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)
```

```
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)")
```
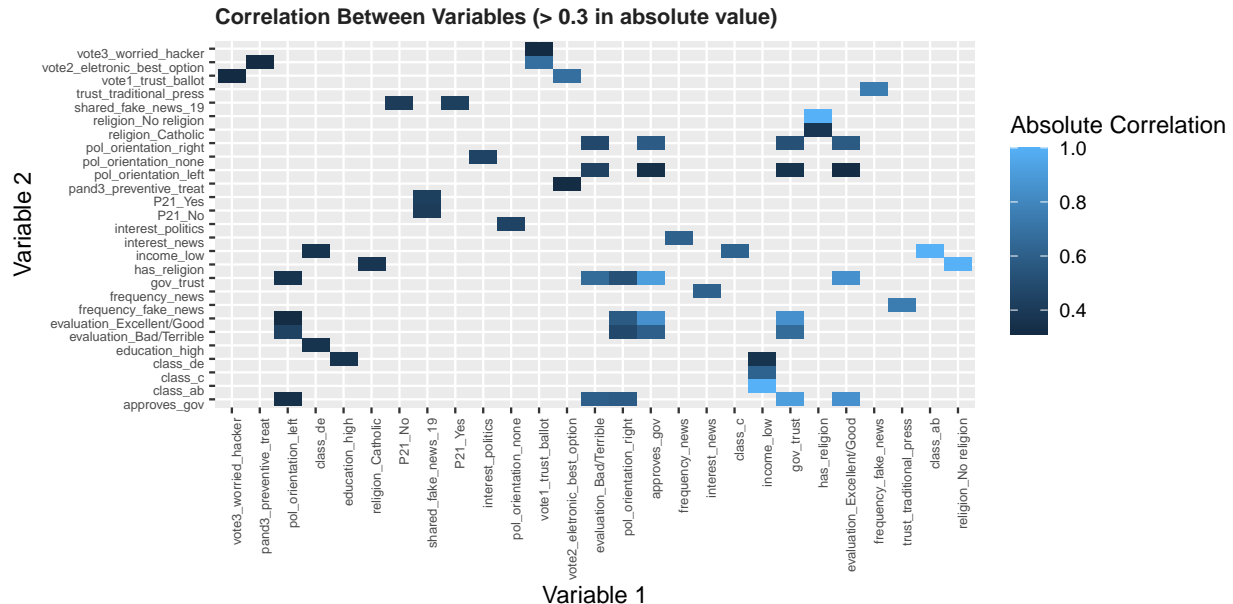

Regressions - All categories

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_c + religion_Catholic +
                   religion_Evangelicals + `religion_Other religion`,
                family = binomial(link = 'logit'),
                data = data_code)

#Left out: religion_No religion
```

Model 2 - Demographics + Region and City

```
model_19_2 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                   education_high + class_c + religion_Catholic +
                   religion_Evangelicals + `religion_Other 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_c + religion_Catholic +
                   religion_Evangelicals + `religion_Other 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_c + religion_Catholic +
                   religion_Evangelicals + `religion_Other 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_c + religion_Catholic +
                religion_Evangelicals + `religion_Other 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_c + religion_Catholic +
                religion_Evangelicals + `religion_Other 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_c + religion_Catholic +
                religion_Evangelicals + `religion_Other 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

