

Disinformation Resilience in Backsliding Democracies:

Media Capture & Civil Society in the Visegrád Group

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Societies' susceptibility to disinformation is often linked to democratic backsliding, but the relationships between these concepts remain poorly understood. To measure resilience to disinformation, we expand the framework developed for consolidated Western democracies by Humprecht et al. (2020) to democracies that are experiencing varying degrees of democratic backsliding; the Visegrád Group—Czechia, Hungary, Poland, and Slovakia. Our application leads us to generate additional macro-level features that should be incorporated when thinking about disinformation resilience in states experiencing democratic backsliding. Specifically, we identify how the role of civil society operates differently depending on the level of democracy and the value of media trust is conditioned by the degree of institutional capture, adding these complementary measures to the original framework. Our updated empirical analyses identify Slovakia as the most and Hungary as the least resilient to disinformation. The advancement of the framework enables its application beyond the presumably more stable and consolidated democracies by identifying aspects that help build structural resilience to disinformation.

Keywords: online disinformation, democratic backsliding, Eastern Europe, Visegrád Group, civil society, media capture

Disinformation is often considered one of the main threats to democracies, but strategies to counter it systematically remain debated (OECD 2022; Turcilo and Obrenovic 2020; West 2017). The spread of disinformation is often connected to the trend of democratic backsliding (Colomina et al. 2021; Maati et al. 2023; Reisher 2022; Wikforss 2023), yet most studies of the phenomenon continue to focus on consolidated Western democracies, especially the United States. To better understand the relationship between disinformation and democratic backsliding, we extend the framework established by Humprecht et al. (2020) that conceptualizes features of structural resilience to disinformation in advanced democracies. The framework focuses on features of a country’s political, media and economic landscape that influence the dissemination of disinformation.

To understand how these features structure resilience to disinformation in countries experiencing democratic backsliding, we extend the framework into the Visegrád countries—Czechia, Hungary, Poland, and Slovakia—formerly authoritarian communist countries that are now experiencing democratic backsliding to varying degrees. Collectively, this group can be thought of as having experienced various degrees of democratic backsliding, with evidence of the phenomenon in Czechia (Cianetti and Hanley 2021; Hanley and Vachudova 2019), broad agreement about Hungary’s new status as a hybrid regime (Krekó and Enyedi 2018; Végh 2022), advocacy that Poland under PiS rule (until December 2023) has regressed to a semi-consolidated democracy (Wójcik and Wiatrowski 2022), and serious challenges to liberal democracy in Slovakia (Mesežnikov and Gyárfášová 2018). The variation in the degree of democratic erosion across these countries combined with their shared history and cultural interconnectivity makes this group of countries an excellent case to better understand potential relationships between disinformation and the practice of democracy. Empirically, we find that Slovakia outperforms its neighbors in terms of structural resistance to disinformation, whereas Hungary has the lowest overall resilience.

In applying the framework, we identify several key differences in resilience features in democratic and eroding regimes. For example, consuming and trusting politically captured

media disseminating disinformation must be interpreted as higher susceptibility. We therefore use our findings to advance the framework in application to eroding democracies. To do so, we integrate V-Dem's (Coppedge et al. 2019) *Media Capture Index* to account for ownership features of the media landscape. We also add a *Civil Society Index*, in terms of the scope of civic spaces and pro-democratic mass mobilization. The addition of the civil society index is designed to identify the role of non-government actors, who are shown to both bolster democratic practice and improve resilience to disinformation (Bernhard 2020; Eisen et al. 2019).

Beyond our empirical application to the Visegrád countries, our advancements travel to other national contexts beyond established democracies. We also apply our advanced version of Humprecht et al.'s (2020) framework back to the consolidated democracies in their original study. Our developments therefore have implications for our understanding of the relationship between disinformation resilience and the practice of democracy both in consolidated and backsliding countries. We suggest that consideration of the dynamics of media capture and civil society provide a more complete understanding of this relationship in both cases.

Disinformation Resilience & Democratic Backsliding

Following Humprecht et al. (2020), we analyze resilience to disinformation at the national level, understood as resulting from macro-level features of a society. These macro-level features structure individuals' resilience or susceptibility to disinformation and represent "the capacity of groups...to sustain and advance their well-being" (Lamont and Hall 2013, 2) in the face of disinformation. This approach differs from those offered by media psychology or studies on the individual, micro effects of disinformation (Hameleers 2023; Zerback, Töpfl, and Knöpfle 2021).

Disinformation is commonly conceived as both "computational propaganda" and "communicative practice" (Woolley and Howard 2018), which political actors use to advance their agenda using digital tools. The goal of this strategy is to shift people's perception of reality and ultimately alter their behavior. Consequently, many actors in established

democracies perceive disinformation campaigns as a growing threat (Colomina et al. 2021), as they circumvent their norms and institutions to influence the population, weakening societal structures, shaping public opinion, and (de)mobilizing citizens (Humprecht et al. 2023). Disinformation is therefore defined by its status as not only false but carrying the *intention* to mislead (Fallis 2015) or cause harm (Pathak, Srihari, and Natu 2021). It is this intent that separates disinformation from misinformation, which is characterized as false or inaccurate information. Conversely, malinformation is the use of factually accurate information with the intent to harm (Wardle and Derakhshan 2017). Consequently, scholars point to the “malicious” intent behind disinformation (Diaz Ruiz and Nilsson 2023; Freelon and Wells 2020), or characterize it as a means of hybrid warfare (Manning and Romerstein 2004).

