



TECHNICAL UNIVERSITY OF MUNICH

M.Sc. POLITICS & TECHNOLOGY

THESIS

**Political information fact-checking behavior in the context
of the Russia-Ukraine war**

NATALIA ALLMI

August 22, 2023

Acknowledgements

I would like to express my genuine gratitude to the team at the Chair of Digital Governance of the Technical University of Munich. In particular, my supervisor, Yannis Teocharis, for his guidance and support, and Jan Zilinsky and Franziska Pradel for their insightful advice and constructive suggestions. I would also like to thank the Network of European Political Communication Scholars (NEPOCS) for providing the survey data that served as the foundation of this thesis. This dataset has contributed to shaping the research and analysis presented here.

Introduction

The war between Russia and Ukraine has influenced the economy and political scenario on a global scale, leading to extensive coverage of the war both on traditional and social media. Consequently, individuals have been inundated with a vast amount of news and information. Serious repercussions can arise from this situation given that a substantial amount of the broadcasted information has been misleading and inaccurate and that continuous exposure to the news has been shown to induce negative emotions (Ducharme, 2022; Riad et al., 2022; Bodas et al., 2015; Hoyt et al., 2022; Gao et al., 2020; Fullana et al., 2020; Sharma et al., 2022) impacting individuals' attitudes towards information-seeking and avoidance. Furthermore, the public's concern regarding the war can fluctuate in accordance with the agenda set by the media, causing modifications in individuals' behavior (McCombs, 2014). Having misinformed citizens can negatively impact democracy, increasing polarization and inciting conflict as well as violence within society (Reglitz, 2022; Pavlik, 2022). In this scenario, fact-checking has been shown to be a helpful tool to diminish the spread of political misinformation (Walter et al., 2020; Porter and Wood, 2021). For this reason, it is fundamental to understand under which conditions individuals engage in information-seeking behavior, such as fact-checking, to elaborate policies that will encourage the development of a society with well-informed individuals.

Previous studies on the relationship between negative emotions and information demand reveal mixed results. Some authors argue that negative emotions drive information-seeking (Gadarian and Albertson, 2014; Yang and Kahlor, 2013; Charpentier et al., 2022; Rich et al., 2020) while others say it leads to avoidance (Villi et al., 2022; Skovsgaard and Andersen, 2020; Toff and Nielsen, 2022). An existing survey on the use of political information in the context of the Russia-Ukraine war that includes a behavioral measure of demand for information provides a unique opportunity to study the relationship between negative emotions and information-seeking or avoidance and therefore advance the existing literature.

This study seeks to answer how using different media outlets to obtain political information impacts individuals' concern for the war and how concern affects the amount of fact-checking they perform. Concern is measured through two components considered independent variables: anxiety and importance.

Using ordinary least squares and negative binomial regressions on data collected from a field survey in 19 countries during April and May 2022, I find that a) there are no discernible global trends regarding the associations between type of media consumption and concern, b) The results show no evidence that there is a relationship between anxiety and fact-checking, and c) The results show evidence that there is a positive correlation between importance and fact-checking for most countries, where the higher the perceived importance of the war by individuals, the greater the number of fact-checks they perform. These results contribute to the existing literature by providing an in-depth understanding of how negative emotions affect information-seeking in the context of armed conflict in the 21st century, where occurrences are systematically broadcasted by a series of different media outlets and platforms. This is essential for elaborating evidence-based policies that can promote a healthy society with well-informed citizens. Furthermore, the study across 19 countries provides a better understanding of how the effect varies in different circumstances, which allows policymakers to construct specific approaches for each context. The first section of this study provides a theoretical background on the Russia-Ukraine war, the influence of the media, and the relationship between negative emotions and information demand. This is followed by an outline of the research questions and a detailed description of the data collection and methods. Lastly, the results are reported, and a discussion of the limitations and policy implications of the research is included in the conclusion.

Theoretical Background

Russia-Ukraine War

On February 24, 2022, Russian forces invaded Ukraine. Following the outbreak of the war, there have been thousands of deaths, and millions of people have left Ukraine seeking refuge ([Mpoke Bigg, 2023](#)). A tense international political climate has settled, and economic uncertainty has surfaced around the globe. Negative consequences from the war range from loss of lives to wreckage of property, destruction of cities, political instability, and economic insecurity, among others. Throughout the world, nations and individuals have been directly and indirectly impacted. The war has influenced the global economy and

transnational relations, provoking a rise in inflation and reduced international trade (Khudaykulova et al., 2022). Energy prices have skyrocketed in Europe and worldwide, GDP growth in the USA, Brazil, and the Euro area has slowed, and the war has increased food insecurity and debt risk in low-income countries (OECD, 2022). Residents of lands near the war-site fear that the war could extend its boundaries (Barchielli et al., 2022). In the United States, 59% of adults are highly concerned that Russia could invade other countries in the area (Pew Research Center, 2022), and a survey conducted by the American Psychological Association (2022) reveals that the Russian invasion of Ukraine is one of the sources that cause the most stress among adults in the United States. These factors strain individuals' living situations, impacting their psychological well-being (Barchielli et al., 2022).

The influence of the media

The war has been extensively covered by traditional and online news sources and has been featured on social media platforms. Worldwide, online news searches on the Russia-Ukraine war spiked between February and May 2022¹. Many popular national and international media outlets have prioritized covering the war, continuously publishing updated information (Pavlik, 2022). The presence of the war on social media platforms and the volume of circulated content have been substantial. Smartphones have allowed anyone who owns one to post real-time videos and pictures from the battlefield on social media, thus transforming the way the world experiences war (Suciu, 2022). All over the globe, individuals have been able to watch scenes from the war from their own homes, thousands of kilometers away from the war site. In the past years, and significantly since the COVID-19 pandemic, social media users have increased by more than one billion, and today some of the most popular social media platforms in the world are Facebook, YouTube, and Instagram (Kemp, 2023). Furthermore, global trends show that the use of websites, apps, and social media has escalated while the use of traditional media such as TV, newspapers, and radio has fallen (YouGov, 2023).

The numerous news sources that are easily and readily available allow individuals to remain informed. However, continuous exposure to an overwhelming amount of information and explicit content has been

¹<https://trends.google.com>

shown to induce raised levels of stress in individuals (Ducharme, 2022). Consuming an unlimited amount of negative news online, known as "doom-scrolling," can negatively impact an individual's well-being. This is one of the many ways the war has indirectly affected the populations of countries far from the combat zone. Multiple studies show that continuously following the news and using social media during events surrounded by uncertainty, such as the COVID-19 pandemic and wars, is correlated with elevated levels of anxiety and depression (Riad et al., 2022; Bodas et al., 2015; Hoyt et al., 2022; Gao et al., 2020; Fullana et al., 2020; Sharma et al., 2022).

Occasionally, the coverage of events on social media adopts a different tone than in traditional media. The literature suggests that the former provokes more negative emotions than the latter. This could be because content published in traditional media is usually filtered or includes warnings, while content on social media is more explicit, causing more substantial repercussions on emotional well-being (Ducharme, 2022). A study during COVID-19 shows that exposure to social media was linked with a deterioration in psychological well-being, contrary to exposure to traditional media, which showed no association (Price et al., 2022).

Moreover, social media platforms employ different styles and formats to convey news by using various audio-visual resources. Thus, the impact on an individual's emotional well-being and the level of affliction can vary depending on the exposure and use of each platform. A study reveals that, during the pandemic, taking a break from using Facebook, Twitter, TikTok, and Instagram had a beneficial impact on individuals' mental health (Lambert et al., 2022). In particular, reducing the time spent on Twitter and TikTok is associated with a decline in depression, whereas less time spent on TikTok is associated with a decrease in anxiety. Another study found that having access to Facebook increased depression and reduced mental well-being in college students (Braghieri et al., 2022).

Agenda-setting theory

The agenda-setting theory stipulates that the media, by deciding which issues to report on and how to frame them, has the power to influence the opinion of society and the salience of issues. The effects of agenda-setting have been observed in a wide range of countries concerning various issues (McCombs,

2014), such as the economy, foreign policy, technology, and most recently, COVID-19, climate change, and immigration. Moreover, in the context of a war, where nationalist stances emerge, agenda-setting can be used to control public opinion (Özdemir, 2023).

The media have issue agendas driven by differing interests and influenced by different sources. Previously, traditional media dominated the distribution and reporting of news and was the main agenda-setter. With the advent of social media, blogs, and online media, this trend has shifted, granting citizens, politicians, and political parties more influence in agenda-setting (Meraz, 2009). When it comes to politicized issues, the agendas set by different media outlets will likely diverge, even as they mutually influence each other and transform. As opposed to traditional media, where news stories follow a process before they are published, social media is used by politicians to express themselves without institutional restrictions (Gilardi et al., 2022). Along with partisan media, online platforms are used by parties and politicians to promote their interests and agendas. As a result, the issues and how they are covered will vary according to the media source.

In particular, the substantial rise in the circulation of fake news has been shown to influence crucial issues of international significance. Fake news has been shown to impact the agenda of issues covered by emerging online media and partisan media, which are known to use fake news to advance their interests (Vargo et al., 2018). Consequently, an individual's levels of concern for the war, particularly its perceived importance, will be influenced by the issue agendas of the media they consume, to what extent they choose to include the war as part of the agenda, and by the framing employed to report the issue. Furthermore, the impact on the salience of issues and individuals' opinions due to the influence of the media's agenda affects individuals' attitudes and behaviors (McCombs, 2014).

The relevance of fact-checking

Since the start of the war, misinformation has originated from many sources. Russia and Ukraine, along with other relevant international actors such as China and the USA, have disseminated false information (Pavlik, 2022). In particular, the Russian government conducted an aggressive disinformation campaign against Ukraine on social media (OECD, 2022). The spread of misinformation constitutes an obstacle

to democracy because individuals are fed false or inaccurate information, which hinders the possibility of having well-grounded discussions. This can lead to increased polarization among the population, instigating hate and violence. Additionally, the spread of false information jeopardizes citizens' trust in each other and democratic institutions (Reglitz, 2022). Access to accurate and reliable information is essential to sustaining well-functioning democracies, which is of particular importance in the context of armed conflict (Pavlik, 2022).

Globally, more than half of internet users are afraid of encountering misinformation, and this concern is exceptionally high in the Americas and Western Europe (Knuutila et al., 2022). The proliferation of misinformation is particularly problematic on social media platforms, where reporting accuracy is often compromised (Suciu, 2022). The lack of verification and corroboration of information makes social media a fertile space for the spread of fake news (Hameleers et al., 2021), which often occurs at an alarming speed. Exposure to social media has been associated with high levels of misinformation and low levels of (accurate) information. (Jamieson and Albarracín, 2020). Castro et al. (2022) show that when learning and maintaining politically informed citizens, consuming traditional media appears to be more effective than obtaining news through social media.

Considering the growth of social media users and the number of individuals that use social media as a news source, it is imperative to distinguish measures that contribute to diminishing the spread of false news. In particular, fact-checking has been shown to be a valuable tool to counter political misinformation (Walter et al., 2020; Porter and Wood, 2021). The number of fact-checking sites has increased across the globe (Cherubini and Graves, 2016), and fact-checking initiatives have been promoted and encouraged by different actors such as governments, civil society organizations, traditional news media outlets, and social media platforms themselves. Consequently, it is essential to study and determine the factors that encourage individuals to perform fact-checks to verify the truthfulness of the news and information they encounter.

Negative emotions and information-seeking or avoidance

Given the importance of fact-checking, it is essential to understand how negative emotions influence information-seeking and avoidance behavior. Until recently, trends indicated that people's time on the internet had been increasing. However, this trend is reversing. Currently, less time is spent surfing the web and accessing news online, possibly due to the negative tone online content tends to adopt, triggering negative emotions ([Newman, 2023](#)). A survey conducted one month after Russia's invasion of Ukraine indicates that, compared to a pre-war study, the conflict has caused trends in news avoidance to accelerate in countries such as Poland, Germany, and the US ([Eddy and Fletcher, 2022](#)). In Brazil and the UK, news avoidance trends were previously high and have held.

Academics have extensively studied the link between emotions and the demand for information. However, scholars remain divided on whether negative emotions like concern drive information-seeking or avoidance. Some authors argue that concern incites learning and promotes information-seeking. When citizens are exposed to threatening events, situations where they feel in danger, or where their environments suffer large alterations, such as pandemics, terrorist attacks, and climate change, their emotional well-being is affected, and they are induced negative emotions, driving political engagement and information-searching behavior ([Gadarian and Albertson, 2014](#); [Yang and Kahlor, 2013](#); [Charpentier et al., 2022](#); [Rich et al., 2020](#)). Additionally, information-seeking attitudes triggered by developing negative emotions as a consequence of news exposure to menacing political events are a method for individuals to reduce uncertainty regarding the event ([Boyle et al., 2004](#)). According to [Jiang \(2022\)](#), the link between negative emotions and news-seeking is mediated by infobesity. Worry leads to increased information seeking on social media, producing an information overload that stimulates fact-checking.

Alternatively, [Villi et al. \(2022\)](#) show that, across various national contexts, the prevalence of negative news in media reporting causes news avoidance. Negative news cause individuals to develop negative emotions, leading them to avoid news exposure and to choose to remain uninformed. News avoidance is driven by uneasiness, stress, and confusion that originate from the information overload caused by the vast amount of easily-accessible negative news that individuals have at their disposal ([Skovsgaard](#)

and Andersen, 2020; Toff and Nielsen, 2022). This phenomenon was widely seen during the COVID-19 pandemic (Schäfer et al., 2022; de Bruin et al., 2021; Ytre-Arne and Moe, 2021).

Research Questions

The reviewed literature exposes how different media sources can affect the concern levels of individuals regarding the war and details conflicting theories on information demand. From this, follow the two research questions that are the focus of this study:

RQ1: How does the consumption of political information through different media outlets affect the levels of concern in individuals regarding the Russia-Ukraine war?

RQ2: How do anxiety and the importance assigned to the Russia-Ukraine war affect the amount of fact-checking performed by individuals?

Data Collection

The data used in this study was obtained from a field survey conducted in 19 countries, in April and May 2022². Quota sampling was employed to resemble representativeness on age, gender, and education. Of all the surveyed individuals ($N=19037$), 53% are female, and 39% have at least a bachelor's degree. Table 1 shows a summary of the sociodemographic characteristics by country.

Main predictor and dependent variables

For exact wording of the survey questions see Appendix A.

Fact-checking

The surveyed individuals were asked to rate ten statements with information related to the war as true or false. At the end of the survey, they were asked to select which statements they would like to fact-check. The variable "fact-checking" is constructed as the number of statements an individual chooses

²The broader research project received ethical approval by the institutional review board of the coordinating university. The data collection protocol, sampling procedures and questionnaires are available via OSF https://osf.io/pruda/?view_only=188fc5107ca40639936bfa810bbe5d5.

Country	Women (%)	College Graduates (%)	Age 18-24 (%)	Age 25-74 (%)	Age 75 or Older (%)	N
Germany	51	26	5	82	13	1000
United States	52	46	1	82	16	1004
France	54	36	6	81	13	1003
Poland	53	44	6	92	1	1004
Austria	53	27	8	90	3	1000
Belgium	52	43	8	86	6	1000
Brazil	54	46	6	91	2	1001
Czechia	51	26	20	78	2	1000
Denmark	48	36	7	85	8	1001
Greece	52	51	8	92	0	1005
Hungary	54	35	14	85	1	1000
Italy	51	33	6	83	11	1001
Netherlands	57	30	5	85	10	1003
Romania	49	60	18	82	0	1006
Serbia	51	44	9	90	1	1000
Spain	51	40	4	89	6	1001
Sweden	59	36	4	86	10	1001
Switzerland	52	39	8	86	6	1003
United Kingdom	55	37	2	85	12	1004

Table 1: Summary of sociodemographic characteristics of the surveyed participants by country.

to fact-check. This is the primary outcome variable of the study. Figure 1 shows the distribution of the number of fact-checked statements for the pooled data in the top panel and the distribution of fact-checked statements for each country in the bottom panel.