```r
model_19_8 <- glm(shared_fake_news_19 ~ sex_men + age_full + race_is_white +
                      education_high + class_c + religion_Catholic +
                      religion_Evangelicals + `religion_Other 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	−0.063	−0.063	−0.143	−0.141
	(0.112)	(0.112)	(0.116)	(0.117)
age_full	0.006	0.006*	0.006*	0.006*
	(0.004)	(0.004)	(0.004)	(0.004)
race_is_white	−0.037	−0.036	−0.046	−0.045
	(0.116)	(0.116)	(0.116)	(0.116)
education_high	0.109	0.105	0.110	0.111
	(0.118)	(0.119)	(0.119)	(0.119)
class_c	0.251**	0.247**	0.265**	0.264**
	(0.112)	(0.112)	(0.113)	(0.113)
religion_Catholic	−0.206	−0.215	−0.213	−0.214
	(0.181)	(0.182)	(0.183)	(0.183)
religion_Evangelicals	0.109	0.099	0.092	0.095
	(0.189)	(0.189)	(0.191)	(0.191)
'religion_Other religion'	−0.009	−0.003	−0.012	−0.012
	(0.253)	(0.254)	(0.255)	(0.255)
region_North		0.322	0.352	0.348
		(0.288)	(0.289)	(0.290)
region_Northeast		0.089	0.116	0.111
		(0.238)	(0.240)	(0.240)
region_Southeast		0.316	0.245	0.242
		(0.226)	(0.228)	(0.229)
region_South		0.025	0.008	0.008
		(0.259)	(0.261)	(0.261)
capital_metrop		−0.143	−0.153	−0.153
		(0.114)	(0.115)	(0.115)
pol_orientation_right			0.374**	0.403**
			(0.152)	(0.174)
pol_orientation_center			0.531***	0.528***
			(0.195)	(0.195)
pol_orientation_left			0.314**	0.303**
			(0.148)	(0.151)
approves_gov				−0.056
				(0.160)
Constant	−1.641***	−1.768***	−1.929***	−1.921***
	(0.252)	(0.325)	(0.332)	(0.333)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−993.624	−990.225	−984.695	−984.634
Akaike Inf. Crit.	2,005.248	2,008.451	2,003.390	2,005.267

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	−0.063	−0.063	−0.143	−0.139
	(0.112)	(0.112)	(0.116)	(0.118)
age_full	0.006	0.006*	0.006*	0.007*
	(0.004)	(0.004)	(0.004)	(0.004)
race_is_white	−0.037	−0.036	−0.046	−0.040
	(0.116)	(0.116)	(0.116)	(0.117)
education_high	0.109	0.105	0.110	0.084
	(0.118)	(0.119)	(0.119)	(0.120)
class_c	0.251**	0.247**	0.265**	0.243**
	(0.112)	(0.112)	(0.113)	(0.114)
religion_Catholic	−0.206	−0.215	−0.213	−0.194
	(0.181)	(0.182)	(0.183)	(0.185)
religion_Evangelicals	0.109	0.099	0.092	0.144
	(0.189)	(0.189)	(0.191)	(0.194)
'religion_Other religion'	−0.009	−0.003	−0.012	−0.037
	(0.253)	(0.254)	(0.255)	(0.257)
region_North		0.322	0.352	0.286
		(0.288)	(0.289)	(0.294)
region_Northeast		0.089	0.116	0.025
		(0.238)	(0.240)	(0.244)
region_Southeast		0.316	0.245	0.132
		(0.226)	(0.228)	(0.232)
region_South		0.025	0.008	−0.079
		(0.259)	(0.261)	(0.265)
capital_metrop		−0.143	−0.153	−0.172
		(0.114)	(0.115)	(0.116)
pol_orientation_right			0.374**	0.369**
			(0.152)	(0.176)
pol_orientation_center			0.531***	0.499**
			(0.195)	(0.197)
pol_orientation_left			0.314**	0.266*
			(0.148)	(0.153)
approves_gov				−0.043
				(0.162)
frequency_fake_news				0.605***
				(0.147)
resp_population				−0.206
				(0.179)
resp_gov				0.478**
				(0.233)
resp_politicians				−0.169
				(0.233)
resp_press				0.133
				(0.199)
resp_social_media				−0.015
				(0.181)
severity_fake_news				−0.007
				(0.190)
fact_checking				0.082
				(0.117)
Constant	−1.641***	−1.768***	−1.929***	−2.516***
	(0.252)	(0.325)	(0.332)	(0.392)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−993.624	−990.225	−984.695	−971.562
Akaike Inf. Crit.	2,005.248	2,008.451	2,003.390	1,995.124