Disinformation is expected to disturb democratic processes by influencing the decisions of individuals and institutions (Kuklinski et al. 2000; Tenove 2020). Exposure to conspiracy narratives reduces political participation by increasing people’s perception of their own political powerlessness or uncertainty and decreases trust in governments (Einstein and Glick 2015; Jolley and Douglas 2014). Disinformation strategically shapes information availability and can affect collective opinion and decision-making (Woolley and Howard 2018) by creating a “manufactured consensus” (Woolley and Guilbeault 2017). In response, democratic institutions and societies attempt to minimize the dissemination of disinformation in their public spheres (Cipers, Meyer, and Lefevre 2023). We therefore consider what factors determine resilience to disinformation.

Resilience to disinformation identifies the extent to which societies are prepared against computational propaganda and hybrid attacks. From a macro perspective, we focus on the processes, platforms, and features that are essential for democratic deliberation. Humprecht et al. (2020) identify three overarching shifts in recent decades that have contributed to higher susceptibility to disinformation in societies: in the *political environment*, the *media environment*, and the *economic environment*. We start by following their approach, targeted at consolidated Western democracies, and applying their framework to the Visegrád countries.

In the following, we briefly introduce the key components of Humprecht et al.’s (2020) framework that forms the foundation of our analysis.

In terms of the *political environment* factors in the framework, polarization describes the alienation of different political or societal groups, ideologically or emotionally (Somer, McCoy, and Luke 2021; Yarchi, Baden, and Kligler-Vilenchik 2021). When messages reinforce group identities, people are more prone to believe them (Tucker et al. 2018). Affective polarization merges political identity with one’s social identity, where cognitive biases are amplified under higher polarization and increase the propensity to trust and disseminate disinformation (Serrano-Puche 2021).

The rise of authoritarian populist parties offers another favorable condition for disinformation. Populist parties are identified using Cas Mudde’s conceptualization of populism as a “thin-centered ideology” (Mudde 2004), which emphasizes the stimulation of a divide between “the people” and “the elite” and the aspiration for majoritarian rule without checks and balances. Populism simplifies the political sphere in Manichean narratives and delivers answers to feelings of deprivation and grievances, together with threat scenarios for constructed in-groups (Hameleers 2021). Populist parties can mainstream disinformation into the center of democracies by taking “issue ownership” over common or absolute truth and about the legitimacy of truth-producing authorities (Hameleers and Minihold 2022). Populist language mobilizes on the exact cognitive mechanisms and biases as disinformation campaigns. Therefore, populists have an “elective affinity” (Waisbord 2018) for using disinformation, meaning that a higher presence of populism is closely related to the dissemination of disinformation.

Multiple *media environment* factors influence societies’ resilience to disinformation. Professional, mass, or legacy media play a central role in shaping public discourses. For example, news consumption and the funding of public service media is closely aligned with citizens’ political knowledge and behavior (Aalberg et al. 2013; Aalberg and Cushion 2016). Media organizations play an important agenda setting role, shaping public and political debates

(Entman 1993; McCombs and Shaw 1972). Yet, trust in media is eroding in many countries and is often connected to lower trust in political institutions (Hanitzsch, Van Dalen, and Steindl 2018) and increased partisan identification (Ladd 2010). Online and offline news fragmentation is also shown to increase disinformation dissemination both online and offline (Fletcher and Nielsen 2017), where overlapping audiences appear essential to counter partisan media narratives (Humprecht, Esser, and van Aelst 2020). Finally, the *economic environment* can also influence resilience to disinformation, where larger markets may have more capacity to provide structures that limit the spread of disinformation yet simultaneously incentivize the creation of more disinformation content (Stiglitz and Kosenko 2024).

Humprecht et al. (2020) identify three clusters of disinformation resilience in their sample of eighteen consolidated Western countries: the “media supportive, more consensual cluster” in Western Europe and Canada; the “polarized cluster” in Southern Europe; and the US as an outlier case with low trust, high polarization and fragmentation. We therefore seek to understand how this finding travels to countries experiencing democratic backsliding. A decline of democracy—in terms of freedom of the press, the rise of authoritarian governments undermining democratic institutions, and capturing media organizations (Schiffrin 2018; 2021)—can fundamentally alter societies’ resilience to disinformation. For instance, when authoritarian parties take control over public service media, roll back the rule of law by dismantling the independence of courts, or taking civil rights away from groups in society, as the PiS government did in Poland, then increasing polarization and protests against government policies may not be destabilizing democracy, but can be seen an expression of the fight *for* democracy. Similarly, trust in media is not beneficial for democracy in all circumstances—in a situation of media capture through government parties and a decline of media independence, citizens should be skeptical and less trusting. Accordingly, we can see that the use of social media for news is the highest where trust in news media is the lowest in Europe—for instance, in Greece, Bulgaria or Hungary (Newman et al. 2022). We therefore expect that our application of Humprecht et al’s (2020) framework beyond consolidated

Western democracies will require an advancement in application to countries experiencing democratic backsliding.