Concerns about the war

The survey item for concerns about the war is comprised of five statements to be rated on a scale from 1 (completely disagree) to 7 (completely agree) regarding the importance of the war and anxiety. An exploratory factor analysis (see Appendix C) was performed to determine whether it was necessary to consider the statements independently. As a result, the survey item was separated into two different variables. The first, "importance," is an average of the first three statements related to how important an individual considers the war to be for them personally, for their country, and globally. The second variable, "anxiety," corresponds to the fifth statement concerning how anxious an individual feels in regard to the war. The fourth statement was omitted from the models given that it is linked to the perception individuals have regarding the importance of the war for others. This study focuses on negative emotions associated with the individual who is being surveyed; therefore, including information about other people's emotions

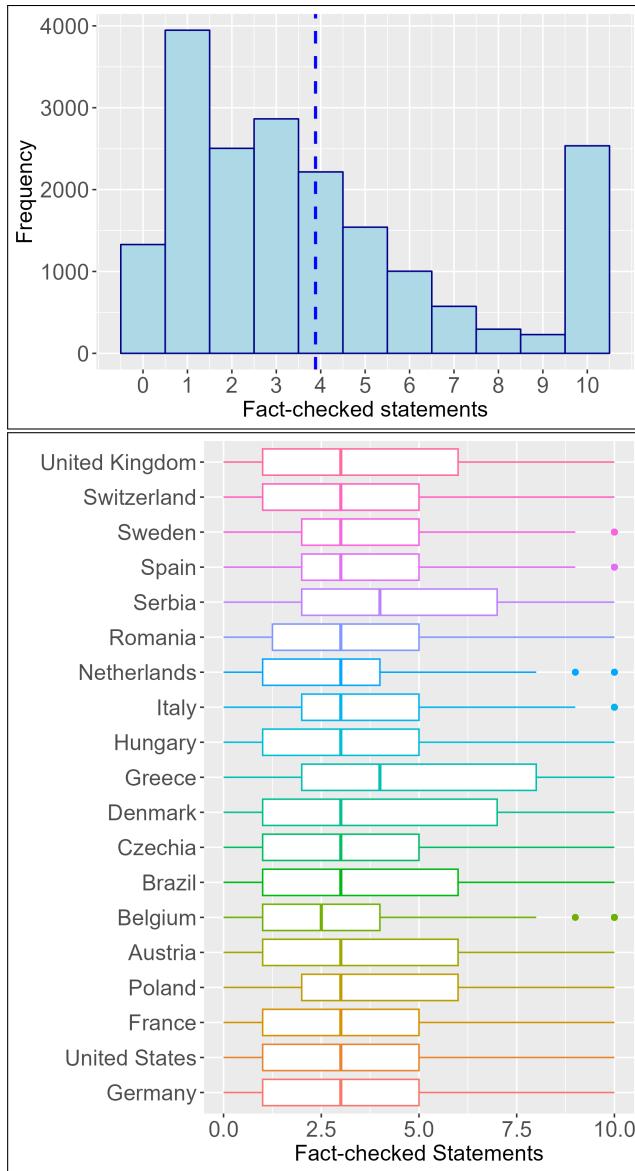


Figure 1: Distribution of main outcome variable: number of fact-checked statements. The top panel shows the distribution of the number of fact-checked statements by individuals for the pooled data (the dashed line corresponds to the mean value). The bottom panel shows a boxplot of the number of fact-checked statements by individuals for each country (values for the mean, standard deviations, and quartiles are provided in Table 2).

is not of interest. Table 2 shows the summary statistics for these variables.

Media use

Individuals were asked how often they obtained political information and news from different media sources (e.g., TV, newspapers, social media) and from different social media platforms (e.g., Twitter,

	Fact-Checks				Anxiety				Importance			
	Mean	Sd.	Q1	Q3	Mean	Sd.	Q1	Q3	Mean	Sd.	Q1	Q3
Germany	3.6	3.0	1	5	5.3	1.7	4	7	5.2	1.3	5	6
United States	3.4	3.0	1	5	4.8	1.7	4	6	5.2	1.3	4	6
France	3.3	2.9	1	5	4.6	1.6	4	6	5.1	1.2	5	6
Poland	4.2	3.2	2	6	5.7	1.4	5	7	5.7	1.2	5	7
Austria	4.1	3.4	1	6	4.8	1.7	4	6	5.2	1.3	4	6
Belgium	3.2	2.7	1	4	4.9	1.6	4	6	5.2	1.2	4	6
Brazil	4.1	2.9	1	6	4.8	2.0	3	7	5.8	1.3	5	7
Czechia	3.4	2.8	1	5	5.4	1.7	4	7	5.0	1.6	4	6
Denmark	4.4	3.5	1	7	4.5	1.8	3	6	5.1	1.3	4	6
Greece	4.8	3.4	2	8	5.0	1.7	4	6	5.3	1.2	5	6
Hungary	3.8	3.0	1	5	5.3	1.7	4	7	5.1	1.4	4	6
Italy	4.0	2.9	2	5	5.0	1.6	4	6	5.5	1.2	5	6
Netherlands	3.4	2.7	1	4	4.5	1.6	3	6	5.1	1.2	4	6
Romania	3.9	3.0	1	5	5.5	1.7	5	7	5.5	1.3	5	7
Serbia	4.7	3.2	2	7	3.5	1.9	2	5	5.1	1.4	4	6
Spain	4.0	2.9	2	5	4.5	1.8	3	6	5.5	1.2	5	6
Sweden	3.9	2.8	2	5	4.3	1.9	3	6	5.5	1.3	5	7
Switzerland	3.6	3.2	1	5	4.6	1.7	3	6	4.8	1.3	4	6
United Kingdom	4.0	3.4	1	6	5.1	1.6	4	6	5.3	1.2	5	6

Table 2: Summary statistics of the main variables (fact-checking, importance, and anxiety) by country

Instagram, TikTok, Facebook).

Control variables

Demographic variables (age, gender, and education) and political variables (orientation, political interest, trust in government, and satisfaction with democracy) were used as controls. Political cynicism, media trust, and self-perception of media literacy were also included in the controls and are calculated as the average agreement of various statements.

Methods

For the first research question, examining the relationship between media use and concern, a set of linear regression models using ordinary least squares (OLS) with robust standard errors were estimated for each country and for each target variable (anxiety and importance). The robust standard errors were calculated

using the Huber-White sandwich estimator to account for heteroscedasticity. The model is specified as:

$$y_{i,c} = \alpha_c + \beta_c D + \delta_c PC + \gamma_c M + \epsilon$$

where:

- c is the country for which the regression is being estimated
- D are demographic control variables
- PC are political control variables
- M are media variables
- $\alpha, \beta, \delta, \gamma$ are the coefficients for each set of predictors, and
- ϵ is the error term.

For the second research question, examining the relationship between concern and fact-checking, a set of negative binomial generalized linear models were estimated for each country using maximum likelihood.

The model is specified as:

$$y_{i,c} = \exp^{\alpha_c + \beta_c D + \delta_c PC + \gamma_c M + \theta_c C}$$

where:

- c is the country for which the regression is being estimated
- D are demographic control variables
- PC are political control variables
- M are media variables
- C are concern variables
- $\alpha, \beta, \delta, \gamma, \theta$ are the coefficients for each set of predictors

Results

The effect of media type on concern

First, this study tests whether using different media outlets predicts higher or lower anxiety levels in individuals using country-by-country regressions. The estimation of one model per country enables drawing between-country comparisons. Figure 2 shows the coefficient estimates and 95 % confidence intervals for selected predictors for a sample set of countries (the complete results of the models and coefficient values are shown in Appendix B Table B.1). In general, the results show that for most media outlets, the coefficient estimates do not reveal patterns of how consumption affects anxiety. Furthermore, most coefficient estimations are not statistically significant at the 0.05 level. Therefore, for only a few countries there is sufficient evidence to suggest there is a relationship between the use of a media outlet to obtain political information and anxiety levels regarding the war. Even then, the trends are not general, and we can observe positive and negative coefficients depending on the country. Particularly, the coefficient estimates for "TV" are mostly positive, and for many countries, the coefficients are statistically significant at the 0.05 level. In these cases, this suggests that watching TV to get information about political news and societal issues predicts higher levels of anxiety in individuals concerning the war.

When considering the use of different social media platforms, the model estimations also reveal mixed results and most of the coefficients are not significant at the 0.05 level. However, in some cases, there is evidence showing a relationship between media platforms and anxiety in certain countries. The coefficient estimates for Twitter in Romania and Facebook in the United Kingdom are positive and statistically significant at the 0.05 level. This indicates that using these outlets in these countries to get information about political news issues predicts higher anxiety levels in individuals. In contrast, the coefficients for Gab in Romania, Poland, and Czechia are negative and statistically significant at the 0.05 level, indicating that using Gab in certain countries predicts lower anxiety levels in individuals.

Second, this study tests whether using different media outlets predicts higher or lower levels of importance regarding the war for individuals using country-by-country regressions. Figure 3 shows the coefficient estimates and 95 % confidence intervals for selected predictors for a sample set of countries (the complete

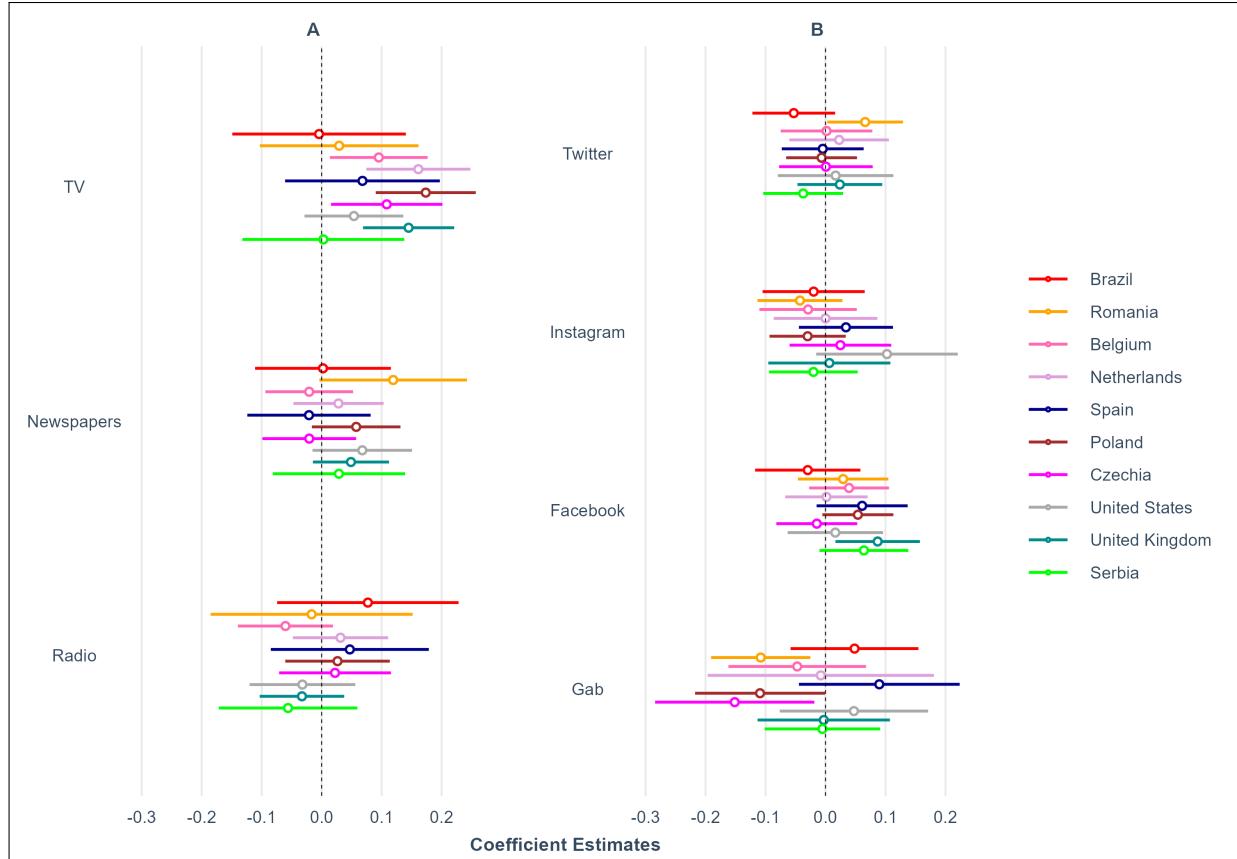


Figure 2: Point estimates and 95 % confidence intervals for coefficients from country-by-country regressions (models include political and demographic controls). The estimates for certain predictors of interest are shown for a sample of countries. Control variables are not shown. The outcome variable (anxiety) and all continuous predictors have been normalized to range from 0 to 1. Positive coefficient values indicate that when the independent variable increases, the mean of the target variable will also increase. Larger coefficient values indicate larger increases in the target variable. Panel A shows the coefficient estimates for different media outlets, and panel B shows the estimates for different social media platforms (see Figure B.1 in Appendix B for results of all countries and variables).

results of the models and coefficient values are shown in Appendix B Table B.2). The results show that for most media outlets and social media platforms, there are no trends that indicate whether they predict higher or lower levels of importance, except for specific cases. The plot for "TV" reveals that almost all the coefficient values are positive, and for many countries, they are statistically significant at the 0.05 level. In these cases, this suggests that watching TV to get information about political news and societal issues predicts higher levels of importance for individuals.

The resulting coefficient estimates for social media platforms do not reveal any patterns, except for the case of "Gab," where most coefficient values are negative. However, in the case of most countries, the

coefficients are not statistically significant at the 0.05 level. In particular, the coefficients for Twitter in Brazil and Gab in Romania and Czechia are negative and statistically significant at the 0.05 level. This indicates that using these platforms in these countries to get information about political news and societal issues predicts lower levels of importance for individuals regarding the war. In contrast, the coefficient for Facebook in Belgium is positive and statistically significant at the 0.05 level, indicating that using this outlet in this country predicts higher levels of importance for individuals regarding the war.