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

Table 5: Logit Models Comparison - Pandemic

	Dependent variable:			
	shared_fake_news_19			
sex_men	−0.063	−0.063	−0.143	−0.106
	(0.112)	(0.112)	(0.116)	(0.119)
age_full	0.006	0.006*	0.006*	0.007*
	(0.004)	(0.004)	(0.004)	(0.004)
race_is_white	−0.037	−0.036	−0.046	−0.096
	(0.116)	(0.116)	(0.116)	(0.118)
education_high	0.109	0.105	0.110	0.121
	(0.118)	(0.119)	(0.119)	(0.121)
class_c	0.251**	0.247**	0.265**	0.247**
	(0.112)	(0.112)	(0.113)	(0.115)
religion_Catholic	−0.206	−0.215	−0.213	−0.161
	(0.181)	(0.182)	(0.183)	(0.186)
religion_Evangelicals	0.109	0.099	0.092	0.175
	(0.189)	(0.189)	(0.191)	(0.194)
'religion_Other religion'	−0.009	−0.003	−0.012	0.043
	(0.253)	(0.254)	(0.255)	(0.259)
region_North		0.322	0.352	0.262
		(0.288)	(0.289)	(0.295)
region_Northeast		0.089	0.116	0.068
		(0.238)	(0.240)	(0.245)
region_Southeast		0.316	0.245	0.122
		(0.226)	(0.228)	(0.233)
region_South		0.025	0.008	−0.011
		(0.259)	(0.261)	(0.266)
capital_metrop		−0.143	−0.153	−0.163
		(0.114)	(0.115)	(0.116)
pol_orientation_right			0.374**	0.356**
			(0.152)	(0.177)
pol_orientation_center			0.531***	0.497**
			(0.195)	(0.198)
pol_orientation_left			0.314**	0.287*
			(0.148)	(0.154)
approves_gov				−0.085
				(0.164)
pand2_worse_perception_media				−0.096
				(0.128)
pand3_trust_vaccine				0.225
				(0.144)
pand3_seek_science				0.333**
				(0.132)
pand3_preventive_treat				0.229
				(0.157)
pand3_masks				0.113
				(0.177)
pand5_increased_interest_science				0.852***
				(0.153)
Constant	−1.641***	−1.768***	−1.929***	−2.871***
	(0.252)	(0.325)	(0.332)	(0.373)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−993.624	−990.225	−984.695	−957.498
Akaike Inf. Crit.	2,005.248	2,008.451	2,003.390	1,962.996

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	−0.063	−0.063	−0.143	−0.139
	(0.112)	(0.112)	(0.116)	(0.117)
age_full	0.006	0.006*	0.006*	0.007*
	(0.004)	(0.004)	(0.004)	(0.004)
race_is_white	−0.037	−0.036	−0.046	−0.053
	(0.116)	(0.116)	(0.116)	(0.118)
education_high	0.109	0.105	0.110	0.095
	(0.118)	(0.119)	(0.119)	(0.120)
class_c	0.251**	0.247**	0.265**	0.265**
	(0.112)	(0.112)	(0.113)	(0.115)
religion_Catholic	−0.206	−0.215	−0.213	−0.244
	(0.181)	(0.182)	(0.183)	(0.185)
religion_Evangelicals	0.109	0.099	0.092	0.085
	(0.189)	(0.189)	(0.191)	(0.193)
'religion_Other religion'	−0.009	−0.003	−0.012	−0.018
	(0.253)	(0.254)	(0.255)	(0.257)
region_North		0.322	0.352	0.357
		(0.288)	(0.289)	(0.292)
region_Northeast		0.089	0.116	0.097
		(0.238)	(0.240)	(0.242)
region_Southeast		0.316	0.245	0.228
		(0.226)	(0.228)	(0.230)
region_South		0.025	0.008	0.005
		(0.259)	(0.261)	(0.263)
capital_metrop		−0.143	−0.153	−0.154
		(0.114)	(0.115)	(0.115)
pol_orientation_right			0.374**	0.422**
			(0.152)	(0.175)
pol_orientation_center			0.531***	0.566***
			(0.195)	(0.197)
pol_orientation_left			0.314**	0.274*
			(0.148)	(0.154)
approves_gov				−0.002
				(0.162)
vote1_trust_ballot				0.031
				(0.157)
vote2_eletronic_best_option				0.306*
				(0.158)
vote3_worried_hacker				0.684***
				(0.203)
vote3_worried_politics				−0.685***
				(0.252)
vote3_worried_transparency				0.059
				(0.237)
vote3_worried_tech				0.008
				(0.192)
vote3_worried_tse				−0.207
				(0.180)
Constant	−1.641***	−1.768***	−1.929***	−1.966***
	(0.252)	(0.325)	(0.332)	(0.369)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−993.624	−990.225	−984.695	−972.170
Akaike Inf. Crit.	2,005.248	2,008.451	2,003.390	1,994.340