The goal of this study is, therefore:

1. To apply the framework of disinformation resilience to the Visegrád group countries as cases experiencing democratic backsliding.
2. To advance the framework of disinformation resilience in application to countries experiencing democratic backsliding, validating these advancements against the original countries.

The Visegrád Group

The Visegrád Group refers to political cooperation between the four countries of Czechia, Poland, Hungary, and Slovakia. These central European countries are united by their European Union (EU) membership, shared economic and particular political interests, and a common legacy of having previously been under the Soviet Union's sphere of influence (Schütz and Bull 2017). Following the end of the Cold War, these countries were seen as frontrunners of post-Soviet democratic transformation, yet Russia has repeatedly tried to limit their democratization and relations within the EU (Cabada 2022; Waisová 2020). We briefly discuss each country's media ecosystems and relation to democratic backsliding and disinformation.

Czechia: In Czechia, much of the online disinformation is spread on websites and social media platforms with connections to Czech politicians—including former president Miloš Zeman and former prime minister Andrej Babiš—with links to Russia (Cabada 2022). Elected officials have failed to combat the spread of disinformation, with sections of the population particularly receptive to Russian disinformation narratives due to the countries' shared histories (Bokša 2019). In particular, the Mafra group, owned by Babiš, continued to provide favorable coverage to his ANO 2011 party despite widespread evidence of his misuse of EU funds that ultimately led to his defeat in the December 2021 election (Bernhard, Guasti, and Bustikova 2019). The pro-democratic mobilization that helped remove Babiš from office was

therefore accompanied by an undermining of the media landscape (Bernhard, Guasti, and Bustikova 2019) that had traditionally been described by Freedom House as “politically imbalanced due to the concentration of media ownership in the country” (Buščíková 2021) and dominated by conglomerates that gained comprehensive funding during Babiš’s tenure and continue to ensure his influence over coverage (Sybera 2022).

Poland: Disinformation in Poland tends to focus on government activities, the role of the Catholic Church, and “culture war” issues such as LGBTQ rights (Rosińska 2021). Russian influence is less prominent compared to the other Visegrád countries (Waisová 2020), though narratives of pan-Slavism are also visible (Bokša 2019). Online disinformation in Poland is largely produced by a small group of right-wing accounts with links to the—until recently, governing—Law and Justice (PiS) party, which scholars contend have successfully taken over the online public sphere using bots and troll networks (Gorwa 2017). This pattern continues the previous strategy of taking over the state broadcaster (TVP) such that the service “is now widely seen on the left as an official channel for PiS propaganda” (Gorwa 2017, 12).¹ In response, a robust civil society has emerged spreading narratives through an alternative press (Pfetsch and Voltmer 2012; Tonini 2008). Despite the emergence of this alternative network, Poland’s Freedom of Press ranking fell from 33rd to 59th between 2003 and 2019 (Reporters without Borders 2023), with identifiably false content featuring in mainstream news coverage as a result of lower journalistic standards, attention-seeking of audiences, and the dominance of corporate interests (Popiołek, Hapek, and Barańska 2021).

Hungary: Recent autocratization in Hungary is often connected to foreign disinformation (see e.g., Reisher 2022). Since Viktor Orbán and his Fidesz party came to power for the second time in 2010, Hungary has had the lowest democracy standards in the EU (Coppedge et al. 2019). This trend has been accompanied by disruption to academic practices and the almost complete capture of the media landscape by Fidesz (Fillipov 2020; Szicherle

¹ After the 2023 election TVP was taken over by the new government (Ash 2024).

and Molnár 2021; Urbán, Polyák, and Horváth 2023). Spyware software is used to silence critics (Walker 2022), and government-aligned oligarchs systematically bought off media outlets after foreign investors withdrew due to political pressure (Štětka 2015). Consequently, alternative news outlets are often situated abroad, providing fertile ground for Russian disinformation because it simplifies targeting (Reisher 2022). Fidesz also benefits from this dynamic as Russian disinformation both divides the Hungarian electorate and provides cover for further erosion of democratic norms and standards (Reisher 2022).

Slovakia: Though Slovakia can be understood as the most stable democracy in the Visegrád Group, the country’s positive attitudes towards Russia and pan-Slavism mean that the population are poorly able to identify widespread Russian disinformation (Hajdu, Klingová, and Sawiris 2021). Websites that contain disinformation are *the* most used media sources, and articles using pan-Slavic cultural narratives are the most shared on social media (Čížik and Masariková 2018). Influential oligarchs interfere with journalistic independence, with the murder of journalist Ján Kuciak seen as evidence of the growing danger that independent media sources face (Burčík 2019) in a media system containing a “vast ecosystem of outlets that promulgate problematic content” (Hajdu, Klingová, and Sawiris 2021). In this period, the prevalence of disinformation in Slovakia has become better understood (Hlatky 2023; Škarba and Višňovský 2023; Wenzel et al. 2023). Disinformation narratives were present in the output of professional media, politicians, and experts in the 2020 parliamentary elections (Köles et al. 2021). Although widely understood as a turn towards illiberal populism, the 2023 parliamentary elections also saw protests against the ultimately triumphant “Smer-SSD” party, which was widely seen as liable to political corruption and oligarchic and criminal networks’ influences (Zvada 2023; Rossi 2020). The government elected in 2023 appears unlikely to strengthen structures countering disinformation given prime minister Robert Fico’s close connections to pro-Russian groups.