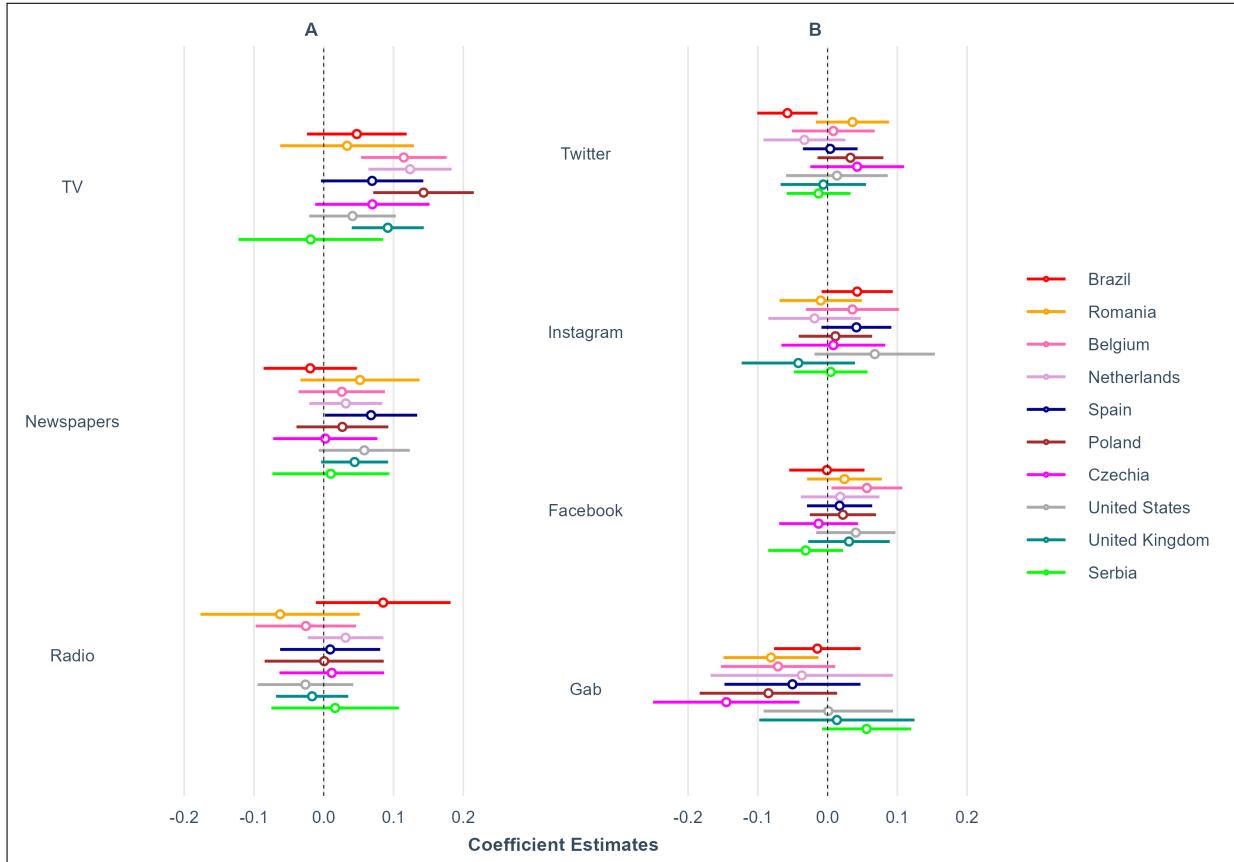


Figure 3: Point estimates and 95 % confidence intervals for coefficients from country-by-country regressions (models include political and demographic controls). The estimates for certain predictors of interest are shown for a sample of countries. Control variables are not shown. The outcome variable (importance) and all continuous predictors have been normalized to range from 0 to 1. Positive coefficient values indicate that when the independent variables increase, the mean of the target variable will also increase. Larger coefficient values indicate larger increases in the target variable. Panel A shows the coefficient estimates for different media outlets, and panel B shows the estimates for different social media platforms (see Figure B.2 in Appendix B for all countries and variables).

The effect of concern on fact-checking

The study tests which variables predict more or less fact-checking by individuals, focusing on analyzing the results of the variables related to concern over the war ("anxiety" and "importance") and media variables. Figure 4 shows the coefficient estimates and 95 % confidence intervals for selected predictors for a sample set of countries (the complete results of the models and coefficient values are shown in Appendix B Table B.3).

The estimated coefficient values for the predictor "anxiety" do not reveal trends and are not statistically significant at the 0.05 level. Consequently, there is a lack of evidence that the number of statements individuals fact-check is correlated to levels of anxiety regarding the war. The "importance" predictor results show that for all countries, the estimated coefficient values are positive, and for many countries, the coefficient is statistically significant at the 0.05 level. In these cases, the results suggest that fact-checking correlates with the war's importance for individuals. When the level of importance increases, the number of statements individuals fact-check also increases. For the cases shown in Figure 4, it can be seen that the Netherlands is the most extreme case, where for every one-unit increase in the predictor "importance," the expected count of fact-checks will increase by a factor of 1.77 (or 77%).

In regards to media outlets, the results don't reveal general patterns. However, it is worth noting that in cases such as the UK and Belgium, the use of social media predicts a smaller number of fact-checked statements by individuals (statistically significant at the 0.05 level). In contrast, the use of newspapers in the Netherlands and Spain predicts more fact-checked statements by individuals (statistically significant at the 0.05 level).

Figure 5 shows the relationship between the predicted values for the target variable (number of fact-checks performed by an individual) and the main predictor variables (anxiety and importance). The trend line in the plots shows that there isn't a distinct relationship between the predictor "anxiety" and the prediction values for "fact-checks" for most countries. In a few cases, there is a positive correlation. In the case of Serbia, there is a negative correlation, indicating that as anxiety levels rise, the amount of fact-checking performed by individuals diminishes. In the case of the predictor "importance," there appears to be a

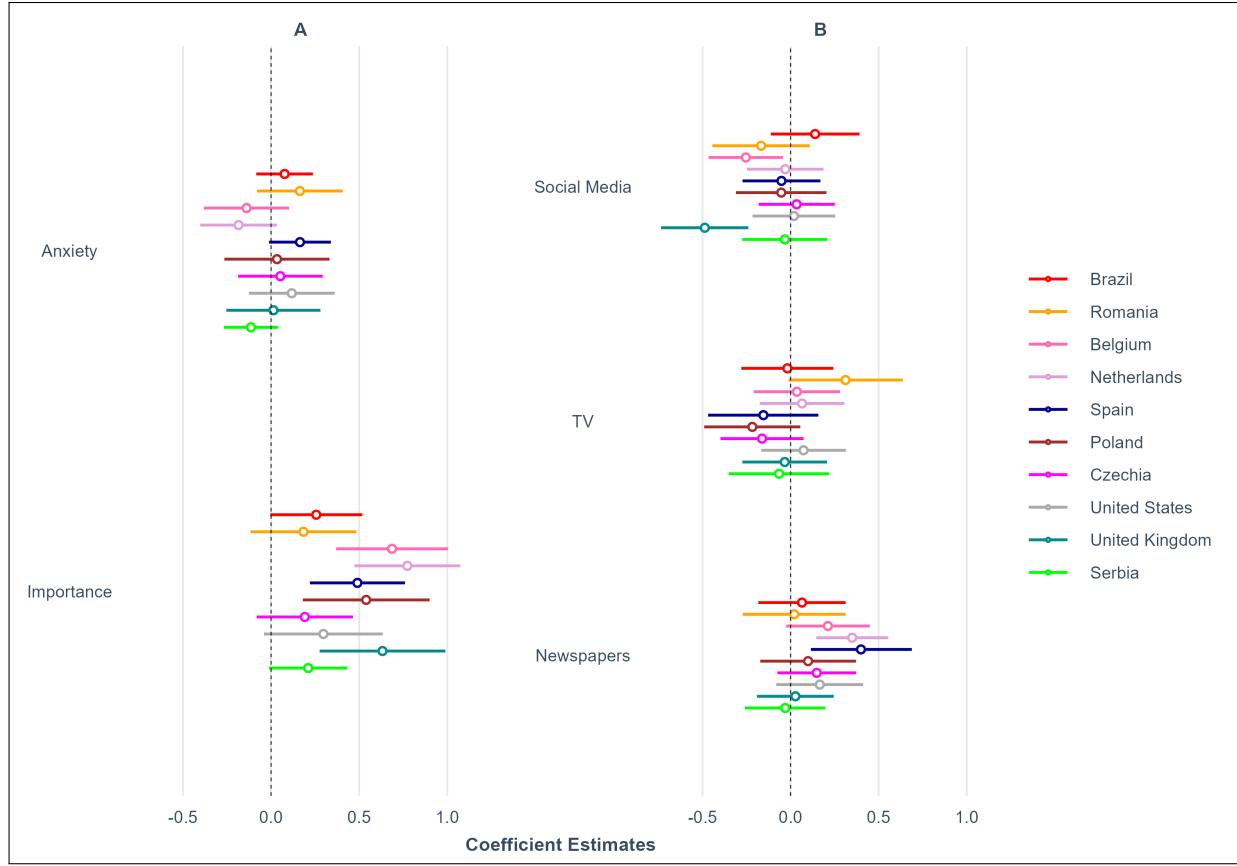


Figure 4: Point estimates and 95 % confidence intervals for coefficients from country-by-country regressions (model includes political and demographic controls). The estimates for certain predictors of interest are shown for a sample of countries. Control variables are not shown. The outcome variable (number of fact-checks performed by an individual) ranges from 0 to 10. All continuous predictors have been normalized to range from 0 to 1. Positive coefficient values indicate an increase in the expected count of fact-checks. Larger coefficient values indicate higher rates of increase in the expected count of fact-checks. Panel A shows coefficients for concern variables and panel B shows coefficients for media variables (see Figure B.3 in Appendix B for all countries and variables).

positive correlation with the dependent variable "fact-checks" for all countries, marked by an inclined trend line with a positive slope.

Discussion and Conclusion

Encountering reliable and accurate news and information is challenging in the context of politicized international conflicts. This is largely due to the widespread use of online news and social media platforms. A misinformed public constitutes a barrier to a healthy democracy and can incite hostility. For this reason, it is essential to comprehend under what conditions individuals tend to increase fact-

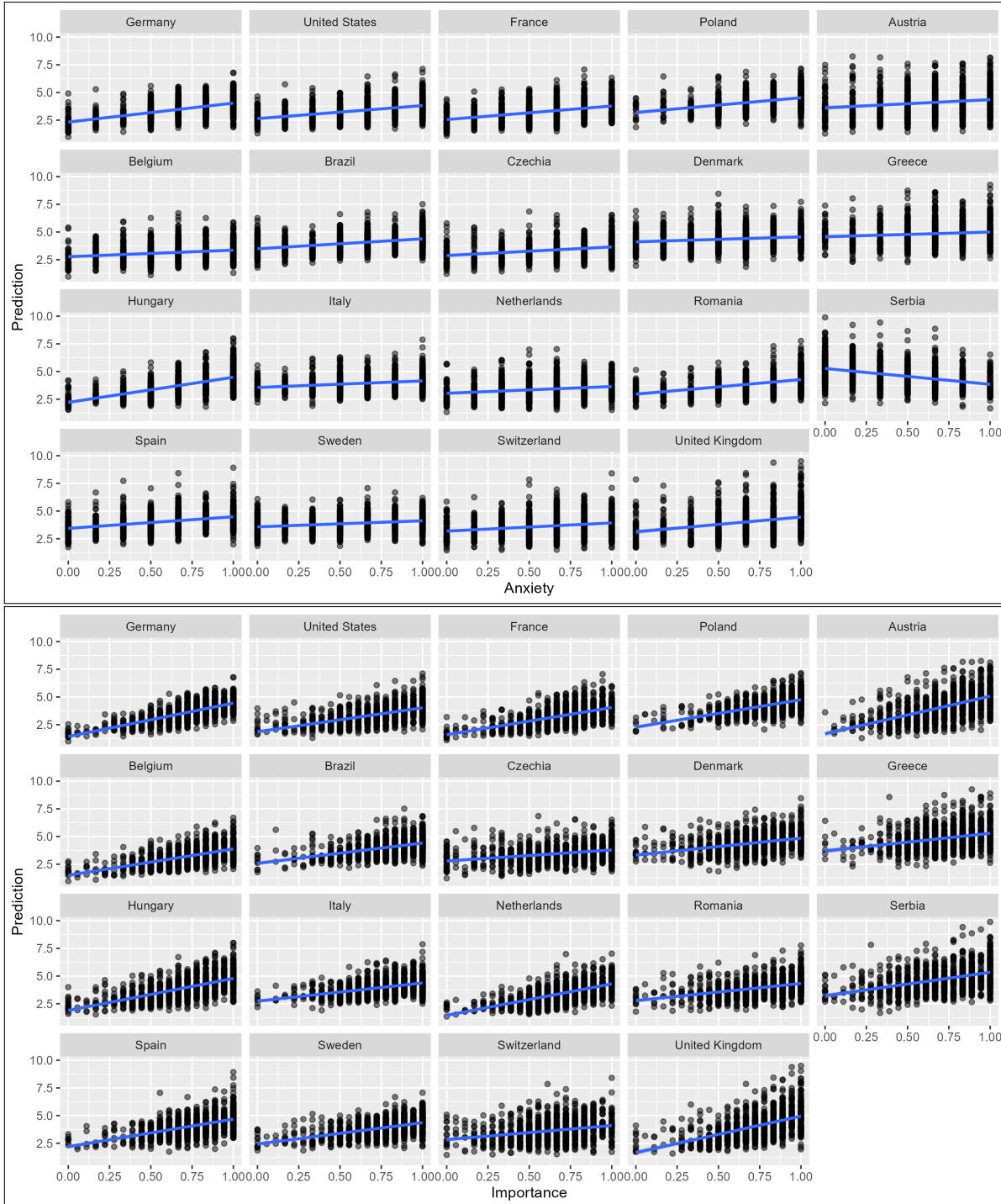


Figure 5: Relationship between the predicted values for the target variable (number of fact-checks performed by an individual) and selected predictor variables (anxiety and importance). The trend line is shown in blue. The top panel shows the relationship between the target variable and the predictor variable "anxiety", and the bottom panel shows the relationship with the predictor variable "importance".

checking.

This study analyzes how the use of different media outlets and social media platforms to obtain news and political information affects the concern of individuals regarding the Russia-Ukraine war and how concern influences the amount of fact-checking performed by individuals. The results show that across countries, there are no consistent outcomes as to whether using a specific media outlet predicts an individual's concern for the war (both concerning importance and anxiety). The exception is the use of TV, which in some countries is correlated with higher anxiety levels and importance. This result aligns with the theory that continuous exposure to news and information incites negative emotions in individuals. Although the theory also suggests that social media drives more negative emotions than traditional media, the results do not support this. Only in some countries is there evidence of a relationship between social media platforms and concern. Furthermore, if we analyze the results from the perspective of the agenda-setting theory, we could state that because, for some countries, the use of TV is correlated with greater concern, it seems that the media outlet "TV" prioritizes the war in its agenda, in contrast to the agenda of other outlets and social media. Regardless, analyzing each country's situation remains necessary to determine which media outlets correlate positively or negatively with concern.

Concerning the second research question, the results show no evidence that "anxiety" is correlated with fact-checking. In contrast, the results show that there is evidence to suggest that increasing "importance" predicts higher fact-checking for most countries included in the study. This indicates a positive correlation between importance levels and information-seeking. The findings for "anxiety" align with the conflicting theories in the literature review and suggest that whether this negative emotion predicts information-seeking or avoidance may be subject to particular circumstances and contexts. Furthermore, the results reveal that some media outlets are correlated with fact-checking in some countries. In particular, social media is negatively correlated with fact-checking in the UK and Belgium. This outcome is coherent with the theory that social media is associated with higher misinformation levels, though it remains for future research to study how this fluctuates from one country to the next.

Limitations arise from data collection and processing that are important to consider. First, in the case of some countries, the collected sample of data is not representative of the population. For example,

Romania appears to have 60% of individuals as college graduates (the highest percentage among the 19 countries). However, as of 2021, Romania had the lowest tertiary education attainment rate in the EU ([European Commission, Directorate-General for Education, Youth, Sport and Culture, 2022](#)). This could lead to biased results that reflect attitudes and behaviors that are unrepresentative of the country. In this regard, it would be beneficial to conduct a replication of the study with a new sample of data that is representative of the country's demographics.

Second, it is worth noting that the control variable for political orientation is based on categorizing the political system as a linear scale between "left" and "right," and the media outlets include alternative left- and right-wing media. The concepts of "left" and "right" are abstract, and individuals associate them with a wide variety of variables, which can lead to biased results ([Bauer et al., 2017](#)). Consequently, caution is advised when comparing results, given that "left" and "right" on the political spectrum can have varied interpretations for individuals from the different countries considered in this study.

Third, there is likely a presence of social-desirability bias, where respondents answer survey questions in a way that society will see favorably. This is problematic because untruthful answers can lead to unreliable data and biased results ([Jann et al., 2019](#)). The distribution of fact-checked statements (see Figure 1) reveals that an unusual number of individuals choose to fact-check only one statement. The act of not fact-checking information is thought of as "wrong" or "bad" within our society. Thus, it could be the case that individuals, to keep up appearances, choose to fact-check one statement over zero. In reality, the behavior of these individuals would be different because they would likely not perform any fact-checking. Hence arises the question of how to process the target variable. In this study, it was decided to conserve the raw number of fact-checks not to risk losing potentially important information. However, future research should contemplate treating the "ones" in the target variable as "zeros" or considering the variable as dichotomous to compare the outcomes.

