and City + Political Orientation

```
model_19_3 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                    education_high + class_ab + class_c + has_religion +
                    region_North + region_Northeast +
                    region_Southeast + region_South + capital_metrop +
                    pol_orientation_right + pol_orientation_center +
                    pol_orientation_left,
                  family = binomial(link = 'logit'),
                  data = data_code)

#Left out: religion_No religion + region_Center-West + pol_orientation_none
```

Model 4 - Demographics + Region and City + Political Orientation + Government Evaluation

```
model_19_4 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                    education_high + class_ab + class_c + has_religion +
                    region_North + region_Northeast +
                    region_Southeast + region_South + capital_metrop +
                    pol_orientation_right + pol_orientation_center +
                    pol_orientation_left  + approves_gov,
                  family = binomial(link = 'logit'),
                  data = data_code)

#Left out: religion_No religion + region_Center-West + pol_orientation_none
```

Model 5 - Demographics + Region and City + Political Orientation + Government Evaluation + Answers Fake News

```
model_19_5 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                    education_high + class_ab + class_c + has_religion +
                    region_North + region_Northeast +
                    region_Southeast + region_South + capital_metrop +
                    pol_orientation_right + pol_orientation_center +
                    pol_orientation_left + approves_gov +
                    frequency_fake_news + resp_population + resp_gov +
                    resp_politicians + resp_press + resp_social_media +
                    severity_fake_news + fact_checking,
                  family = binomial(link = 'logit'),
                  data = data_code)
```

Model 6 - Demographics + Region and City + Political Orientation + Government Evaluation + Pandemic

attention increased interest in science

```
model_19_6 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                    education_high + class_ab + class_c + has_religion +
                    region_North + region_Northeast +
                    region_Southeast + region_South + capital_metrop +
                    pol_orientation_right + pol_orientation_center +
                    pol_orientation_left  + approves_gov +
                    pand2_worse_perception_media + pand3_trust_vaccine +
                    pand3_seek_science + pand3_preventive_treat + pand3_masks +
                    pand5_increased_interest_science,
                  family = binomial(link = 'logit'),
                  data = data_code)
```

Model 7 - Demographics + Region and City + Political Orientation + Government Evaluation + Vote

```
model_19_7 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                    education_high + class_ab + class_c + has_religion +
                    region_North + region_Northeast +
                    region_Southeast + region_South + capital_metrop +
                    pol_orientation_right + pol_orientation_center +
                    pol_orientation_left + approves_gov +
                    vote1_trust_ballot + vote2_eletronic_best_option +
                    vote3_worried_hacker + vote3_worried_politics +
                    vote3_worried_transparency + vote3_worried_tech +
                    vote3_worried_tse,
                  family = binomial(link = 'logit'),
                  data = data_code)

#Left out: religion_Other religion + pol_orientation_none
```

Model 8 - All

```
model_19_8 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                    education_high + class_ab + class_c + has_religion +
                    region_North + region_Northeast +
                    region_Southeast + region_South + capital_metrop +
                    pol_orientation_right + pol_orientation_center +
                    pol_orientation_left + approves_gov +
                    frequency_fake_news + resp_population + resp_gov +
                    resp_politicians + resp_press + resp_social_media +
                    severity_fake_news + fact_checking +
                    pand2_worse_perception_media + pand3_trust_vaccine +
                    pand3_seek_science + pand3_preventive_treat + pand3_masks +
                    pand5_increased_interest_science + vote1_trust_ballot +
                    vote2_eletronic_best_option + vote3_worried_hacker +
                    vote3_worried_politics + vote3_worried_transparency +
                    vote3_worried_tech + vote3_worried_tse,
                  family = binomial(link = 'logit'),
                  data = data_code)
```