Data and Operationalization

To understand the dynamics of disinformation resilience in backsliding democracies, we start by applying the established framework for advanced democracies developed by Humprecht et al. (2020). They identify seven indicators, grouped into the *Political Environment*, *Media Environment*, and *Economic Environment*, to explain variation in resilience to online disinformation. Below, we briefly outline these indicators. We use the same data and sources wherever possible.

Humprecht et al. (2020) base their case selection of eighteen democratic countries on Hallin and Mancini's (2004) media systems, an often-used sample for comparative analyses. Given the noted differences between North American and European media systems in both of these studies, and our focus on extending the framework into the Visegrád countries, we drop Canada and the United States from our sample and focus only on European media systems. We therefore apply the framework to a total of twenty countries (sixteen of the original eighteen countries, plus the four Visegrád countries). Wherever possible, the same years were used for data collection to enable the comparison of the results from this and the original analysis. We discuss each of the indices below, with the full list of data and sources presented in Table 1.

Table 1: Framework, Data, & Sources

Dimension & Indicators	Czechia	Hungary	Poland	Slovakia	Data Source
Political Environment					
<i>Populist Communication</i>					
Vote Share of Populist Parties 2018	20.2%	68.9%	46.4%	23.8%	TAP Index (2019)
Change in Vote Share 2008–2018	+7.4	+24.3	+10.5	+0.9	TAP Index (2019)
<i>Societal Polarization</i>					
Polarization of Society	0.432	-2.986	-2.755	-1.192	V-Dem (2019)
Online Media Fractionalization	1.313	-1.453	0.019	0.980	V-Dem (2019)
Media Environment					
<i>Media Trust</i>					
Overall Trust in News Media	31%	29%	48%	34%	Digital News Report (2018)
Trust in News that I use	37%	52%	55%	45%	Digital News Report (2018)
<i>Strength of Public Sector Broadcasting</i>					
Market Share of Public TV	30%	11%	29%	14%	EAO Yearbook (2019)
Public Revenue (License Fee)	0.135%	0.201%	0.134%	0.134%	EAO Yearbook (2019)

Shared Media

Share of Largest Media Outlet	54%	60%	56%	60%	Digital News Report (2018)
Outlet Name	CT 24	RTL Club	TVN	TV JOJ	Digital News Report (2018)

Economic Environment

Size of Online Media Market

Internet Access	76%	73%	68%	78%	World Bank Data (2021)
Total Population (millions)	10.675	9.643	36.821	5.432	World Bank Data (2021)

Social Media News Consumption

Social Media Use for News	56%	65%	59%	51%	Digital News Report (2018)
Sharing News on Social Media	32%	32%	26%	27%	Digital News Report (2018)

Outcome

Disinformation Exposure	36%	42%	28%	21%	Digital News Report (2018)
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Political Environment: For *Populist Communication*, the vote share of populist parties in 2018 and their gains or losses between 2008 and 2018 are included. We follow Humprecht et al. (2020), with these first two components coming from the “Timbro Authoritarian Populism Index” (TAP). *Societal Polarization* is composed of two variables from the Varieties of Democracy (V-Dem) dataset (Coppedge et al. 2019): “Polarization of Society” and “Online Media Fractionalization”, which rely on country expert assessments. Again, we follow the sources used by the framework’s authors.

Media Environment: Following Humprecht et al. (2020), the *Media Trust* is constructed from two indicators from Reuters’ Digital News Report (Kalogeropoulos, Newman, and Fletcher 2018). As shown in Table 1, these indicators scale respondents’ answers to questions about their degree of “overall trust in news media” and “trust in news that I use”. The *Strength of Public Service Broadcasting* was operationalized through a combination of the market share of public television and the total revenue generated by the annual license fee revenues as a share of gross domestic product (GDP). The original study relied on data from Brüggemann et al. (2014) for this part, unfortunately the full dataset for that paper was not available so we went directly to the cited source, the European Audiovisual Observatory (EAO). Following Humprecht et al. (2020) we use EAO data from 2019 data for all countries for the market share of public TV. For public revenue we use the most recent figures.

Economic Environment: Humprecht et al. (2020) include the total number of internet users in the *Size of Online Media Market* variable in their study. Following the original

authors, we operationalize this indicator using World Bank data on the percentage of internet users and the total population in each country (International Telecommunication Union and Worldbank 2021). The *Social Media News Consumption* indicator contains two variables: (1) the share that social media is used for news consumption, and (2) how much people share news on social media. Again following Humprecht et al. (2020), we use data from the Digital News Report (Kalogeropoulos, Newman, and Fletcher 2018).