Fourth, concern and the variables through which it is measured (anxiety and importance) are considered negative emotions in this study. However, negativity is not necessarily a precondition for importance. Considering that the results indicate a positive correlation between fact-checking and importance as opposed to anxiety, future research should explore importance from an alternative theoretical framework

that does not frame it as negative.

Lastly, using linear models has many benefits as well as limitations. This study used linear models because of their simplicity for implementation and outcome interpretation. However, one of the limitations of these models is the assumption of linearity between the dependent and independent variables. Conceivably, in some cases, the relationship between variables is highly complex and would be better explained through non-linear relationships. Further studies should explore these relationships in depth to determine whether it would be constructive to use a more complex model.

These findings have a series of policy implications. In general, the results from this study suggest that to boost fact-checking, the focus of policies should be placed on raising the importance of the war for individuals. Nonetheless, given that there are no global trends regarding which variables are of higher importance, the policy content should be specific to each country. The results of this study can be used to identify which media outlets and platforms have a higher importance in drafting policies that promote their use.

References

- American Psychological Association (2022). *Stress in America*. American Psychological Association.
- Barchielli, B., Cricenti, C., Gallè, F., Sabella, E. A., Liguori, F., Da Molin, G., Liguori, G., Orsi, G. B., Giannini, A. M., Ferracuti, S., et al. (2022). Climate changes, natural resources depletion, covid-19 pandemic, and russian-ukrainian war: What is the impact on habits change and mental health? *International Journal of Environmental Research and Public Health*, 19(19):11929.
- Bauer, P. C., Barberá, P., Ackermann, K., and Venetz, A. (2017). Is the left-right scale a valid measure of ideology? individual-level variation in associations with “left” and “right” and left-right self-placement. *Political Behavior*, 39:553–583.
- Bodas, M., Siman-Tov, M., Peleg, K., and Solomon, Z. (2015). Anxiety-inducing media: The effect of constant news broadcasting on the well-being of israeli television viewers. *Psychiatry*, 78(3):265–276. PMID: 26391834.
- Boyle, M. P., Schmierbach, M., Armstrong, C. L., McLeod, D. M., Shah, D. V., and Pan, Z. (2004). Information seeking and emotional reactions to the september 11 terrorist attacks. *Journalism & Mass Communication Quarterly*, 81(1):155–167.
- Braghieri, L., Levy, R., and Makarin, A. (2022). Social media and mental health. *American Economic Review*, 112(11):3660–3693.
- Castro, L., Strömbäck, J., Esser, F., Van Aelst, P., de Vreese, C., Aalberg, T., Cardenal, A. S., Corbu, N., Hopmann, D. N., Koc-Michalska, K., et al. (2022). Navigating high-choice european political information environments: A comparative analysis of news user profiles and political knowledge. *The International Journal of Press/Politics*, 27(4):827–859.
- Charpentier, C. J., Cogliati Dezza, I., Vellani, V., Globig, L. K., Gädeke, M., and Sharot, T. (2022). Anxiety increases information-seeking in response to large changes. *Scientific Reports*, 12(1):7385.

Cherubini, F. and Graves, L. (2016). The rise of fact-checking sites in europe. *Reuters Institute for the Study of Journalism, University of Oxford*.

de Bruin, K., de Haan, Y., Vliegenthart, R., Kruikemeier, S., and Boukes, M. (2021). News avoidance during the covid-19 crisis: Understanding information overload. *Digital Journalism*, 9(9):1286–1302.

Ducharme, J. (2022). Watching War Unfold on Social Media Affects Your Mental Health. *Time*.

Eddy, K. and Fletcher, R. (2022). Perceptions of media coverage of the war in Ukraine. *Reuters Institute for the Study of Journalism, University of Oxford*.

European Commission, Directorate-General for Education, Youth, Sport and Culture (2022). *Education and training monitor 2022 : Romania*. Publications Office of the European Union.

Fullana, M. A., Hidalgo-Mazzei, D., Vieta, E., and Radua, J. (2020). Coping behaviors associated with decreased anxiety and depressive symptoms during the covid-19 pandemic and lockdown. *Journal of Affective Disorders*, 275:80–81.

Gadarian, S. K. and Albertson, B. (2014). Anxiety, immigration, and the search for information. *Political Psychology*, 35(2):133–164.

Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., Wang, Y., Fu, H., and Dai, J. (2020). Mental health problems and social media exposure during covid-19 outbreak. *Plos one*, 15(4):e0231924.

Gilardi, F., Gessler, T., Kubli, M., and Müller, S. (2022). Social media and political agenda setting. *Political Communication*, 39(1):39–60.

Hameleers, M., Brosius, A., and de Vreese, C. H. (2021). Where's the fake news at? European news consumers' perceptions of misinformation across information sources and topics. Harvard Kennedy School (HKS) Misinformation Review.

Hoyt, D. L., Hiserodt, M., Gold, A. K., Milligan, M. A., and Otto, M. W. (2022). Is ignorance bliss? examining the effect of news media exposure on anxiety and depression during the covid-19 pandemic. *The Journal of Nervous and Mental Disease*, 210(2):91–97.

Jamieson, K. H. and Albarracín, D. (2020). The relation between media consumption and misinformation at the outset of the SARS-CoV-2 pandemic in the US. Harvard Kennedy School (HKS) Misinformation Review.

Jann, B., Krumpal, I., and Wolter, F. (2019). Social desirability bias in surveys—collecting and analyzing sensitive data. special issue.

Jiang, S. (2022). The roles of worry, social media information overload, and social media fatigue in hindering health fact-checking. *Social Media + Society*, 8(3):20563051221113070.

Kemp, S. (2023). Digital 2023: Global Overview Report. DataReportal.

Khudaykulova, M., Yuanqiong, H., Khudaykulov, A., et al. (2022). Economic consequences and implications of the ukraine-russia war. *International Journal of Management Science and Business Administration*, 8(4):44–52.

Knuutila, A., Neudert, L.-M., and Howard, P. N. (2022). Who is afraid of fake news? Modeling risk perceptions of misinformation in 142 countries. Harvard Kennedy School (HKS) Misinformation Review.

Lambert, J., Barnstable, G., Minter, E., Cooper, J., and McEwan, D. (2022). Taking a one-week break from social media improves well-being, depression, and anxiety: a randomized controlled trial. *Cyberpsychology, Behavior, and Social Networking*, 25(5):287–293.

McCombs, M. (2014). *Setting the Agenda : Mass Media and Public Opinion*. Polity Press.

Meraz, S. (2009). Is There an Elite Hold? Traditional Media to Social Media Agenda Setting Influence in Blog Networks. *Journal of Computer-Mediated Communication*, 14(3):682–707.

Mpoke Bigg, M. (2023). Key Moments in the Russia-Ukraine War: A Timeline. *The New York Times*.

Newman, N. (2023). Journalism, media, and technology trends and predictions 2023. Digital News Project. Reuters Institute for the Study of Journalism. University of Oxford.

OECD (2022). *OECD Economic Outlook, Volume 2022 Issue 2*. OECD.

OECD (2022). Disinformation and Russia's war of aggression against Ukraine: Threats and governance responses. OECD.

Özdemir, H. (2023). The Rise of Military Bloggers Amid the Russian-Ukrainian War. TRT World Research Centre.

Pavlik, J. (2022). The russian war in ukraine and the implications for the news media. *Athens Journal of Mass Media and Communications*, 8:1–17.

Pew Research Center (2022). Americans' Concerns About War in Ukraine: Wider Conflict, Possible U.S.-Russia Clash. Pew Research Center.

Porter, E. and Wood, T. J. (2021). The global effectiveness of fact-checking: Evidence from simultaneous experiments in argentina, nigeria, south africa, and the united kingdom. *Proceedings of the National Academy of Sciences*, 118(37):e2104235118.

Price, M., Legrand, A. C., Brier, Z. M., van Stolk-Cooke, K., Peck, K., Dodds, P. S., Danforth, C. M., and Adams, Z. W. (2022). Doomscrolling during covid-19: The negative association between daily social and traditional media consumption and mental health symptoms during the covid-19 pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy*.

Reglitz, M. (2022). Fake news and democracy. *J. Ethics & Soc. Phil.*, 22:162.

Riad, A., Drobov, A., Krobot, M., Antalová, N., Alkasaby, M. A., Peřina, A., and Koščík, M. (2022). Mental health burden of the russian–ukrainian war 2022 (ruw-22): anxiety and depression levels among young adults in central europe. *International journal of environmental research and public health*, 19(14):8418.

Rich, T. S., Milden, I., and Wagner, M. T. (2020). Research note: Does the public support fact-checking social media? It depends whom and how you ask. Harvard Kennedy School (HKS) Misinformation Review.

Schäfer, S., Aaldering, L., and Lecheler, S. (2022). "give me a break!" prevalence and predictors of intentional news avoidance during the covid-19 pandemic. *Mass Communication and Society*, 0(0):1–24.

- Sharma, B., Lee, S. S., and Johnson, B. K. (2022). The Dark at the End of the Tunnel: Doomsurfing on Social Media Newsfeeds. *Technology, Mind, and Behavior*, 3(1: Spring 2022). <https://tmb.apaopen.org/pub/nn9uaqsz>.
- Skovsgaard, M. and Andersen, K. (2020). Conceptualizing news avoidance: Towards a shared understanding of different causes and potential solutions. *Journalism Studies*, 21(4):459–476.
- Suciuc, P. (2022). Is Russia's Invasion Of Ukraine The First Social Media War? *Forbes*.
- Toff, B. and Nielsen, R. K. (2022). How news feels: Anticipated anxiety as a factor in news avoidance and a barrier to political engagement. *Political Communication*, 39(6):697–714.
- Vargo, C. J., Guo, L., and Amazeen, M. A. (2018). The agenda-setting power of fake news: A big data analysis of the online media landscape from 2014 to 2016. *New Media & Society*, 20(5):2028–2049.
- Villi, M., Aharoni, T., Tenenboim-Weinblatt, K., Boczkowski, P. J., Hayashi, K., Mitchelstein, E., Tanaka, A., and Kligler-Vilenchik, N. (2022). Taking a break from news: A five-nation study of news avoidance in the digital era. *Digital Journalism*, 10(1):148–164.
- Walter, N., Cohen, J., Holbert, R. L., and Morag, Y. (2020). Fact-checking: A meta-analysis of what works and for whom. *Political Communication*, 37(3):350–375.
- Yang, Z. J. and Kahlor, L. (2013). What, me worry? the role of affect in information seeking and avoidance. *Science Communication*, 35:189 – 212.
- YouGov (2023). Global Media Outlook, 2023: Growth in digital slows, live events may bounce back. YouGov.
- Ytre-Arne, B. and Moe, H. (2021). Doomsurfing, monitoring and avoiding: News use in covid-19 pandemic lockdown. *Journalism Studies*, 22(13):1739–1755.

Appendix

A Survey question wording

Fact-checking option

The statements you read earlier were subject to recent fact-checks. This means a journalist or independent fact-checker investigated whether the statements were true or false. Would you like to see the fact-checks for any of these statements? Please select all the statements for which you would like to see the fact-checks:

1. The Russian attack repeatedly hit civilian targets in Ukraine
2. China has publicly condemned the Russian invasion of Ukraine
3. NATO is keeping previous agreements on which countries are allowed to join NATO.
4. In Russia-occupied Crimea and in the Donbas, Ukrainians live in repression and fear
5. Russia is committing genocide in Ukraine
6. Ukraine's government is antisemitic and controlled by neo-Nazis
7. Ukraine has repeatedly broken the ceasefire they previously agreed to
8. The U.S. is funding biological weapons research in Ukraine
9. The Ukrainian Armed Forces are supported by far-right militias
10. Ukraine signed a law that forbids publishing news only in Russian

Concerns about the war

Now, we would like to ask you a few questions about the war in Ukraine. To what extent do you agree with the following statements on a scale from 1 (completely disagree) to 7 (completely agree) :

1. The war in Ukraine is an important global issue
2. The war in Ukraine is an important issue for my country
3. The war in Ukraine is an important issue to me personally
4. The war in Ukraine mostly affects other people
5. The war in Ukraine makes me anxious

Media use

In your everyday life, how often do you get information about political news and societal issues from the following sources? (1 never - 7 very often) (8 = I don't use this source at all). Note that it doesn't matter through which device you get to the media or platform (smartphone, laptop, tablet, etc.).

1. Television
2. Radio
3. Newspapers and magazines (including news websites)
4. News aggregators (e.g. Google News, Yahoo News, etc.)
5. Social media (e.g., Facebook, Twitter, YouTube etc.)
6. Messaging services (e.g. WhatsApp, Telegram, Facebook Messenger, Viber)
7. Left-wing alternative media
8. Right-wing alternative media

If an individual scored "Social media" as 2 or higher then they were routed to the question:

When on social media, how often do you get information about political news and societal issues from the following sources? (1 never - 7 very often)

1. Facebook
2. Twitter
3. Instagram
4. YouTube
5. TikTok
6. Gab
7. Reddit
8. Other

Political orientation

In politics, people sometimes talk of 'left' and 'right.' Where would you place yourself on this scale, where 0 means the left and 10 means the right?

Political interest

How interested would you say you are in politics? 1 Very interested - 7 Not at all interested

Political cynicism

To what extent do you agree with the following statements (1 completely disagree - 7 completely agree)?

There are no right or wrong answers. Please give us your best guess, even if you are not sure.

1. People are very frequently manipulated by politicians.
2. Politicians are only interested in getting and maintaining power.
3. Politicians pretend to care more about people than they really do.
4. Our political leaders are prepared to lie to us whenever it suits their purposes.
5. If a politician sticks to their ideals and principles, they are unlikely to reach the top of their profession.
6. No one can hope to stay honest once they enter politics.
7. Almost all politicians will sell out their ideals or break their promises if it will increase their power.
8. All politicians are bad – some are just worse than others.

Media trust

Generally speaking, to what extent do you agree with the following statements about the [country] news media? Please give us your best guess, even if you are not sure. (1 = completely disagree, 7 = completely agree)

1. The news media are fair in their news coverage
2. The news media are accurate in their news coverage
3. The news media separate fact and opinion in their news coverage
4. There is a lot of false information in the news media
5. There is a lot of deceptive information in the news media

Satisfaction with democracy

On the whole, I am satisfied with the way democracy works in [country]. (1 = completely disagree, 7 = completely agree)

Trust in government

Most of the time I can trust the government to do what is right. (1 = completely disagree, 7 = completely agree)

Self-perceived media literacy

To what extent do you agree with the following statements? (1 = completely disagree, 7 = completely agree)?

1. I find it easy to distinguish between what is true and what is false information.
2. I avoid information that is not in line with my views.
3. I can tell when production techniques are used to influence my perception.
4. I spot it when events are made to look more dramatic than they really are.
5. I know where and how to find accurate information.