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	−0.139	−0.106	−0.139	−0.094
	(0.118)	(0.119)	(0.117)	(0.121)
age__full	0.007*	0.007*	0.007*	0.008**
	(0.004)	(0.004)	(0.004)	(0.004)
race__is__white	−0.040	−0.096	−0.053	−0.103
	(0.117)	(0.118)	(0.118)	(0.121)
education__high	0.084	0.121	0.095	0.081
	(0.120)	(0.121)	(0.120)	(0.123)
class__c	0.243**	0.247**	0.265**	0.254**
	(0.114)	(0.115)	(0.115)	(0.118)
religion__Catholic	−0.194	−0.161	−0.244	−0.181
	(0.185)	(0.186)	(0.185)	(0.189)
religion__Evangelicals	0.144	0.175	0.085	0.193
	(0.194)	(0.194)	(0.193)	(0.199)
'religion__Other religion'	−0.037	0.043	−0.018	0.042
	(0.257)	(0.259)	(0.257)	(0.262)
region__North	0.286	0.262	0.357	0.278
	(0.294)	(0.295)	(0.292)	(0.301)
region__Northeast	0.025	0.068	0.097	0.025
	(0.244)	(0.245)	(0.242)	(0.249)
region__Southeast	0.132	0.122	0.228	0.056
	(0.232)	(0.233)	(0.230)	(0.237)
region__South	−0.079	−0.011	0.005	−0.056
	(0.265)	(0.266)	(0.263)	(0.271)
capital__metrop	−0.172	−0.163	−0.154	−0.180
	(0.116)	(0.116)	(0.115)	(0.118)
pol__orientation__right	0.369**	0.356**	0.422**	0.337*
	(0.176)	(0.177)	(0.175)	(0.180)
pol__orientation__center	0.499**	0.497**	0.566***	0.525***
	(0.197)	(0.198)	(0.197)	(0.201)
pol__orientation__left	0.266*	0.287*	0.274*	0.241
	(0.153)	(0.154)	(0.154)	(0.157)
approves__gov	−0.043	−0.085	−0.002	−0.048
	(0.162)	(0.164)	(0.162)	(0.167)
frequency__fake__news	0.605***			0.467***
	(0.147)			(0.157)
resp__population	−0.206			−0.263
	(0.179)			(0.184)
resp__gov	0.478**			0.416*
	(0.233)			(0.234)
resp__politicians	−0.169			−0.039
	(0.233)			(0.236)
resp__press	0.133			0.135
	(0.199)			(0.204)
resp__social__media	−0.015			0.011
	(0.181)			(0.185)
severity__fake__news	−0.007			−0.158
	(0.190)			(0.196)
fact__checking	0.082			0.027
	(0.117)			(0.121)
pand2__worse__perception__media		−0.096		−0.016
		(0.128)		(0.136)
pand3__trust__vaccine		0.225		0.277*
		(0.144)		(0.149)
pand3__seek__science		0.333**		0.287**
		(0.132)		(0.137)
pand3__preventive__treat		0.229		0.302*
		(0.157)		(0.165)
pand3__masks		0.113		0.200
		(0.177)		(0.182)
pand5__increased__interest__science		0.852***		0.758***
		(0.153)		(0.163)
vote1__trust__ballot			0.031	−0.077
			(0.157)	(0.163)
vote2__eletronic__best__option			0.306*	0.241
			(0.158)	(0.170)
vote3__worried__hacker			0.684***	0.696***
			(0.203)	(0.211)
vote3__worried__politics			−0.685***	−0.854***
			(0.252)	(0.261)
vote3__worried__transparency			0.059	0.002
			(0.237)	(0.239)
vote3__worried__tech			0.008	−0.027
			(0.192)	(0.191)
vote3__worried__tse			−0.207	−0.196
			(0.180)	(0.182)
Constant	−2.516***	−2.871***	−1.966***	−3.008***
	(0.392)	(0.373)	(0.369)	(0.443)
Observations	1,934	1,934	1,934	1,934
Log Likelihood	−971.562	−957.498	−972.170	−937.260
Akaike Inf. Crit.	1,995.124	1,962.996	1,994.340	1,952.520