Outcome: Our object of interest is the degree to which citizens report exposure to dis- and misinformation. This variable is measured in the Digital News Report in the form of reported confrontation with “stories that are completely made up for commercial or political reasons” (Kalogeropoulos, Newman, and Fletcher 2018).

Following Humprecht et al. (2020), we z-standardized all measures into average indicators and inverted some indices such that higher values reflect higher resilience to disinformation. The internal consistency of our measures across twenty countries are identical to those reported in the original study (Cronbach’s $\alpha > 0.71$).

Findings

We present our results in two stages. First, we extend the existing framework to include the Visegrád countries to better understand the relationship between disinformation resilience and the indicators in countries experiencing various degrees of democratic backsliding. Second, we offer our suggestions for advancing the framework in application first to the Visegrád countries, then demonstrate the validity of these suggestions by applying them back to the countries in the original study.

Applying the Framework

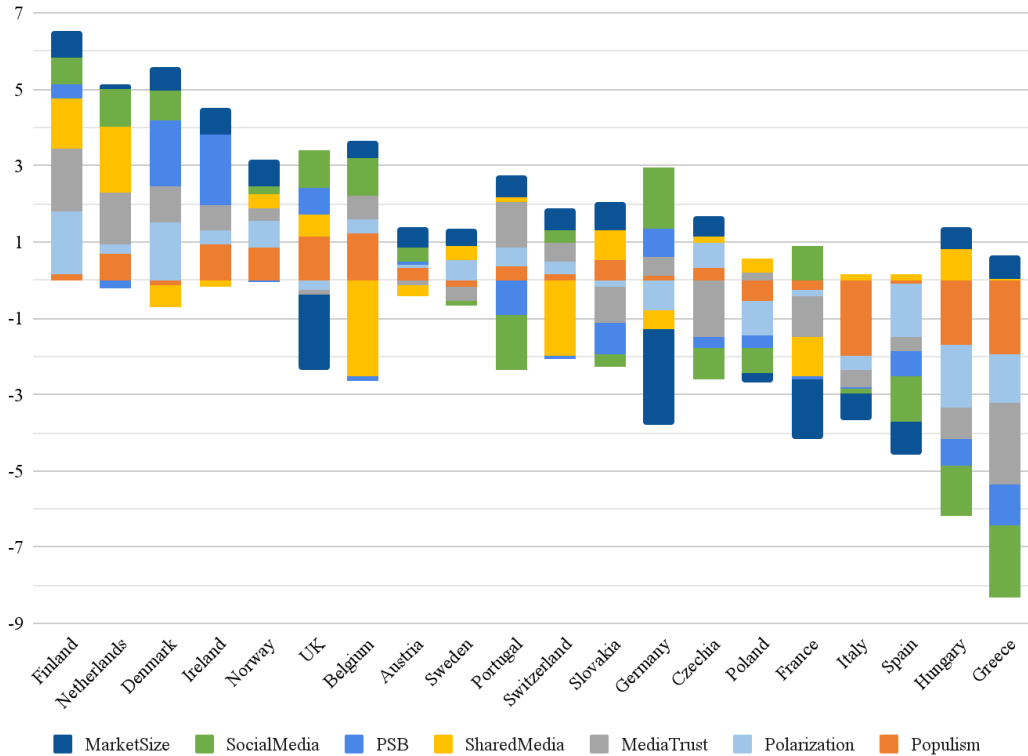
Following Humprecht et al. (2020), we first present the correlation coefficients between our different indices and the resilience variable for all countries in Table 2.

Table 2: Correlations of Indices & Disinformation Exposure (Original Framework)

Framework Indices	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Populist Communication (1)	1						
Societal Polarization (2)	0.529*	1					
Media Trust (3)	0.512*	0.568**	1				
Strength of PSB (4)	0.357	0.491*	0.458*	1			
Shared Media (5)	-0.139	-0.058	0.023	-0.159	1		
Size of Online Media Market (6)	0.010	0.403	0.079	0.068	-0.148	1	
Social Media News Consumption (7)	0.523*	0.441	0.510*	0.617**	-0.236	-0.414	1
Disinformation Exposure (8)	0.680**	0.557**	0.706***	0.569**	-0.277	-0.277	0.843***

Note: N = 20; values are Pearson's correlation coefficients; *p < .05. **p < .01. ***p < .001. PSB = public service broadcasting.

Next, we also plot the performance of the various indices for the original countries in Figure 1 with the addition of the four Visegrád countries. In this visualization, a stacked bar plot consisting of the standardized values represents the resilience performances in relation to each other, replicating the original study. The Visegrád countries all perform in the lower half of the case sample, Slovakia, Czechia, and Poland in the third, and Hungary in the fourth quarter. These initial results from the Visegrád countries seem to support the original framework's consistency as the resilience indicators' performances align with exposure to disinformation.

Figure 1: Resilience Indicators (Original Framework)

Note. Standardized index values. Higher values mean higher performance of resilience indicators. Figure is an extension of the study by Humprecht et al. (2020) adding Slovakia, Poland, Czechia, and Hungary.