B Additional figures and tables

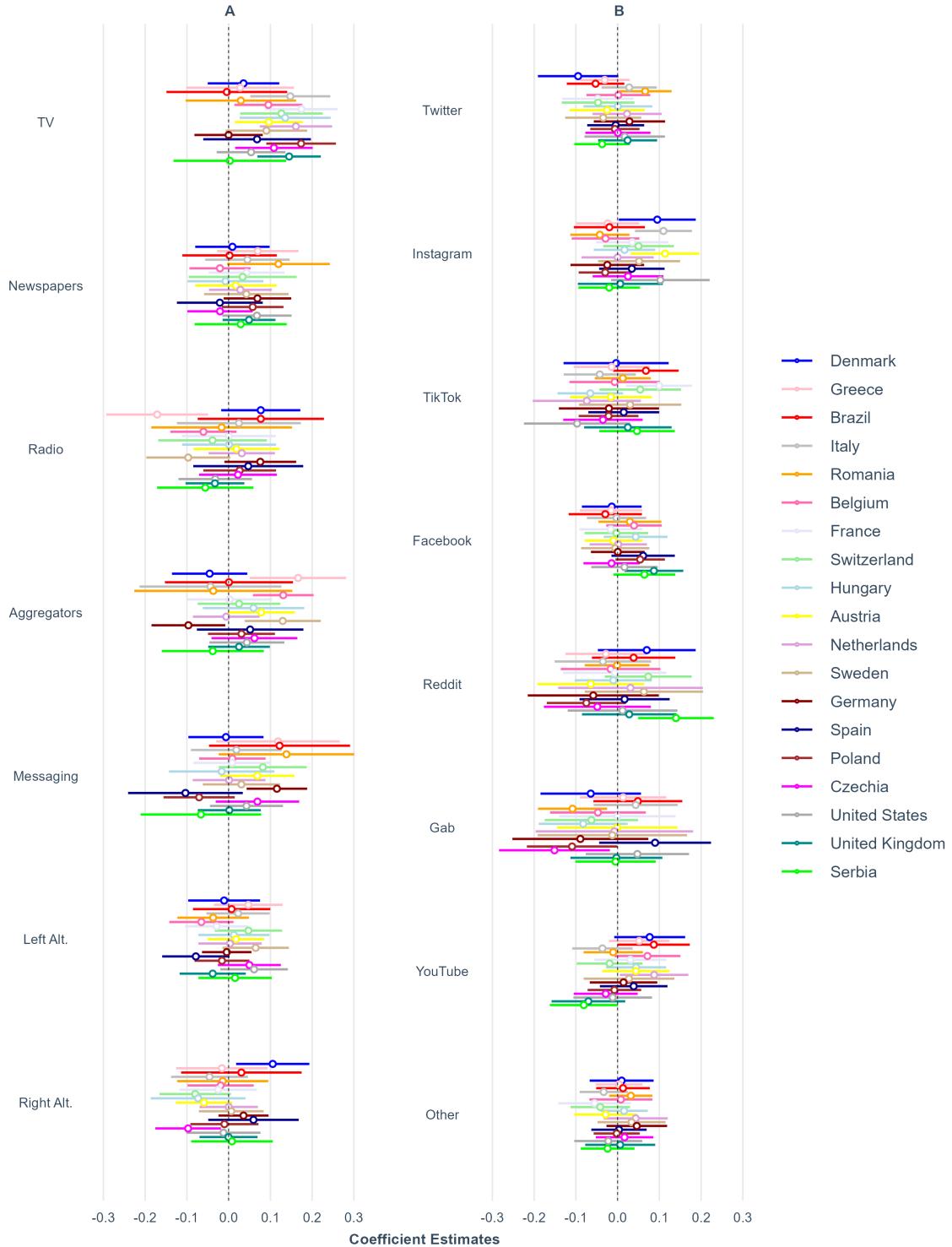


Figure B.1: Point estimates and 95 % confidence intervals for coefficients from country-by-country regressions (models include political and demographic controls). The estimates for certain predictors of interest are shown. Control variables are not shown. The outcome variable (anxiety) and all continuous predictors have been normalized to range from 0 to 1. Positive coefficient values indicate that when the independent variable increases, the mean of the target variable will also increase. Larger coefficient values indicate larger increases in the target variable. Panel A shows the coefficient estimates for different media outlets, and panel B shows the estimates for different social media platforms.

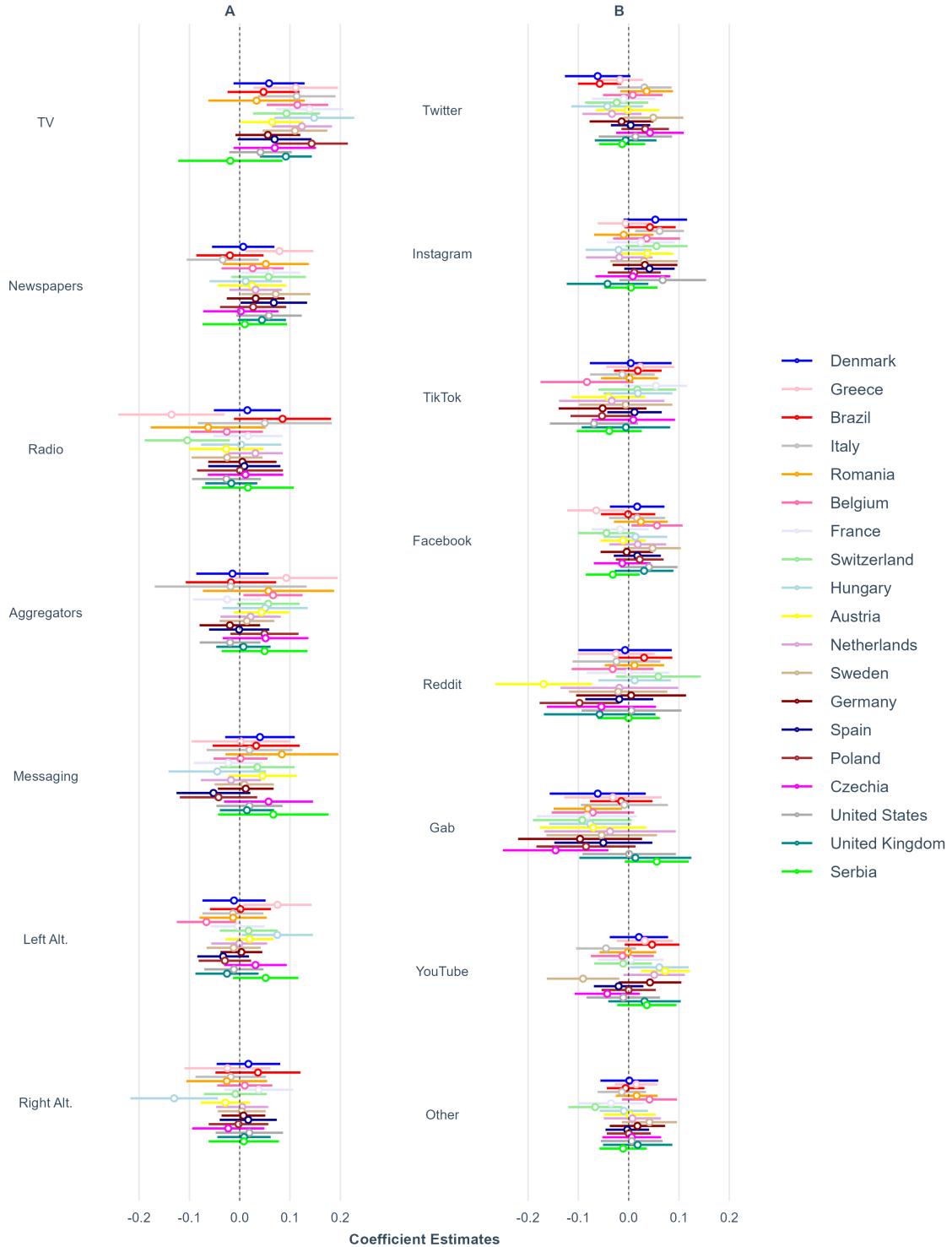


Figure B.2: Point estimates and 95 % confidence intervals for coefficients from country-by- country regressions (models include political and demographic controls). The estimates for certain predictors of interest are shown. Control variables are not shown. The outcome variable (importance) and all continuous predictors have been normalized to range from 0 to 1. Positive coefficient values indicate that when the independent variables increase, the mean of the target variable will also increase. Larger coefficient values indicate larger increases in the target variable. Panel A shows the coefficient estimates for different media outlets, and panel B shows the estimates for different social media platforms.

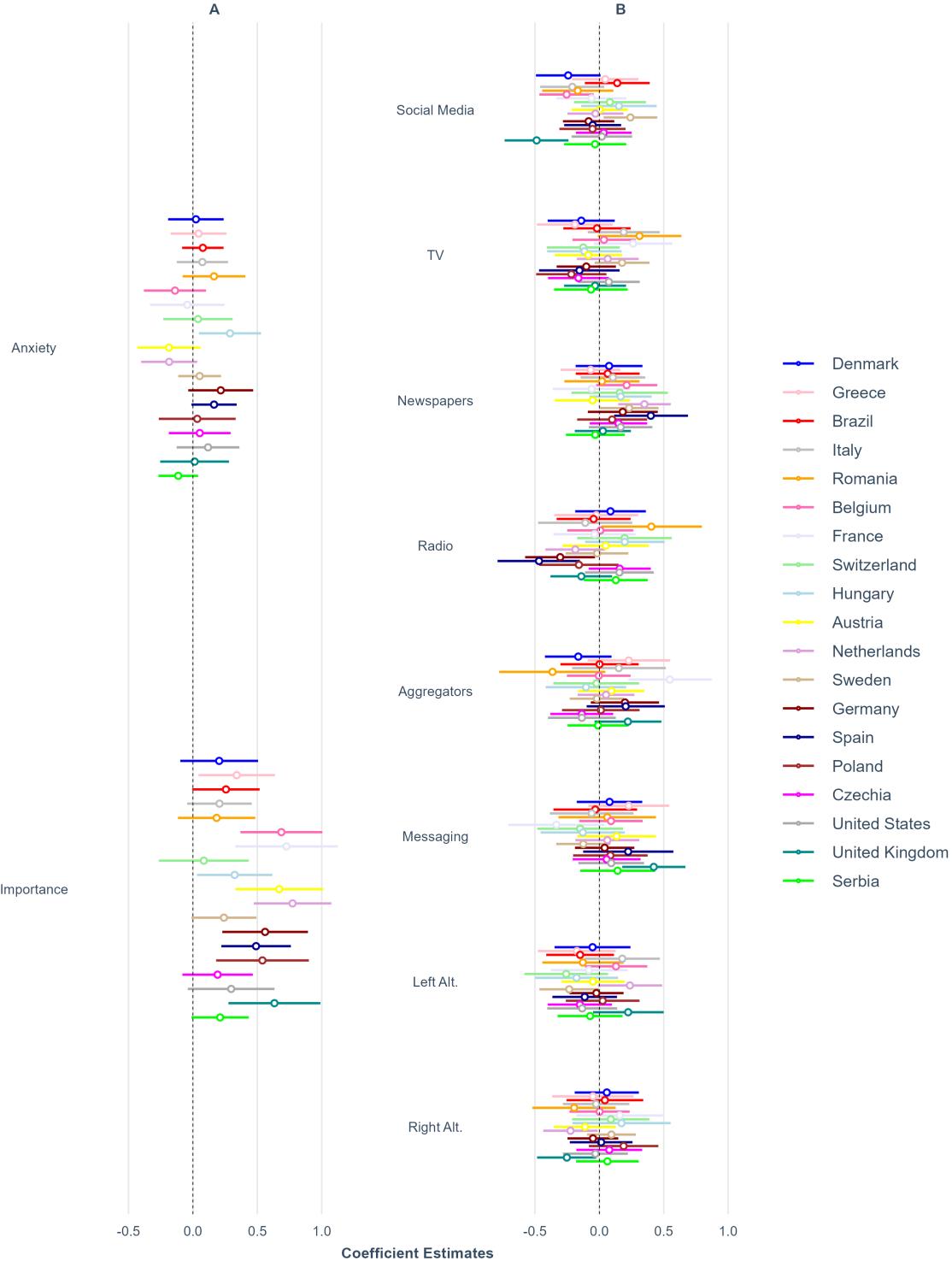


Figure B.3: Point estimates and 95 % confidence intervals for coefficients from country-by-country regressions (model includes political and demographic controls). The estimates for certain predictors of interest are shown. Control variables are not shown. The outcome variable (number of fact-checks performed by an individual) ranges from 0 to 10. All continuous predictors have been normalized to range from 0 to 1. Positive coefficient values indicate an increase in the expected count of fact-checks. Larger coefficient values indicate higher rates of increase in the expected count of fact-checks. Panel A shows coefficients for concern variables and panel B shows coefficients for media variables.

Table B.1: Results from country-by-country OLS regressions for outcome variable anxiety (models include political and demographic controls). Cell entries are coefficient values and robust standard errors are in parentheses. The outcome variable and all continuous variables are scaled to range from 0 to 1. For positive coefficients, when the independent variable increases the mean of the target variable increases. Larger coefficient values indicate greater increases in the outcome variable.