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)."

```r
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	1.005601	1.005442	1.073209	1.076539	1.087877	1.084926	1.078126	1.100026
age_full	1.049109	1.059252	1.084012	1.092359	1.100624	1.097410	1.098142	1.109853
race_is_white	1.048540	1.048826	1.053209	1.053783	1.056926	1.061997	1.065977	1.082605
education_high	1.082224	1.082637	1.086458	1.086625	1.091086	1.090382	1.095896	1.100509
class_c	1.009036	1.010728	1.014772	1.015004	1.023834	1.021025	1.033844	1.049826
religion_Catholic	2.629787	2.632408	2.646674	2.647302	2.666808	2.668390	2.666080	2.694343
religion_Evangelicals	2.543874	2.544995	2.569316	2.572094	2.624769	2.590364	2.603874	2.656964
religion_Other religion	1.550903	1.552623	1.552287	1.552269	1.558790	1.562854	1.562390	1.576242
region_North	NA	1.972745	1.974352	1.977012	2.016105	1.993971	1.969463	2.023383
region_Northeast	NA	3.419981	3.452303	3.462966	3.513901	3.504976	3.462933	3.539985
region_Southeast	NA	4.052706	4.127653	4.133533	4.209808	4.187168	4.133250	4.228639
region_South	NA	2.532555	2.550508	2.550676	2.602212	2.574478	2.545976	2.611900
capital_metrop	NA	1.026670	1.027422	1.027760	1.033059	1.032895	1.029733	1.040895
pol_orientation_right	NA	NA	1.328040	1.738841	1.748848	1.747760	1.741737	1.770996
pol_orientation_center	NA	NA	1.205453	1.207337	1.214039	1.211111	1.214761	1.227278
pol_orientation_left	NA	NA	1.286722	1.345516	1.350774	1.348256	1.364506	1.374741
approves_gov	NA	NA	NA	1.661748	1.664987	1.694070	1.679553	1.719145
frequency_fake_news	NA	NA	NA	NA	1.033864	NA	NA	1.124048
resp_population	NA	NA	NA	NA	1.835220	NA	NA	1.854664
resp_gov	NA	NA	NA	NA	2.817503	NA	NA	2.743358
resp_politicians	NA	NA	NA	NA	3.113068	NA	NA	3.086259
resp_press	NA	NA	NA	NA	1.953839	NA	NA	1.986448
resp_social_media	NA	NA	NA	NA	1.880273	NA	NA	1.899285
severity_fake_news	NA	NA	NA	NA	1.095550	NA	NA	1.120502
fact_checking	NA	NA	NA	NA	1.065796	NA	NA	1.089311
pand2_worse_perception_media	NA	NA	NA	NA	NA	1.071425	NA	1.198452
pand3_trust_vaccine	NA	NA	NA	NA	NA	1.166340	NA	1.219258
pand3_seek_science	NA	NA	NA	NA	NA	1.095995	NA	1.156880
pand3_preventive_treat	NA	NA	NA	NA	NA	1.242596	NA	1.352594
pand3_masks	NA	NA	NA	NA	NA	1.143777	NA	1.184575
pand5_increased_interest_science	NA	NA	NA	NA	NA	1.067018	NA	1.190010
vote1_trust_ballot	NA	NA	NA	NA	NA	NA	1.940743	2.023551
vote2_eletronic_best_option	NA	NA	NA	NA	NA	NA	1.878442	2.092151
vote3_worried_hacker	NA	NA	NA	NA	NA	NA	2.636860	2.747899
vote3_worried_politics	NA	NA	NA	NA	NA	NA	3.820341	3.953982
vote3_worried_transparency	NA	NA	NA	NA	NA	NA	3.392155	3.327742
vote3_worried_tech	NA	NA	NA	NA	NA	NA	2.307548	2.205706
vote3_worried_tse	NA	NA	NA	NA	NA	NA	2.115571	2.084879