Of the Visegrád countries, Slovakia performs best, mainly showing lower resilience in comparison to the other three cases in its weaker PSB. Conversely, Hungary only performs positively in the *Shared Media Index* and *Market Size* while showing negative values in all other categories. Poland performs better than Hungary and even relatively positive in one more area than Czechia, and its positive resilience is mainly driven by higher trust in media than in all other three cases, less news consumption via social media, and lower populism values.

Though the V4 countries appear to broadly align within the original framework, we identify several challenges in applying this model to countries experiencing democratic backsliding. These challenges are explicitly revealed in our application to the Visegrád countries. Of the V4 countries, Poland showed the highest trust in media overall and in outlets that people use themselves. According to the framework, this strengthens resilience. Yet, these high rates of trust do not align with reports of the Polish media landscape (Coppedge et al. 2019; Reporters without Borders 2023), which indicate that the country has experienced a more drastic dissolution of independent and free journalism than Czechia or Slovakia. When a society upholds the freedom of the press, then at least the trust in media overall (the first variable of the *Media Trust Index*) should be expected to be lower under these circumstances. Such a relationship requires people to be critical of the undermining of this democratic principle and possess the ability to both detect and reject widening opportunity structures for disinformation. Higher trust in captured media could instead signify a lower sensibility for these processes, resulting in lower resilience against disinformation.

Whether the “trust in news that I use”—the second variable of the *Media Trust Index*—is also vulnerable to these deficiencies in countries experiencing democratic backsliding depends on media choices at the individual level. For example, an individual consuming and trusting a media source that is biased or that has been captured by the governing party, such as the Mafra group in Czechia, is likely to be more likely to be exposed to disinformation. Conversely, consuming alternative media or having low trust in state-controlled sources can reduce exposure to disinformation in these countries. For example, consuming a diet of alternative

media sources in Hungary might serve as one avenue towards resilience to government-endorsed disinformation (Goh 2015). That Hungary has a low value for trust in news media overall but comparatively high values of trust in news media people consume themselves could be an indicator of this pattern but without more information about the sources that people are consuming and trusting at the individual level, the existing framework is of limited analytical value. Deterioration in Slovakia's and Czechia's media landscapes is much smaller than in Poland and Hungary, yet these countries perform even lower than Hungary in the *Media Trust Index*. In these democracies, it may be that higher sensibility and critiques of the attempted erosions may instead signify greater resilience to disinformation.

Another example of a potential problem for applying the framework in authoritarian regimes is that the significant positive value of the *Shared Audience Index* forms the leading share of Hungary's positive resilience values. This could be a problematic indicator when the highest audience share is concentrated on a public broadcaster that has become an instrument of the government, or an outlet controlled by partisan oligarchs. Yet, sixty percent of the Hungarian population consumed their news via RTL Klub, one of the few remaining foreign-funded broadcasters in Hungary, which regularly emphasizes its independence from the governing regime (Bede 2018; Newman et al. 2022). Similarly, in Poland the outlet with the highest share is TVN, a critical and foreign-funded TV outlet that has experienced frequent attempts by PIS to undermine its position in the media market (Charlish and Florkiewicz 2021; Henley 2021). A considerable share of both populations therefore consume content that opposes the government's positions and their disinformation. In both countries, these data can be understood as a sign of resilience to disinformation and indeed appear in the existing framework as positive indicators.

The same logic applies to social media news consumption. In some authoritarian regimes, social media offers crucial access to news not controlled by the states and becomes a key to resilience. Yet, this variable also captures dynamics that might contribute to disinformation dissemination, including sensationalism and missing oversight, which are

essential in hybrid and authoritarian regimes. These differences suggest that resilience against disinformation must be thought of differently in non-democratic regimes and that the current framework might be limited to non-autocratic regimes.

More generally, our findings for the Visegrad countries suggest the need to adapt the framework for countries experiencing democratic backsliding. In this original framework, lower trust in media decreases the values of Czechia and Slovakia but might be understood as contributing to resilience. Conversely, Hungary and Poland display relatively high trust in media overall, yet evidence suggests that citizens in these countries might have particular cause for concern about their society's institutional resilience to online disinformation. One further important feature of these two democracies is that a huge share of news audiences concentrates on the remaining independent and critical broadcasters, indicating higher resilience.² We propose two empirical adaptations to the existing framework based on these empirical findings, namely; the inclusion of *Media Capture* and *Civil Society* indices.

Advancing the Framework

As outlined above, we contend that the existing framework is insufficient to accurately understand disinformation resilience in countries experiencing democratic backsliding. To account for these limitations, we propose advancing the existing framework by adding two further variables relating to the role of *Civil Society* and *Media Capture*. We argue that civil society is directly related to a country's level of disinformation resilience and so include the measure directly. Because media capture does not always correspond to lower trust in media, we include media capture as an interaction term with media trust, expecting that higher media capture "dampens" values of (misleading) high media trust. Finally, we contend that the operationalization of *Populist Communication* requires adjustment to apply beyond

² For our cases, the qualitative insight was enough to not consider this as a sign of lower resilience. But for other cases, this could reveal a concentration of large parts of a society on disinformation spreading outlets. In these cases, the interpretation of this value should be adapted as well. This could become important for consolidated democracies as well.

consolidated Western democracies. We discuss our additional measures below, with the full set of sources presented in Table 3.