	Denmark	Greece	Brazil	Italy	Romania	Belgium	France	Switzerland	Hungary	Austria
(Intercept)	0.20 ** (0.08)	0.38 *** (0.07)	0.08 (0.07)	0.36 *** (0.07)	0.27 *** (0.06)	0.41 *** (0.08)	0.22 ** (0.07)	0.36 *** (0.07)	0.49 *** (0.07)	0.40 *** (0.08)
AgeCat18-24	-0.06 (0.04)	0.05 (0.03)	-0.05 (0.04)	-0.02 (0.03)	-0.02 (0.03)	-0.04 (0.04)	-0.04 (0.04)	-0.01 (0.04)	-0.11 *** (0.03)	-0.10 ** (0.04)
AgeCat75 or older	0.01 (0.03)	0.21 *** (0.05)	0.02 (0.06)	0.02 (0.03)	0.23 (0.15)	-0.05 (0.03)	0.05 * (0.02)	0.05 (0.03)	0.03 (0.05)	-0.01 (0.05)
woman	0.12 *** (0.02)	0.12 *** (0.02)	0.12 *** (0.02)	0.11 *** (0.02)	0.08 *** (0.02)	0.08 *** (0.02)	0.11 *** (0.02)	0.02 (0.02)	0.05 ** (0.02)	0.07 *** (0.02)
college_gradCollege graduate	-0.01 (0.02)	-0.00 (0.02)	-0.01 (0.02)	-0.03 (0.02)	-0.00 (0.02)	-0.01 (0.02)	-0.00 (0.02)	-0.01 (0.02)	0.03 (0.02)	-0.02 (0.02)
pol_cynicism_scale	0.16 ** (0.05)	0.09 (0.06)	0.22 *** (0.06)	0.17 *** (0.05)	0.13 * (0.05)	0.19 *** (0.05)	0.15 ** (0.05)	0.04 (0.06)	0.04 (0.05)	0.13 * (0.06)
trust_gov	0.22 *** (0.05)	0.12 * (0.06)	-0.02 (0.04)	0.07 (0.05)	0.05 (0.04)	0.04 (0.06)	0.06 (0.05)	0.06 (0.06)	0.11 (0.06)	0.16 ** (0.05)
Political_Interest	0.11 ** (0.04)	-0.04 (0.04)	0.12 ** (0.04)	0.02 (0.03)	0.11 *** (0.03)	0.06 (0.03)	0.04 (0.04)	0.06 (0.04)	0.14 *** (0.03)	0.05 (0.04)
political_orient	-0.00 (0.07)	-0.15 (0.08)	-0.00 (0.09)	-0.23 *** (0.07)	0.09 (0.07)	-0.07 (0.07)	-0.04 (0.07)	-0.20 ** (0.08)	-0.18 * (0.08)	-0.14 (0.08)
political_orient_sq	0.01 (0.11)	0.04 (0.11)	-0.08 (0.10)	0.10 (0.10)	-0.09 (0.09)	0.04 (0.12)	0.02 (0.11)	0.10 (0.12)	0.11 (0.10)	-0.07 (0.13)
satisfaction_dem	-0.04 (0.06)	-0.01 (0.05)	0.06 (0.04)	0.11 * (0.05)	-0.01 (0.04)	0.02 (0.05)	0.00 (0.05)	0.11 (0.07)	-0.07 (0.06)	0.03 (0.05)
media_trust_scale	0.22 ** (0.07)	0.13 (0.07)	0.12 (0.06)	0.08 (0.07)	0.17 * (0.07)	0.11 (0.06)	0.20 ** (0.07)	0.20 ** (0.07)	0.05 (0.06)	0.19 ** (0.06)
sp_media_lit_scale	-0.26 ** (0.08)	0.04 (0.07)	0.10 (0.08)	-0.10 (0.07)	0.08 (0.07)	-0.17 * (0.08)	-0.08 (0.08)	-0.17 * (0.07)	0.02 (0.07)	-0.24 *** (0.07)
TV	0.04 (0.04)	0.03 (0.07)	-0.00 (0.07)	0.15 ** (0.05)	0.03 (0.07)	0.10 * (0.04)	0.17 *** (0.04)	0.13 * (0.05)	0.14 * (0.06)	0.10 * (0.04)
newspapers	0.01 (0.05)	0.07 (0.05)	0.00 (0.06)	0.05 (0.05)	0.12 (0.06)	-0.02 (0.04)	0.04 (0.05)	0.03 (0.07)	-0.01 (0.05)	0.02 (0.05)
radio	0.08 (0.05)	-0.17 ** (0.06)	0.08 (0.08)	0.02 (0.08)	-0.02 (0.09)	-0.06 (0.04)	0.00 (0.06)	-0.04 (0.07)	0.00 (0.06)	0.02 (0.05)
aggregators	-0.05 (0.05)	0.17 ** (0.06)	0.00 (0.08)	-0.04 (0.09)	-0.04 (0.10)	0.13 *** (0.04)	0.00 (0.05)	0.02 (0.05)	0.06 (0.06)	0.08 (0.04)
messaging	-0.01 (0.05)	0.12 (0.08)	0.12 (0.09)	0.02 (0.06)	0.14 (0.08)	0.01 (0.04)	0.01 (0.05)	0.08 (0.05)	-0.02 (0.06)	0.07 (0.05)
left_alt	-0.01 (0.04)	0.05 (0.04)	0.01 (0.05)	0.02 (0.04)	-0.04 (0.04)	-0.07 (0.04)	-0.03 (0.04)	0.05 (0.04)	0.01 (0.04)	0.02 (0.03)
right_alt	0.11 * (0.04)	-0.02 (0.06)	0.03 (0.07)	-0.05 (0.05)	-0.01 (0.06)	-0.02 (0.04)	-0.03 (0.05)	-0.08 (0.04)	-0.07 (0.06)	-0.06 (0.03)
twitter	-0.09 (0.05)	-0.03 (0.03)	-0.05 (0.04)	0.03 (0.03)	0.07 * (0.03)	0.00 (0.04)	-0.05 (0.04)	-0.05 (0.04)	0.00 (0.04)	-0.03 (0.05)
instagram	0.09 * (0.05)	-0.02 (0.04)	-0.02 (0.04)	0.11 ** (0.03)	-0.04 (0.04)	-0.03 (0.04)	0.03 (0.04)	0.05 (0.04)	0.02 (0.04)	0.11 ** (0.04)
tiktok	-0.00 (0.06)	-0.01 (0.05)	0.07 (0.04)	-0.04 (0.04)	0.01 (0.03)	-0.01 (0.06)	0.10 * (0.04)	0.05 (0.05)	-0.07 (0.04)	-0.02 (0.05)
gab	-0.06 (0.06)	0.01 (0.05)	0.05 (0.05)	0.04 (0.05)	-0.11 * (0.04)	-0.05 (0.06)	-0.00 (0.07)	-0.06 (0.06)	-0.08 (0.05)	-0.00 (0.07)
reddit	0.07 (0.06)	-0.03 (0.05)	0.04 (0.05)	-0.04 (0.06)	-0.00 (0.04)	-0.02 (0.06)	-0.01 (0.06)	0.07 (0.05)	-0.01 (0.05)	-0.06 (0.07)
facebook	-0.01 (0.04)	-0.02 (0.04)	-0.03 (0.04)	-0.00 (0.04)	0.03 (0.04)	0.04 (0.03)	-0.02 (0.04)	-0.00 (0.04)	0.04 (0.04)	-0.01 (0.04)
youtube	0.08 (0.04)	0.05 (0.04)	0.09 * (0.04)	-0.04 (0.04)	-0.01 (0.04)	0.07 (0.04)	0.03 (0.04)	-0.02 (0.04)	0.04 (0.04)	0.04 (0.04)
other	0.01 (0.04)	0.00 (0.03)	0.01 (0.03)	-0.03 (0.03)	0.03 (0.03)	0.01 (0.04)	-0.06 (0.04)	-0.04 (0.04)	0.02 (0.03)	-0.03 (0.04)
N	1001	1005	1001	1001	1006	1000	1003	1003	1000	1000
R2adj	0.13	0.10	0.15	0.16	0.13	0.06	0.11	0.11	0.10	0.17

*** p < 0.001; ** p < 0.01; * p < 0.05.

Table B.1 (Continued)

	Netherlands	Sweden	Germany	Spain	Poland	Czechia	United States	Kingdom	Serbia	United
(Intercept)	0.43 *** (0.08)	0.37 *** (0.08)	0.46 *** (0.07)	0.32 *** (0.08)	0.45 *** (0.06)	0.47 *** (0.07)	0.37 *** (0.07)	0.38 *** (0.07)	0.24 ** (0.08)	
AgeCat18-24	-0.04 (0.04)	0.04 (0.05)	-0.04 (0.04)	-0.08 * (0.04)	0.01 (0.04)	-0.04 (0.03)	-0.07 (0.08)	-0.15 * (0.07)	0.09 * (0.04)	
AgeCat75 or older	0.03 (0.03)	0.01 (0.03)	-0.03 (0.02)	0.10 ** (0.04)	0.02 (0.06)	0.08 (0.07)	0.06 ** (0.02)	0.03 (0.02)	0.06 (0.12)	
woman	0.08 *** (0.02)	0.09 *** (0.02)	0.12 *** (0.02)	0.11 *** (0.02)	0.06 *** (0.02)	0.06 ** (0.02)	0.08 *** (0.02)	0.08 *** (0.02)	-0.03 (0.02)	
college_gradCollege graduate	-0.05 ** (0.02)	-0.02 (0.02)	-0.03 (0.02)	0.02 (0.02)	0.02 (0.01)	0.01 (0.02)	0.01 (0.02)	-0.02 (0.02)	-0.00 (0.02)	
pol_cynicism_scale	0.14 * (0.06)	0.06 (0.06)	0.08 (0.05)	0.08 (0.06)	0.10 * (0.05)	-0.00 (0.06)	0.16 ** (0.05)	0.16 ** (0.05)	0.11 (0.06)	
trust_gov	0.12 * (0.05)	0.08 (0.06)	0.16 ** (0.05)	0.13 ** (0.05)	0.03 (0.05)	0.05 (0.05)	0.12 * (0.06)	0.02 (0.05)	-0.04 (0.06)	
Political_Interest	0.04 (0.03)	-0.00 (0.04)	0.19 *** (0.04)	0.10 ** (0.04)	0.11 ** (0.03)	0.08 * (0.04)	0.12 *** (0.04)	0.13 *** (0.04)	-0.10 ** (0.04)	
political_orient	0.01 (0.07)	-0.04 (0.08)	-0.20 * (0.08)	0.06 (0.08)	0.06 (0.07)	-0.10 (0.08)	-0.19 * (0.09)	-0.16 * (0.08)	0.09 (0.09)	
political_orient_sq	-0.17 (0.11)	-0.09 (0.12)	0.14 (0.15)	-0.08 (0.11)	-0.08 (0.09)	0.10 (0.12)	0.07 (0.10)	0.12 (0.12)	0.04 (0.12)	
satisfaction_dem	0.06 (0.05)	-0.04 (0.06)	0.04 (0.05)	-0.01 (0.04)	0.01 (0.05)	0.17 *** (0.05)	-0.07 (0.05)	0.02 (0.05)	0.09 (0.07)	
media_trust_scale	0.14 * (0.06)	0.20 ** (0.07)	0.00 (0.06)	0.21 ** (0.06)	0.16 ** (0.06)	0.08 (0.07)	0.02 (0.07)	0.12 * (0.06)	0.17 * (0.07)	
sp_media_lit_scale	-0.41 *** (0.08)	-0.19 * (0.08)	-0.27 *** (0.07)	-0.20 * (0.08)	-0.07 (0.07)	-0.02 (0.07)	-0.06 (0.07)	-0.15 * (0.07)	0.15 * (0.07)	
TV	0.16 *** (0.04)	0.09 (0.05)	-0.00 (0.04)	0.07 (0.07)	0.17 *** (0.04)	0.11 * (0.05)	0.05 (0.04)	0.14 *** (0.04)	0.00 (0.07)	
newspapers	0.03 (0.04)	0.04 (0.05)	0.07 (0.04)	-0.02 (0.05)	0.06 (0.04)	-0.02 (0.04)	0.07 (0.04)	0.05 (0.03)	0.03 (0.06)	
radio	0.03 (0.04)	-0.10 (0.05)	0.08 (0.04)	0.05 (0.07)	0.03 (0.04)	0.02 (0.05)	-0.03 (0.04)	-0.03 (0.04)	-0.06 (0.06)	
aggregators	-0.01 (0.04)	0.13 ** (0.05)	-0.10 * (0.05)	0.05 (0.07)	0.03 (0.04)	0.06 (0.05)	0.04 (0.05)	0.02 (0.04)	-0.04 (0.06)	
messaging	0.00 (0.04)	0.03 (0.05)	0.12 ** (0.04)	-0.10 (0.07)	-0.07 (0.04)	0.07 (0.05)	0.04 (0.04)	0.00 (0.04)	-0.07 (0.07)	
left_alt	0.00 (0.04)	0.06 (0.04)	-0.00 (0.03)	-0.08 (0.04)	-0.02 (0.03)	0.05 (0.04)	0.06 (0.04)	-0.04 (0.04)	0.02 (0.04)	
right_alt	0.00 (0.04)	0.01 (0.04)	0.04 (0.03)	0.06 (0.06)	-0.01 (0.04)	-0.10 * (0.04)	-0.01 (0.05)	-0.00 (0.04)	0.01 (0.05)	
twitter	0.02 (0.04)	-0.03 (0.05)	0.03 (0.04)	-0.00 (0.03)	-0.01 (0.03)	0.00 (0.04)	0.02 (0.05)	0.02 (0.04)	-0.04 (0.03)	
instagram	0.00 (0.04)	0.05 (0.05)	-0.02 (0.04)	0.03 (0.04)	-0.03 (0.03)	0.02 (0.04)	0.10 (0.06)	0.01 (0.05)	-0.02 (0.04)	
tiktok	-0.07 (0.07)	0.03 (0.06)	-0.02 (0.06)	0.01 (0.04)	-0.02 (0.04)	-0.04 (0.05)	-0.10 (0.06)	0.02 (0.05)	0.05 (0.05)	
gab	-0.01 (0.10)	-0.01 (0.09)	-0.09 (0.08)	0.09 (0.07)	-0.11 * (0.06)	-0.15 * (0.07)	0.05 (0.06)	-0.00 (0.06)	-0.01 (0.05)	
reddit	0.03 (0.09)	0.06 (0.07)	-0.06 (0.08)	0.02 (0.06)	-0.07 (0.05)	-0.05 (0.07)	0.01 (0.07)	0.03 (0.06)	0.14 ** (0.05)	
facebook	0.00 (0.03)	-0.01 (0.04)	0.00 (0.03)	0.06 (0.04)	0.05 (0.03)	-0.01 (0.03)	0.02 (0.04)	0.09 * (0.04)	0.06 (0.04)	
youtube	0.09 * (0.04)	0.03 (0.06)	0.01 (0.04)	0.04 (0.04)	-0.01 (0.03)	-0.03 (0.04)	-0.01 (0.05)	-0.07 (0.04)	-0.08 (0.04)	
other	0.04 (0.04)	0.03 (0.04)	0.05 (0.04)	0.00 (0.03)	-0.00 (0.03)	0.02 (0.04)	-0.02 (0.04)	0.01 (0.04)	-0.02 (0.03)	
N	1003	1001	1000	1001	1004	1000	1004	1004	1000	
R2adj	0.15	0.10	0.18	0.13	0.13	0.11	0.12	0.13	0.06	

*** p < 0.001; ** p < 0.01; * p < 0.05.

Table B.2: Results from country-by-country OLS regressions for outcome variable importance (models include political and demographic controls). Cell entries are coefficient values and robust standard errors are in parentheses. The outcome variable and all continuous variables are scaled to range from 0 to 1. For positive coefficients, when the independent variable increases the mean of the target variable increases. Larger coefficient values indicate greater increases in the outcome variable.