Models

Table 3: Logit Models Comparison - Up to Government Evaluation

	Dependent variable:			
	shared_fake_news_19			
sex_men	−0.070	−0.071	−0.155	−0.153
	(0.112)	(0.112)	(0.116)	(0.117)
age_full	0.005	0.005	0.005	0.005
	(0.004)	(0.004)	(0.004)	(0.004)
race_is_white	−0.067	−0.068	−0.075	−0.075
	(0.116)	(0.116)	(0.117)	(0.117)
education_high	0.025	0.018	0.029	0.029
	(0.126)	(0.126)	(0.126)	(0.126)
class_ab	0.207	0.228	0.211	0.211
	(0.175)	(0.176)	(0.177)	(0.177)
class_c	0.362**	0.370**	0.377**	0.377**
	(0.154)	(0.154)	(0.155)	(0.155)
has_religion	−0.077	−0.087	−0.089	−0.089
	(0.172)	(0.173)	(0.174)	(0.174)
region_North		0.318	0.348	0.346
		(0.287)	(0.289)	(0.289)
region_Northeast		0.086	0.112	0.109
		(0.238)	(0.239)	(0.240)
region_Southeast		0.314	0.241	0.239
		(0.225)	(0.228)	(0.228)
region_South		0.018	−0.004	−0.004
		(0.259)	(0.260)	(0.260)
capital_metrop		−0.152	−0.164	−0.163
		(0.114)	(0.115)	(0.115)
pol_orientation_right			0.393***	0.409**
			(0.152)	(0.174)
pol_orientation_center			0.522***	0.520***
			(0.195)	(0.195)
pol_orientation_left			0.311**	0.305**
			(0.148)	(0.151)
approves_gov				−0.030
				(0.160)
Constant	−1.653***	−1.779***	−1.930***	−1.925***
	(0.257)	(0.328)	(0.335)	(0.336)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−995.995	−992.458	−986.832	−986.815
Akaike Inf. Crit.	2,007.991	2,010.916	2,005.664	2,007.629
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 4: Logit Models Comparison - Answers Fake News

	Dependent variable:			
	shared_fake_news_19			
sex_men	−0.070	−0.071	−0.155	−0.149
	(0.112)	(0.112)	(0.116)	(0.118)
age_full	0.005	0.005	0.005	0.006
	(0.004)	(0.004)	(0.004)	(0.004)
race_is_white	−0.067	−0.068	−0.075	−0.062
	(0.116)	(0.116)	(0.117)	(0.118)
education_high	0.025	0.018	0.029	0.016
	(0.126)	(0.126)	(0.126)	(0.127)
class_ab	0.207	0.228	0.211	0.148
	(0.175)	(0.176)	(0.177)	(0.179)
class_c	0.362**	0.370**	0.377**	0.320**
	(0.154)	(0.154)	(0.155)	(0.157)
has_religion	−0.077	−0.087	−0.089	−0.067
	(0.172)	(0.173)	(0.174)	(0.176)
region_North		0.318	0.348	0.294
		(0.287)	(0.289)	(0.293)
region_Northeast		0.086	0.112	0.029
		(0.238)	(0.239)	(0.243)
region_Southeast		0.314	0.241	0.136
		(0.225)	(0.228)	(0.231)
region_South		0.018	−0.004	−0.080
		(0.259)	(0.260)	(0.264)
capital_metrop		−0.152	−0.164	−0.180
		(0.114)	(0.115)	(0.116)
pol_orientation_right			0.393***	0.379**
			(0.152)	(0.175)
pol_orientation_center			0.522***	0.491**
			(0.195)	(0.197)
pol_orientation_left			0.311**	0.271*
			(0.148)	(0.152)
approves_gov				−0.016
				(0.161)
frequency_fake_news				0.599***
				(0.147)
resp_population				−0.240
				(0.178)
resp_gov				0.431*
				(0.232)
resp_politicians				−0.175
				(0.232)
resp_press				0.143
				(0.198)
resp_social_media				−0.002
				(0.181)
severity_fake_news				0.014
				(0.189)
fact_checking				0.077
				(0.117)
Constant	−1.653***	−1.779***	−1.930***	−2.465***
	(0.257)	(0.328)	(0.335)	(0.391)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−995.995	−992.458	−986.832	−974.489
Akaike Inf. Crit.	2,007.991	2,010.916	2,005.664	1,998.979
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 5: Logit Models Comparison - Pandemic