Table 3: Additional Indicators, Data, & Sources

Additional Indices	Czechia	Hungary	Poland	Slovakia	Data Source
<i>Media Capture</i>					
Censorship Efforts Media	3.05	1.97	2.16	2.60	V-Dem (2019)
Online Media Perspectives	1.911	0.853	1.451	1.453	V-Dem (2019)
Media Self-censorship	3.18	1.70	2.38	3.62	V-Dem (2019)
Media Bias	3.22	1.97	2.67	3.71	V-Dem (2019)
Print / Broadcast Media Critical	3,24	2,27	2,57	3.64	V-Dem (2019)
Media Capture Index	0,64	0,10	0,32	0,80	V-Dem (2019)
<i>Civil Society Environment</i>					
CSO Entry and exit	3,34	2,17	2,79	2,81	V-Dem (2019)
CSO Repression	3.97	2.35	2.82	3.48	V-Dem (2019)
<i>Populist Communication</i>					
Vote Share of Populist Parties 2018	48%	68%	38%	37%	“Votes for Populists” Database (2020)
Change in Vote Share 2008–2018	+35.2	+24.2	+2.7	-13	“Votes for Populists” Database (2020)

Media Capture: Privileged actors, including governments and political elites, frequently seek to manage or suppress information, including the selection and framing of the public agenda, primarily to shape public opinion (Bajomi-Lázár 2014; Castells 2013; Curran 2002; Hallin and Mancini 2004; Schiffrin 2018; 2021). Political economists have traditionally defined media capture almost exclusively as the direct control over mass media companies (Bagdikian 2014; Golding and Murdock 1997). In these accounts, media is described as the most direct socialization factor that is accessible by elites to deliver their message and manufacturing consent (Herman and Chomsky 2010).

To include the degree of media capture by political elites, we construct a new variable called *Media Capture*, which we propose conditions the effect of *Media Trust*, meaning we interact these variables in our advanced model. We operationalize media capture using five indicators from the V-Dem database. Censorship Effort measures the degree that direct or indirect attempts of the government to censor media output is visible. Online Media Perspectives captures the diversity of political opinions in domestic online media. Media Self-Censorship measures the degree of journalists’ self-censorship, as not only direct suppression might lead to a loss of plurality of opinions. Media Bias measures the degree of one-sided

standpoints of media outlets against oppositional parties, and Print/Broadcast Govt. Critical whether major outlets criticize government activities. For all measures, a higher score signals less attempted media capture. Our combined measure has internal consistency (Cronbach's $\alpha > 0.92$). The selection of variables is close to the "Freedom of Expression and Alternative Sources of Information Index" provided by V-Dem.

Civil Society: In countries experiencing democratic backsliding, civil society plays not only a pivotal role in bolstering resilience against the erosion of democratic accountability (Bernhard 2020), but also against online disinformation (Eisen et al. 2019). In terms of democratic governance, civil society organizations monitor online spaces for disinformation aimed at undermining democratic principles (Sakalauskas 2021; Ufen 2024) and can provide an avenue for "diagonal accountability" through which citizens can make their voices heard (Laebens and Lührmann 2021). Through grassroots activism, advocacy campaigns, and community engagement, civil society organizations can raise awareness about the dangers of online manipulation and provide citizens with the tools to critically evaluate information sources (Klečková 2022; Lewandowsky et al. 2012; Sakalauskas 2021). Organizations such as the European Citizen Action Service run targeted projects in these countries aimed at fostering the creation of civil society coalitions aimed at combating disinformation such as the Civil Society Against Disinformation (European Citizen Action Service 2023) program.

The *Civil Society* indicator is composed of two variables: the Core Civil Society Index and Mobilization for Democracy. The Core Civil Society Index captures the scope of civic spaces and activities and provides a measure of how robust a nation's civil society is. The Core Civil Society Index comes from the V-Dem database (Coppedge et al. 2019) and is a composite of the organizational environment—including immigration control and the level of state repression—and the level of citizen activism (Lührmann 2015). The Mobilization for Democracy variable measures pro-democratic mass mobilization, said to improve institutional capacity against disinformation, and shown to improve the quality of democracy (Hellmeier and Bernhard 2022). This variable is operationalized using the question "how frequent and

large have events of mass mobilization for pro-democratic aims been?” in the V-Dem database (Coppedge et al. 2019). Our combined indicator has internal consistency (Cronbach’s $\alpha > 0.39$). The variable on pro-democratic mass mobilization is already indicated to be correlated negatively, which hints towards a possible different interpretation of this civil society behaviour, which will be discussed below (without this variable, $\alpha > 0.83$).