	Denmark	Greece	Brazil	Italy	Romania	Belgium	France	Switzerland	Hungary	Austria
(Intercept)	0.27 *** (0.06)	0.43 *** (0.06)	0.42 *** (0.05)	0.41 *** (0.05)	0.32 *** (0.05)	0.32 *** (0.07)	0.34 *** (0.06)	0.33 *** (0.05)	0.37 *** (0.06)	0.40 *** (0.06)
AgeCat18-24	-0.03 (0.03)	0.01 (0.02)	-0.01 (0.03)	0.02 (0.03)	-0.01 (0.02)	-0.02 (0.03)	-0.02 (0.03)	-0.02 (0.03)	-0.06 * (0.02)	0.02 (0.02)
AgeCat75 or older	0.01 (0.02)	0.16 ** (0.06)	-0.06 (0.04)	0.01 (0.02)	-0.06 (0.15)	-0.01 (0.02)	0.03 (0.02)	0.02 (0.03)	-0.03 (0.05)	-0.01 (0.03)
woman	0.04 ** (0.01)	0.06 *** (0.01)	0.03 * (0.01)	0.03 * (0.01)	0.04 * (0.01)	0.03 * (0.01)	0.06 *** (0.01)	0.02 (0.01)	0.01 (0.01)	0.04 ** (0.01)
college_gradCollege graduate	-0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.03 * (0.01)	0.01 (0.01)	0.01 (0.01)	-0.03 * (0.01)	-0.01 (0.01)	0.04 ** (0.01)	-0.00 (0.01)
pol_cynicism_scale	0.10 ** (0.04)	0.06 (0.05)	0.07 (0.04)	0.13 ** (0.04)	0.10 * (0.04)	0.15 *** (0.04)	0.11 * (0.04)	0.06 (0.04)	0.07 (0.05)	0.03 (0.04)
trust_gov	0.14 *** (0.04)	0.04 (0.04)	-0.05 (0.03)	0.05 (0.05)	0.03 (0.04)	0.05 (0.05)	0.08 * (0.04)	0.05 (0.05)	0.09 (0.05)	0.08 * (0.04)
Political_Interest	0.11 *** (0.03)	0.01 (0.03)	0.07 * (0.03)	0.05 (0.03)	0.08 ** (0.03)	0.07 ** (0.03)	0.05 (0.03)	0.12 *** (0.03)	0.17 *** (0.03)	0.15 *** (0.03)
political_orient	0.01 (0.05)	-0.11 (0.06)	-0.02 (0.06)	-0.13 * (0.05)	0.08 (0.06)	-0.17 ** (0.05)	-0.18 *** (0.05)	-0.13 * (0.06)	-0.20 ** (0.07)	-0.14 * (0.06)
political_orient_sq	-0.06 (0.09)	0.06 (0.09)	0.07 (0.06)	0.06 (0.08)	-0.07 (0.07)	0.22 * (0.09)	0.18 * (0.08)	0.09 (0.09)	0.15 (0.09)	-0.01 (0.09)
satisfaction_dem	0.01 (0.04)	0.07 (0.04)	-0.01 (0.03)	0.06 (0.05)	0.02 (0.03)	0.02 (0.04)	0.05 (0.04)	0.04 (0.05)	-0.01 (0.05)	0.05 (0.04)
media_trust_scale	0.22 *** (0.05)	0.00 (0.05)	0.02 (0.04)	-0.04 (0.05)	0.20 *** (0.06)	0.07 (0.05)	0.10 * (0.05)	0.18 *** (0.05)	0.10 * (0.05)	0.15 *** (0.04)
sp_media_lit_scale	0.04 (0.06)	0.16 ** (0.05)	0.20 *** (0.05)	0.16 ** (0.06)	0.11 * (0.06)	0.03 (0.06)	-0.01 (0.06)	-0.01 (0.05)	0.06 (0.06)	0.05 (0.05)
TV	0.06 (0.04)	0.11 ** (0.04)	0.05 (0.04)	0.11 ** (0.04)	0.03 (0.05)	0.11 *** (0.03)	0.14 *** (0.03)	0.09 ** (0.03)	0.15 *** (0.04)	0.06 * (0.03)
newspapers	0.01 (0.03)	0.08 * (0.03)	-0.02 (0.03)	-0.03 (0.04)	0.05 (0.04)	0.03 (0.03)	0.06 * (0.03)	0.06 (0.04)	0.01 (0.04)	0.02 (0.03)
radio	0.02 (0.03)	-0.14 * (0.05)	0.09 (0.05)	0.05 (0.07)	-0.06 (0.06)	-0.03 (0.04)	0.02 (0.04)	-0.10 * (0.04)	0.00 (0.04)	-0.03 (0.04)
aggregators	-0.01 (0.04)	0.09 (0.05)	-0.02 (0.05)	-0.02 (0.08)	0.06 (0.07)	0.07 * (0.03)	-0.03 (0.03)	0.06 (0.03)	0.05 (0.04)	0.04 (0.03)
messaging	0.04 (0.04)	0.00 (0.05)	0.03 (0.04)	0.02 (0.04)	0.08 (0.06)	0.00 (0.03)	-0.02 (0.03)	0.04 (0.04)	-0.04 (0.05)	0.05 (0.03)
left_alt	-0.01 (0.03)	0.08 * (0.03)	0.00 (0.03)	-0.01 (0.03)	-0.01 (0.03)	-0.07 * (0.03)	-0.00 (0.03)	0.02 (0.03)	0.07 * (0.04)	0.02 (0.02)
right_alt	0.02 (0.03)	-0.02 (0.04)	0.04 (0.04)	-0.02 (0.04)	-0.03 (0.04)	0.01 (0.03)	0.04 (0.03)	-0.01 (0.03)	-0.13 ** (0.04)	-0.03 (0.03)
twitter	-0.06 (0.03)	-0.02 (0.02)	-0.06 ** (0.02)	0.03 (0.03)	0.04 (0.03)	0.01 (0.03)	-0.01 (0.03)	-0.02 (0.03)	-0.04 (0.04)	-0.00 (0.03)
instagram	0.05 (0.03)	-0.01 (0.03)	0.04 (0.03)	0.06 * (0.02)	-0.01 (0.03)	0.04 (0.03)	0.02 (0.03)	0.06 (0.03)	-0.02 (0.03)	0.04 (0.03)
tiktok	0.00 (0.04)	0.02 (0.03)	0.02 (0.02)	-0.01 (0.03)	0.00 (0.03)	-0.08 (0.05)	0.05 (0.03)	0.02 (0.04)	0.02 (0.03)	-0.04 (0.04)
gab	-0.06 (0.05)	-0.03 (0.05)	-0.01 (0.03)	-0.01 (0.04)	-0.08 * (0.03)	-0.07 (0.04)	-0.08 (0.05)	-0.09 (0.05)	-0.08 (0.04)	-0.07 (0.05)
reddit	-0.01 (0.05)	-0.03 (0.04)	0.03 (0.03)	-0.02 (0.04)	0.01 (0.03)	-0.03 (0.04)	-0.00 (0.04)	0.06 (0.04)	0.01 (0.04)	-0.17 *** (0.05)
facebook	0.02 (0.03)	-0.06 * (0.03)	-0.00 (0.03)	0.02 (0.03)	0.02 (0.03)	0.06 * (0.03)	-0.02 (0.03)	-0.04 (0.03)	0.01 (0.03)	-0.01 (0.02)
youtube	0.02 (0.03)	0.03 (0.03)	0.05 (0.03)	-0.05 (0.03)	-0.00 (0.03)	-0.01 (0.03)	0.00 (0.03)	-0.01 (0.03)	0.06 * (0.03)	0.07 ** (0.02)
other	0.00 (0.03)	0.02 (0.02)	-0.01 (0.02)	-0.01 (0.02)	0.02 (0.02)	0.04 (0.03)	-0.04 (0.03)	-0.07 * (0.03)	-0.01 (0.02)	0.00 (0.03)
N	1001	1005	1001	1001	1006	1000	1003	1003	1000	1000
R2adj	0.14	0.10	0.14	0.10	0.11	0.11	0.16	0.14	0.14	0.22

*** p < 0.001; ** p < 0.01; * p < 0.05.

Table B.2 (Continued)

	Netherlands	Sweden	Germany	Spain	Poland	Czechia	United States	Kingdom	Serbia
(Intercept)	0.44 *** (0.05)	0.52 *** (0.06)	0.39 *** (0.06)	0.43 *** (0.06)	0.51 *** (0.05)	0.32 *** (0.06)	0.43 *** (0.05)	0.41 *** (0.05)	0.30 *** (0.05)
AgeCat18-24	-0.03 (0.03)	0.02 (0.04)	-0.03 (0.03)	-0.05 * (0.02)	0.05 (0.02)	-0.06 ** (0.02)	-0.16 *** (0.04)	-0.09 (0.05)	-0.02 (0.03)
AgeCat75 or older	0.03 * (0.02)	-0.01 (0.02)	-0.00 (0.02)	0.06 * (0.02)	0.02 (0.04)	0.12 (0.07)	0.07 *** (0.02)	0.03 * (0.02)	0.00 (0.05)
woman	0.01 (0.01)	0.01 (0.01)	0.05 *** (0.01)	0.05 *** (0.01)	0.02 (0.01)	0.03 * (0.02)	0.02 (0.01)	0.03 * (0.01)	0.06 *** (0.01)
college_gradCollege graduate	-0.04 ** (0.01)	-0.01 (0.01)	0.01 (0.01)	-0.01 (0.01)	0.02 (0.01)	0.01 (0.02)	0.02 (0.01)	-0.02 (0.01)	0.01 (0.01)
pol_cynicism_scale	0.03 (0.04)	-0.05 (0.04)	0.07 (0.04)	0.03 (0.04)	0.05 (0.04)	-0.03 (0.05)	0.05 (0.04)	0.05 (0.04)	0.11 * (0.04)
trust_gov	0.07 (0.04)	0.00 (0.05)	0.10 * (0.04)	0.00 (0.03)	-0.00 (0.04)	0.12 ** (0.04)	0.08 (0.04)	0.01 (0.04)	0.10 * (0.05)
Political_Interest	0.07 ** (0.03)	0.11 *** (0.03)	0.17 *** (0.03)	0.08 *** (0.02)	0.09 *** (0.03)	0.08 * (0.03)	0.14 *** (0.03)	0.09 *** (0.03)	0.16 *** (0.03)
political_orient	-0.08 (0.05)	-0.01 (0.05)	-0.09 (0.06)	0.05 (0.05)	0.01 (0.06)	-0.06 (0.07)	-0.22 *** (0.06)	-0.05 (0.06)	-0.15 * (0.06)
political_orient_sq	0.00 (0.10)	-0.05 (0.08)	-0.06 (0.11)	-0.08 (0.08)	-0.03 (0.07)	0.04 (0.10)	0.14 (0.08)	-0.05 (0.09)	0.15 (0.08)
satisfaction_dem	0.10 * (0.04)	0.04 (0.05)	0.05 (0.04)	0.06 (0.03)	0.05 (0.04)	0.16 *** (0.04)	0.00 (0.04)	0.04 (0.04)	-0.03 (0.05)
media_trust_scale	0.09 * (0.04)	0.08 (0.05)	0.14 ** (0.04)	0.17 *** (0.04)	0.04 (0.05)	0.19 ** (0.06)	-0.01 (0.05)	0.15 *** (0.05)	-0.10 * (0.04)
sp_media_lit_scale	-0.04 (0.06)	0.05 (0.06)	-0.01 (0.05)	0.11 * (0.05)	0.08 (0.06)	0.08 (0.06)	0.12 * (0.05)	0.16 ** (0.06)	0.14 ** (0.06)
TV	0.12 *** (0.03)	0.11 *** (0.03)	0.06 (0.03)	0.07 (0.04)	0.14 *** (0.04)	0.07 (0.04)	0.04 (0.03)	0.09 *** (0.03)	-0.02 (0.05)
newspapers	0.03 (0.03)	0.07 * (0.04)	0.03 (0.03)	0.07 * (0.03)	0.03 (0.03)	0.00 (0.04)	0.06 (0.03)	0.04 (0.02)	0.01 (0.04)
radio	0.03 (0.03)	-0.03 (0.04)	0.01 (0.03)	0.01 (0.04)	0.00 (0.04)	0.01 (0.04)	-0.03 (0.03)	-0.02 (0.03)	0.02 (0.05)
aggregators	0.02 (0.03)	0.01 (0.03)	-0.02 (0.03)	-0.00 (0.03)	0.05 (0.03)	0.05 (0.04)	-0.02 (0.03)	0.01 (0.03)	0.05 (0.04)
messaging	-0.02 (0.03)	0.01 (0.03)	0.01 (0.03)	-0.05 (0.04)	-0.04 (0.04)	0.06 (0.05)	0.02 (0.03)	0.01 (0.03)	0.07 (0.06)
left_alt	-0.00 (0.03)	-0.01 (0.03)	0.00 (0.02)	-0.03 (0.03)	-0.03 (0.03)	0.03 (0.03)	-0.01 (0.03)	-0.03 (0.03)	0.05 (0.03)
right_alt	0.00 (0.03)	0.00 (0.02)	0.01 (0.02)	0.02 (0.03)	-0.00 (0.03)	-0.02 (0.04)	0.02 (0.03)	0.01 (0.03)	0.01 (0.04)
twitter	-0.03 (0.03)	0.05 (0.03)	-0.01 (0.03)	0.00 (0.02)	0.03 (0.02)	0.04 (0.03)	0.01 (0.04)	-0.01 (0.03)	-0.01 (0.02)
instagram	-0.02 (0.03)	0.03 (0.03)	0.03 (0.03)	0.04 (0.03)	0.01 (0.03)	0.01 (0.04)	0.07 (0.04)	-0.04 (0.04)	0.00 (0.03)
tiktok	-0.03 (0.05)	-0.01 (0.05)	-0.05 (0.04)	0.01 (0.03)	-0.05 (0.03)	0.01 (0.04)	-0.07 (0.04)	-0.01 (0.04)	-0.04 (0.03)
gab	-0.04 (0.07)	-0.05 (0.06)	-0.10 (0.06)	-0.05 (0.05)	-0.08 (0.05)	-0.15 ** (0.05)	0.00 (0.05)	0.01 (0.06)	0.06 (0.03)
reddit	-0.02 (0.06)	-0.02 (0.05)	0.00 (0.06)	-0.02 (0.03)	-0.10 * (0.04)	-0.05 (0.06)	0.01 (0.05)	-0.06 (0.06)	-0.00 (0.03)
facebook	0.02 (0.03)	0.05 (0.03)	-0.00 (0.03)	0.02 (0.02)	0.02 (0.02)	-0.01 (0.03)	0.04 (0.03)	0.03 (0.03)	-0.03 (0.03)
youtube	0.05 (0.03)	-0.09 * (0.04)	0.04 (0.03)	-0.02 (0.03)	-0.00 (0.03)	-0.04 (0.03)	-0.01 (0.04)	0.03 (0.04)	0.04 (0.03)
other	0.01 (0.03)	0.04 (0.03)	0.02 (0.03)	-0.00 (0.02)	0.00 (0.02)	0.01 (0.03)	0.01 (0.03)	0.02 (0.04)	-0.01 (0.02)
N	1003	1001	1000	1001	1004	1000	1004	1004	1000
R2adj	0.20	0.14	0.20	0.13	0.12	0.21	0.17	0.13	0.11

*** p < 0.001; ** p < 0.01; * p < 0.05.

Table B.3: Results from country-by-country negative binomial regressions for outcome variable fact-checking (models include political and demographic controls). Cell entries are coefficient values and standard errors are in parentheses. All continuous predictors have been normalized to range from 0 to 1. Positive coefficient values indicate an increase in the expected count of fact-checks. Larger coefficient values indicate higher rates of increase in the expected count of fact-checks.