	Dependent variable:			
	shared_fake_news_19			
sex_men	−0.070	−0.071	−0.155	−0.119
	(0.112)	(0.112)	(0.116)	(0.119)
age_full	0.005	0.005	0.005	0.006*
	(0.004)	(0.004)	(0.004)	(0.004)
race_is_white	−0.067	−0.068	−0.075	−0.121
	(0.116)	(0.116)	(0.117)	(0.119)
education_high	0.025	0.018	0.029	0.050
	(0.126)	(0.126)	(0.126)	(0.128)
class_ab	0.207	0.228	0.211	0.161
	(0.175)	(0.176)	(0.177)	(0.181)
class_c	0.362**	0.370**	0.377**	0.330**
	(0.154)	(0.154)	(0.155)	(0.158)
has_religion	−0.077	−0.087	−0.089	−0.027
	(0.172)	(0.173)	(0.174)	(0.177)
region_North		0.318	0.348	0.258
		(0.287)	(0.289)	(0.294)
region_Northeast		0.086	0.112	0.060
		(0.238)	(0.239)	(0.244)
region_Southeast		0.314	0.241	0.113
		(0.225)	(0.228)	(0.232)
region_South		0.018	−0.004	−0.024
		(0.259)	(0.260)	(0.265)
capital_metrop		−0.152	−0.164	−0.174
		(0.114)	(0.115)	(0.117)
pol_orientation_right			0.393***	0.366**
			(0.152)	(0.177)
pol_orientation_center			0.522***	0.490**
			(0.195)	(0.198)
pol_orientation_left			0.311**	0.291*
			(0.148)	(0.153)
approves_gov				−0.060
				(0.164)
pand2_worse_perception_media				−0.090
				(0.127)
pand3_trust_vaccine				0.227
				(0.144)
pand3_seek_science				0.327**
				(0.132)
pand3_preventive_treat				0.227
				(0.156)
pand3_masks				0.140
				(0.176)
pand5_increased_interest_science				0.837***
				(0.152)
Constant	−1.653***	−1.779***	−1.930***	−2.837***
	(0.257)	(0.328)	(0.335)	(0.373)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−995.995	−992.458	−986.832	−960.397
Akaike Inf. Crit.	2,007.991	2,010.916	2,005.664	1,966.794
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 6: Logit Models Comparison - Electronic Vote

	Dependent variable:			
	shared_fake_news_19			
sex_men	−0.070	−0.071	−0.155	−0.151
	(0.112)	(0.112)	(0.116)	(0.117)
age_full	0.005	0.005	0.005	0.006
	(0.004)	(0.004)	(0.004)	(0.004)
race_is_white	−0.067	−0.068	−0.075	−0.085
	(0.116)	(0.116)	(0.117)	(0.119)
education_high	0.025	0.018	0.029	0.013
	(0.126)	(0.126)	(0.126)	(0.128)
class_ab	0.207	0.228	0.211	0.209
	(0.175)	(0.176)	(0.177)	(0.180)
class_c	0.362**	0.370**	0.377**	0.374**
	(0.154)	(0.154)	(0.155)	(0.157)
has_religion	−0.077	−0.087	−0.089	−0.111
	(0.172)	(0.173)	(0.174)	(0.175)
region_North		0.318	0.348	0.357
		(0.287)	(0.289)	(0.291)
region_Northeast		0.086	0.112	0.098
		(0.238)	(0.239)	(0.241)
region_Southeast		0.314	0.241	0.226
		(0.225)	(0.228)	(0.229)
region_South		0.018	−0.004	−0.005
		(0.259)	(0.260)	(0.262)
capital_metrop		−0.152	−0.164	−0.162
		(0.114)	(0.115)	(0.116)
pol_orientation_right			0.393***	0.428**
			(0.152)	(0.175)
pol_orientation_center			0.522***	0.557***
			(0.195)	(0.197)
pol_orientation_left			0.311**	0.280*
			(0.148)	(0.153)
approves_gov				0.022
				(0.161)
vote1_trust_ballot				0.0003
				(0.157)
vote2_eletronic_best_option				0.305*
				(0.157)
vote3_worried_hacker				0.696***
				(0.202)
vote3_worried_politics				−0.695***
				(0.252)
vote3_worried_transparency				0.045
				(0.236)
vote3_worried_tech				−0.003
				(0.191)
vote3_worried_tse				−0.176
				(0.179)
Constant	−1.653***	−1.779***	−1.930***	−1.955***
	(0.257)	(0.328)	(0.335)	(0.370)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−995.995	−992.458	−986.832	−974.744
Akaike Inf. Crit.	2,007.991	2,010.916	2,005.664	1,997.487
Note:				*p<0.1; **p<0.05; ***p<0.01

Table 7: Logit Models Comparison - All Variables

	Dependent variable:			
	shared_fake_news_19			
sex_men	−0.149	−0.119	−0.151	−0.106
	(0.118)	(0.119)	(0.117)	(0.121)
age_full	0.006	0.006*	0.006	0.006*
	(0.004)	(0.004)	(0.004)	(0.004)
race_is_white	−0.062	−0.121	−0.085	−0.127
	(0.118)	(0.119)	(0.119)	(0.122)
education_high	0.016	0.050	0.013	0.007
	(0.127)	(0.128)	(0.128)	(0.130)
class_ab	0.148	0.161	0.209	0.167
	(0.179)	(0.181)	(0.180)	(0.186)
class_c	0.320**	0.330**	0.374**	0.337**
	(0.157)	(0.158)	(0.157)	(0.161)
has_religion	−0.067	−0.027	−0.111	−0.038
	(0.176)	(0.177)	(0.175)	(0.180)
region_North	0.294	0.258	0.357	0.282
	(0.293)	(0.294)	(0.291)	(0.300)
region_Northeast	0.029	0.060	0.098	0.026
	(0.243)	(0.244)	(0.241)	(0.248)
region_Southeast	0.136	0.113	0.226	0.053
	(0.231)	(0.232)	(0.229)	(0.236)
region_South	−0.080	−0.024	−0.005	−0.061
	(0.264)	(0.265)	(0.262)	(0.270)
capital_metrop	−0.180	−0.174	−0.162	−0.191
	(0.116)	(0.117)	(0.116)	(0.118)
pol_orientation_right	0.379**	0.366**	0.428**	0.349*
	(0.175)	(0.177)	(0.175)	(0.180)
pol_orientation_center	0.491**	0.490**	0.557***	0.517**
	(0.197)	(0.198)	(0.197)	(0.201)
pol_orientation_left	0.271*	0.291*	0.280*	0.247
	(0.152)	(0.153)	(0.153)	(0.156)
approves_gov	−0.016	−0.060	0.022	−0.021
	(0.161)	(0.164)	(0.161)	(0.166)
frequency_fake_news	0.599***			0.469***
	(0.147)			(0.156)
resp_population	−0.240			−0.299
	(0.178)			(0.183)
resp_gov	0.431*			0.371
	(0.232)			(0.233)
resp_politicians	−0.175			−0.042
	(0.232)			(0.235)
resp_press	0.143			0.141
	(0.198)			(0.203)
resp_social_media	−0.002			0.020
	(0.181)			(0.185)
severity_fake_news	0.014			−0.128
	(0.189)			(0.195)
fact_checking	0.077			0.023
	(0.117)			(0.121)
pand2_worse_perception_media		−0.090		−0.015
		(0.127)		(0.136)
pand3_trust_vaccine		0.227		0.272*
		(0.144)		(0.148)
pand3_seek_science		0.327**		0.285**
		(0.132)		(0.137)
pand3_preventive_treat		0.227		0.290*
		(0.156)		(0.164)
pand3_masks		0.140		0.230
		(0.176)		(0.181)
pand5_increased_interest_science		0.837***		0.745***
		(0.152)		(0.163)
vote1_trust_ballot			0.0003	−0.100
			(0.157)	(0.163)
vote2_eletronic_best_option			0.305*	0.245
			(0.157)	(0.169)
vote3_worried_hacker			0.696***	0.709***
			(0.202)	(0.210)
vote3_worried_politics			−0.695***	−0.851***
			(0.252)	(0.261)
vote3_worried_transparency			0.045	−0.014
			(0.236)	(0.238)
vote3_worried_tech			−0.003	−0.038
			(0.191)	(0.190)
vote3_worried_tse			−0.176	−0.163
			(0.179)	(0.182)
Constant	−2.465***	−2.837***	−1.955***	−2.953***
	(0.391)	(0.373)	(0.370)	(0.442)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−974.489	−960.397	−974.744	−940.721
Akaike Inf. Crit.	1,998.979	1,966.794	1,997.487	1,957.442

Note: *p<0.1; **p<0.05; ***p<0.01

Variance Inflation Factor (VIF)

"For a given predictor (p), multicollinearity can assessed by computing a score called the variance inflation factor (or VIF), which measures how much the variance of a regression coefficient is inflated due to multicollinearity in the model.

The smallest possible value of VIF is one (absence of multicollinearity). As a rule of thumb, a VIF value that exceeds 5 or 10 indicates a problematic amount of collinearity (James et al. 2014)."

```
model_1 <- as.data.frame(car::vif(model_19_1)) %>%
  rownames_to_column("variables")

model_2 <- as.data.frame(car::vif(model_19_2)) %>%
  rownames_to_column("variables")

model_3 <- as.data.frame(car::vif(model_19_3)) %>%
  rownames_to_column("variables")

model_4 <- as.data.frame(car::vif(model_19_4)) %>%
  rownames_to_column("variables")

model_5 <- as.data.frame(car::vif(model_19_5)) %>%
  rownames_to_column("variables")

model_6 <- as.data.frame(car::vif(model_19_6)) %>%
  rownames_to_column("variables")

model_7 <- as.data.frame(car::vif(model_19_7)) %>%
  rownames_to_column("variables")

model_8 <- as.data.frame(car::vif(model_19_8)) %>%
  rownames_to_column("variables")

vif_test <- model_8 %>%
  left_join(model_1, by = c("variables" = "variables")) %>%
  left_join(model_2, by = c("variables" = "variables")) %>%
  left_join(model_3, by = c("variables" = "variables")) %>%
  left_join(model_4, by = c("variables" = "variables")) %>%
  left_join(model_5, by = c("variables" = "variables")) %>%
  left_join(model_6, by = c("variables" = "variables")) %>%
  left_join(model_7, by = c("variables" = "variables"))

names(vif_test) <- c("variables", "model_8", "model_1", "model_2", "model_3",
                     "model_4", "model_5", "model_6", "model_7")

vif_test <- relocate(vif_test, -model_8)

vif_test %>%
  kable(caption = "Variance Inflation Factor (VIF) per variable and model",
      align = "c")
```