	Denmark	Greece	Brazil	Italy	Romania	Belgium	France	Switzerland	Hungary	Austria
(Intercept)	1.06 *** (0.22)	1.44 *** (0.20)	0.67 *** (0.17)	0.80 *** (0.19)	0.81 *** (0.18)	0.15 (0.22)	0.45 * (0.23)	0.56 * (0.23)	0.46 * (0.20)	0.48 (0.24)
AgeCat18-24	-0.20 (0.11)	-0.18 * (0.09)	-0.03 (0.09)	0.01 (0.10)	-0.12 (0.07)	0.03 (0.10)	0.11 (0.12)	-0.13 (0.11)	-0.06 (0.08)	-0.30 ** (0.12)
AgeCat75 or older	-0.01 (0.10)	-0.14 (0.51)	0.13 (0.15)	0.04 (0.07)	-0.18 (0.56)	0.15 (0.10)	0.12 (0.08)	0.12 (0.12)	-0.11 (0.24)	0.17 (0.16)
woman	0.03 (0.06)	-0.15 ** (0.05)	0.01 (0.05)	-0.10 * (0.05)	-0.05 (0.05)	-0.11 * (0.05)	-0.08 (0.06)	0.01 (0.06)	-0.05 (0.05)	-0.04 (0.06)
college_gradCollege graduate	-0.00 (0.06)	0.02 (0.05)	0.05 (0.05)	0.06 (0.05)	0.11 * (0.05)	0.02 (0.05)	0.16 ** (0.06)	0.17 ** (0.06)	0.14 ** (0.05)	0.16 * (0.06)
pol_cynism_scale	-0.03 (0.15)	-0.21 (0.15)	0.11 (0.12)	0.33 * (0.14)	-0.01 (0.14)	0.26 (0.16)	0.12 (0.17)	0.34 (0.17)	0.24 (0.15)	-0.06 (0.17)
trust_gov	0.13 (0.14)	-0.03 (0.15)	-0.01 (0.09)	0.12 (0.15)	0.07 (0.13)	-0.02 (0.16)	0.01 (0.18)	-0.26 (0.19)	-0.09 (0.17)	0.04 (0.16)
Political_Interest	0.38 *** (0.11)	0.38 *** (0.09)	0.27 ** (0.09)	0.13 (0.10)	0.25 ** (0.09)	0.26 ** (0.10)	0.25 * (0.11)	0.44 *** (0.11)	0.38 *** (0.09)	0.61 *** (0.11)
political_orient	0.20 (0.22)	-0.16 (0.22)	-0.02 (0.21)	-0.12 (0.19)	-0.32 (0.22)	-0.20 (0.22)	0.01 (0.25)	-0.34 (0.25)	-0.16 (0.23)	-0.36 (0.26)
political_orient_sq	-0.44 (0.33)	0.08 (0.30)	-0.17 (0.24)	-0.08 (0.26)	0.31 (0.25)	-0.14 (0.32)	-0.26 (0.34)	-0.26 (0.37)	0.11 (0.28)	0.12 (0.40)
satisfaction_dem	0.07 (0.15)	-0.06 (0.14)	-0.02 (0.09)	0.06 (0.14)	-0.33 ** (0.12)	0.14 (0.15)	-0.10 (0.17)	0.75 *** (0.20)	0.04 (0.17)	0.11 (0.16)
media_trust_scale	-0.32 (0.19)	-0.59 *** (0.17)	-0.38 ** (0.13)	-0.61 *** (0.17)	-0.15 (0.16)	-0.01 (0.17)	-0.23 (0.20)	-0.22 (0.20)	-0.23 (0.15)	-0.22 (0.18)
sp_media_lit_scale	0.54 ** (0.20)	0.22 (0.17)	0.62 *** (0.16)	0.32 (0.19)	0.48 ** (0.18)	0.50 * (0.21)	0.03 (0.22)	0.25 (0.21)	0.13 (0.18)	0.54 ** (0.20)
TV	-0.14 (0.13)	-0.19 (0.15)	-0.02 (0.14)	0.19 (0.14)	0.31 (0.17)	0.04 (0.12)	0.26 (0.15)	-0.13 (0.15)	-0.12 (0.15)	-0.09 (0.13)
newspapers	0.08 (0.13)	-0.07 (0.12)	0.06 (0.13)	0.10 (0.13)	0.02 (0.15)	0.21 (0.12)	-0.06 (0.15)	0.16 (0.15)	0.17 (0.19)	-0.05 (0.13)
social_media	-0.24 (0.13)	0.05 (0.13)	0.14 (0.13)	-0.21 (0.13)	-0.17 (0.14)	-0.25 * (0.11)	-0.06 (0.14)	0.08 (0.14)	0.15 (0.15)	0.00 (0.11)
radio	0.09 (0.14)	-0.02 (0.17)	-0.04 (0.15)	-0.11 (0.18)	0.40 * (0.20)	0.01 (0.13)	-0.04 (0.16)	0.20 (0.20)	0.20 (0.16)	0.05 (0.17)
aggregators	-0.16 (0.13)	0.23 (0.16)	0.00 (0.16)	0.15 (0.19)	-0.36 (0.21)	-0.00 (0.13)	0.55 ** (0.17)	-0.02 (0.16)	-0.10 (0.16)	0.09 (0.13)
messaging	0.08 (0.13)	0.23 (0.17)	-0.03 (0.18)	-0.06 (0.17)	0.06 (0.20)	0.09 (0.13)	-0.33 (0.18)	-0.15 (0.16)	-0.13 (0.17)	0.13 (0.15)
left_alt	-0.05 (0.16)	-0.17 (0.16)	-0.15 (0.13)	0.18 (0.15)	-0.13 (0.15)	0.13 (0.13)	-0.08 (0.16)	-0.26 (0.16)	-0.18 (0.17)	-0.05 (0.13)
right_alt	0.06 (0.13)	-0.05 (0.17)	0.04 (0.15)	-0.03 (0.13)	-0.20 (0.16)	0.00 (0.12)	0.16 (0.17)	0.09 (0.15)	0.17 (0.20)	-0.11 (0.12)
anxiety	0.02 (0.11)	0.04 (0.11)	0.08 (0.08)	0.07 (0.10)	0.16 (0.12)	-0.14 (0.12)	-0.04 (0.15)	0.04 (0.14)	0.29 * (0.12)	-0.19 (0.12)
importance_scale	0.20 (0.15)	0.34 * (0.15)	0.26 (0.13)	0.21 (0.13)	0.18 (0.15)	0.69 *** (0.16)	0.73 *** (0.20)	0.08 (0.18)	0.32 * (0.15)	0.67 *** (0.17)
N	1001	1005	1001	1001	1006	1000	1003	1003	1000	1000
Pseudo R2	0.05	0.07	0.07	0.06	0.07	0.09	0.07	0.07	0.10	0.10

*** p < 0.001; ** p < 0.01; * p < 0.05.

Table B.3 (Continued)

	Netherlands	Sweden	Germany	Spain	Poland	Czechia	United States	United Kingdom	United Serbia
(Intercept)	0.57 ** (0.21)	0.69 *** (0.18)	0.60 ** (0.22)	0.80 *** (0.19)	1.03 *** (0.21)	0.84 *** (0.20)	0.56 ** (0.20)	0.55 * (0.23)	1.41 *** (0.17)
AgeCat18-24	-0.02 (0.11)	0.20 (0.11)	-0.13 (0.13)	0.18 (0.11)	0.11 (0.10)	-0.17 * (0.07)	0.28 (0.24)	-0.15 (0.19)	-0.11 (0.08)
AgeCat75 or older	0.01 (0.08)	-0.01 (0.08)	0.03 (0.08)	0.04 (0.09)	0.10 (0.19)	0.06 (0.18)	0.12 (0.08)	0.08 (0.08)	-0.05 (0.27)
woman	-0.02 (0.05)	-0.10 * (0.05)	-0.08 (0.05)	-0.08 (0.05)	-0.06 (0.05)	0.10 (0.05)	-0.08 (0.06)	-0.04 (0.06)	-0.12 ** (0.04)
college_gradCollege graduate	0.09 (0.05)	0.04 (0.05)	0.17 ** (0.06)	0.04 (0.05)	0.11 * (0.05)	0.04 (0.06)	0.03 (0.06)	0.07 (0.06)	0.05 (0.04)
pol_cynicism_scale	0.07 (0.15)	-0.03 (0.13)	0.04 (0.15)	0.18 (0.13)	0.01 (0.15)	0.05 (0.15)	0.04 (0.16)	-0.08 (0.17)	0.08 (0.13)
trust_gov	-0.32 * (0.15)	-0.15 (0.13)	-0.09 (0.17)	0.07 (0.11)	-0.39 ** (0.14)	-0.20 (0.13)	-0.41 ** (0.16)	-0.15 (0.15)	0.12 (0.13)
Political_Interest	0.33 ** (0.10)	0.25 ** (0.09)	0.23 * (0.12)	0.19 * (0.09)	0.22 * (0.10)	0.35 *** (0.10)	0.34 ** (0.11)	0.37 ** (0.11)	0.39 *** (0.08)
political_orient	-0.31 (0.20)	-0.40 * (0.19)	-0.14 (0.26)	-0.49 * (0.19)	0.10 (0.23)	0.01 (0.24)	-0.14 (0.27)	-0.07 (0.26)	-0.37 (0.20)
political_orient_sq	0.01 (0.32)	0.24 (0.26)	-0.23 (0.42)	0.39 (0.26)	-0.22 (0.28)	-0.20 (0.32)	-0.07 (0.32)	0.09 (0.36)	-0.11 (0.26)
satisfaction_dem	0.32 * (0.15)	0.05 (0.13)	0.22 (0.16)	0.11 (0.10)	0.24 (0.14)	0.26 * (0.12)	0.16 (0.14)	0.09 (0.15)	-0.22 (0.14)
media_trust_scale	-0.14 (0.16)	-0.13 (0.15)	0.02 (0.18)	-0.63 *** (0.14)	-0.36 * (0.17)	-0.59 *** (0.18)	-0.14 (0.17)	-0.55 ** (0.18)	-0.39 ** (0.14)
sp_media_lit_scale	-0.03 (0.21)	0.49 ** (0.17)	0.12 (0.20)	0.12 (0.17)	0.08 (0.19)	0.46 * (0.18)	0.40 (0.21)	0.66 ** (0.23)	0.13 (0.16)
TV	0.07 (0.12)	0.18 (0.11)	-0.10 (0.12)	-0.15 (0.16)	-0.22 (0.14)	-0.16 (0.12)	0.07 (0.12)	-0.03 (0.12)	-0.07 (0.15)
newspapers	0.35 *** (0.11)	0.23 (0.12)	0.18 (0.13)	0.40 ** (0.14)	0.10 (0.14)	0.15 (0.11)	0.17 (0.13)	0.03 (0.11)	-0.03 (0.12)
social_media	-0.03 (0.11)	0.24 * (0.11)	-0.08 (0.10)	-0.05 (0.11)	-0.05 (0.13)	0.03 (0.11)	0.02 (0.12)	-0.49 *** (0.12)	-0.03 (0.13)
radio	-0.19 (0.12)	-0.02 (0.12)	-0.30 * (0.14)	-0.47 ** (0.16)	-0.16 (0.16)	0.16 (0.12)	0.16 (0.14)	-0.14 (0.12)	0.13 (0.13)
aggregators	0.05 (0.11)	-0.02 (0.11)	0.20 (0.13)	0.20 (0.15)	0.01 (0.16)	-0.14 (0.13)	-0.14 (0.13)	0.22 (0.13)	-0.01 (0.12)
messaging	0.06 (0.13)	-0.12 (0.11)	0.04 (0.12)	0.22 (0.18)	0.09 (0.15)	0.06 (0.14)	0.09 (0.13)	0.42 *** (0.13)	0.14 (0.15)
left_alt	0.24 (0.13)	-0.23 * (0.12)	-0.02 (0.11)	-0.11 (0.13)	0.03 (0.14)	-0.15 (0.12)	-0.13 (0.14)	0.22 (0.14)	-0.07 (0.13)
right_alt	-0.22 * (0.11)	0.09 (0.10)	-0.05 (0.10)	0.01 (0.12)	0.19 (0.14)	0.08 (0.13)	-0.03 (0.13)	-0.25 * (0.12)	0.06 (0.12)
anxiety	-0.18 (0.11)	0.05 (0.09)	0.22 (0.13)	0.16 (0.09)	0.03 (0.15)	0.05 (0.12)	0.12 (0.13)	0.01 (0.14)	-0.11 (0.08)
importance_scale	0.77 *** (0.16)	0.24 (0.13)	0.56 ** (0.17)	0.49 *** (0.14)	0.54 ** (0.18)	0.19 (0.14)	0.30 (0.17)	0.63 *** (0.18)	0.21 (0.11)
N	1003	1001	1000	1001	1004	1000	1004	1004	1000
Pseudo R2	0.10	0.07	0.08	0.08	0.06	0.07	0.06	0.09	0.10

*** p < 0.001; ** p < 0.01; * p < 0.05.

C Exploratory factor analysis

An exploratory factor analysis (EFA) was carried out for the survey item "concerns about the war" (the item contains five statements regarding the perceived importance of the war and the anxiety of individuals) to determine whether the statements should be used as one item or independently.

The first step is to obtain the correlation matrix between the statements (considered as independent variables) and calculate their eigenvalues. The calculation of eigenvalues reveals that the sum of the first three statements ("importance global," "importance national," and "importance individual") accounts for 83% of the total variance. The fifth statement, "anxiety," was kept for the models, given that it is of interest to analyze the relationship between this negative emotion and fact-checking. The fourth statement was omitted from the models ("importance other") given that it is linked to the perception individuals have regarding the importance of the war for others and consequently is not of interest in this study. Using the selected four statements, the optimal number of factors is estimated using a scree plot. The results, shown in Figure C.1, indicate that the optimal number of components is two.

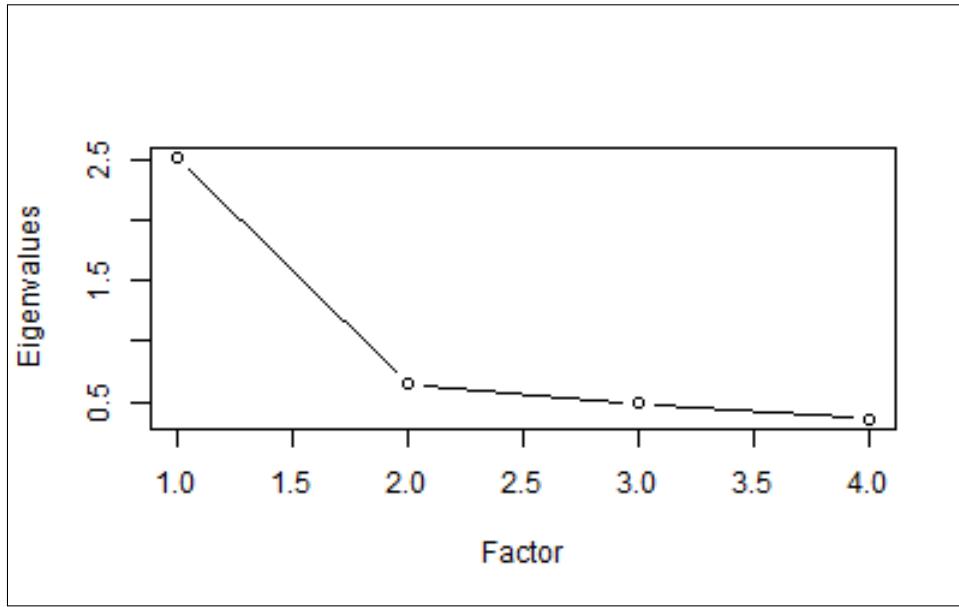


Figure C.1: Scree plot showing the optimal number of factors to consider. The y-axis shows the eigenvalues, and the x-axis shows the number of factors.

Having determined the number of factors, the EFA is conducted using the R package *psych*. Factor rotation is used to make the output more comprehensible. The results displayed in Figure C.2 show a heatmap with the factor loadings for each variable (statement) included in the factor analysis. The factor loadings represent the strength and direction of the relationship between the variables and the factors.

The results show that for the first factor (GLS1) the factor loadings are most substantial for the variables

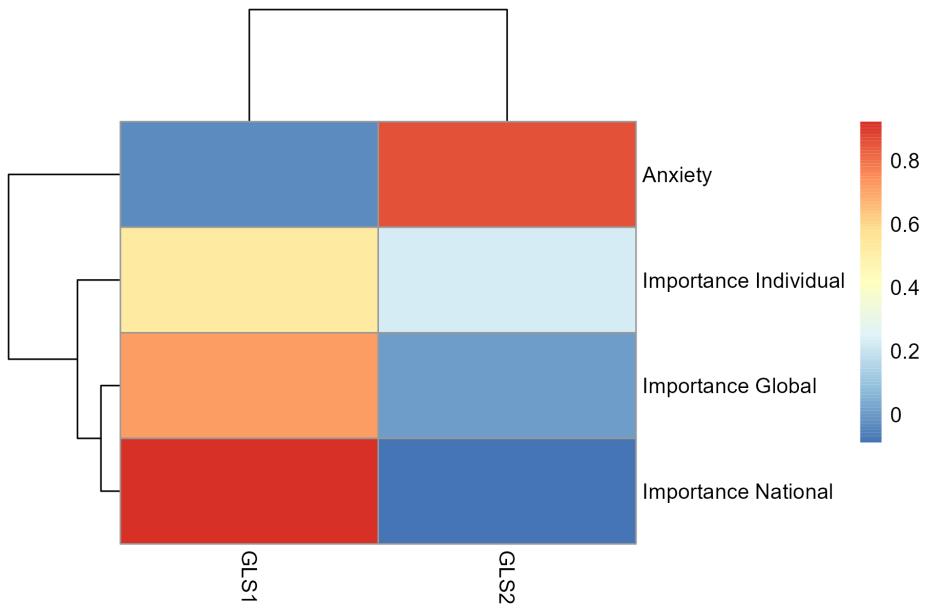


Figure C.2: Heatmap showing the factor loadings for each variable in the factor analysis.

"importance individual," "importance global," and "importance national." For the second factor (GLS2), the factor loading is strong for "anxiety." Consequently, the "concern for the war" survey item was separated into two variables. The first, "importance," is an average of the three statements related to how important an individual considers the war to be for them, their country, and globally. The second variable, "anxiety," corresponds to the fourth statement regarding how anxious an individual feels in regard to the war.

Declaration of Honor

I hereby declare on my honor that I have done this work independently. The concepts taken from external sources, both directly and indirectly, are identified as such. The work was neither submitted to another examination authority nor published.

Natalia Allmi
Munich, Germany
22 August, 2023