Table 8: Variance Inflation Factor (VIF) per variable and model

variables	model_1	model_2	model_3	model_4	model_5	model_6	model_7	model_8
sex_men	1.004308	1.003969	1.074148	1.077354	1.088623	1.085214	1.078813	1.099887
age_full	1.051315	1.061471	1.085001	1.091882	1.100472	1.096215	1.101038	1.111311
race_is_white	1.062172	1.063498	1.067563	1.067894	1.070869	1.077058	1.082107	1.097782
education_high	1.222273	1.218394	1.222982	1.223150	1.228920	1.226336	1.235793	1.239305
class_ab	2.100814	2.106335	2.108863	2.109421	2.147034	2.162454	2.152418	2.216554
class_c	1.910303	1.912693	1.910794	1.910965	1.936157	1.937684	1.948222	1.977373
has_religion	1.014512	1.015206	1.021483	1.021483	1.029796	1.031889	1.026527	1.041165
region_North	NA	1.970819	1.971841	1.974584	2.011260	1.990899	1.968430	2.021453
region_Northeast	NA	3.415338	3.441923	3.453177	3.497177	3.487590	3.454540	3.526172
region_Southeast	NA	4.044865	4.112833	4.118946	4.187723	4.164625	4.117633	4.210407
region_South	NA	2.529021	2.544072	2.544192	2.591545	2.563836	2.539456	2.602606
capital_metrop	NA	1.031059	1.032414	1.032672	1.037414	1.039627	1.034414	1.047510
pol_orientation_right	NA	NA	1.326416	1.742652	1.751743	1.752502	1.746921	1.773481
pol_orientation_center	NA	NA	1.208341	1.209901	1.216768	1.213186	1.216734	1.228978
pol_orientation_left	NA	NA	1.282995	1.341287	1.346836	1.344471	1.358990	1.369474
approves_gov	NA	NA	NA	1.650830	1.654909	1.687137	1.670208	1.709206
frequency_fake_news	NA	NA	NA	NA	1.036118	NA	NA	1.123227
resp_population	NA	NA	NA	NA	1.826496	NA	NA	1.843091
resp_gov	NA	NA	NA	NA	2.787927	NA	NA	2.717867
resp_politicians	NA	NA	NA	NA	3.084394	NA	NA	3.053164
resp_press	NA	NA	NA	NA	1.939519	NA	NA	1.967762
resp_social_media	NA	NA	NA	NA	1.880829	NA	NA	1.898612
severity_fake_news	NA	NA	NA	NA	1.093502	NA	NA	1.115265
fact_checking	NA	NA	NA	NA	1.066909	NA	NA	1.090067
pand2_worse_perception_media	NA	NA	NA	NA	NA	1.069931	NA	1.197143
pand3_trust_vaccine	NA	NA	NA	NA	NA	1.170128	NA	1.220639
pand3_seek_science	NA	NA	NA	NA	NA	1.099718	NA	1.159750
pand3_preventive_treat	NA	NA	NA	NA	NA	1.239603	NA	1.347526
pand3_masks	NA	NA	NA	NA	NA	1.143633	NA	1.182261
pand5_increased_interest_science	NA	NA	NA	NA	NA	1.067473	NA	1.188706
vote1_trust_ballot	NA	NA	NA	NA	NA	NA	1.930110	2.012207
vote2_eletronic_best_option	NA	NA	NA	NA	NA	NA	1.862473	2.081942
vote3_worried_hacker	NA	NA	NA	NA	NA	NA	2.625497	2.731106
vote3_worried_politics	NA	NA	NA	NA	NA	NA	3.826703	3.948837
vote3_worried_transparency	NA	NA	NA	NA	NA	NA	3.380729	3.316015
vote3_worried_tech	NA	NA	NA	NA	NA	NA	2.281381	2.188962
vote3_worried_tse	NA	NA	NA	NA	NA	NA	2.104643	2.081119