Populist Communication: Humprecht et al. (2020) use the Europe-wide “Timbro Authoritarian Populism Index” (TAP) as their main source for the vote share and change in vote share of populist parties. In conducting our extension of the original framework, we identified several limitations of the qualitatively-assessed measure. In our advancement, we instead rely on the more commonly-used measure of populist electoral support; the global “Votes for Populists” database produced by Stanford University (Grzymala-Busse and McFaul 2020), which relies on Mudde’s (2004) definition of populism. Values for Norway were taken from the PopuList 3.0 (Rooduijn et al. 2023; Van Kessel et al. 2023).

Our proposed changes do not reduce the internal consistency between the different indices (Cronbach’s $\alpha > 0.64$). Having introduced our new measures, we next present the updated correlation matrix for all twenty countries in Table 4. Here, *Media Trust* is interacted with *Media Capture* to better represent the measure in backsliding democracies. In addition, we add the *Civil Society Index* (composed of *Civil Society Space* and pro-democratic *Mass Mobilization*) to our model.

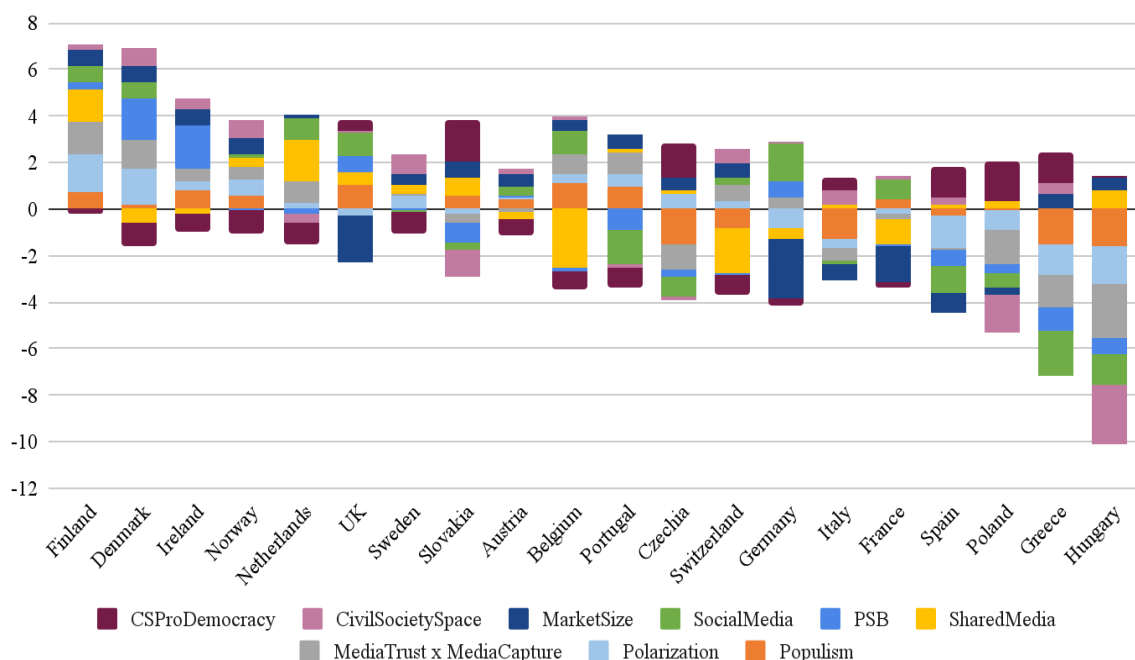
Table 4: Correlation of Indices & Disinformation Exposure (Advanced Framework)

Framework Indices	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Populist Communication (1)	1							
Societal Polarization (2)	0.473*	1						
Media Trust x Media Capture (3)	0.667**	0.732***	1					
Strength of PSB (4)	0.366	0.491*	0.490*	1				
Shared Media (5)	-0.085	-0.058	-0.191	-0.159	1			
Size of Online Media Market (6)	-0.071	0.045	0.045	-0.148	0.068	1		
Social Media News Consumption (7)	0.512*	0.441	-0.24	0.617*	-0.236	-0.414*	1	
Civil Society (8)	0.058	0.305	0.399	0.248	-0.258	0.115	0.137	1
Disinformation Exposure (9)	0.715***	0.557*	0.822***	0.569**	-0.277	0.569**	0.843***	0.193

Note: N = 20; values are Pearson’s correlation coefficients; *p < .05. **p < .01. ***p < .001. PSB = public service broadcasting.

We now apply our advanced framework, presenting our results in Figure 2. Here we see that the interaction of media trust with media capture and the addition of the civil society index has particularly important consequences in the Visegrád countries. These countries are still overall more susceptible than the states in the original analysis to trends of democratic backsliding, Slovakia excepted. Hungary now scores at the lowest end of all of the countries, with a particularly negative impact of the civil society index. Poland and Slovakia are negatively affected by the inclusion of these new variables, Czechia remains broadly unchanged.

Figure 2: Resilience Indicators (Advanced Framework)



Note. Standardized index values. Higher values mean higher performance of resilience indicators.

The interaction with the Media Capture Index attenuates the otherwise positive value of Media Trust in Poland. In Czechia, lower rates of polarization, a strong *PSB* and a vivid Civil Society contribute to higher resilience than in some neighbors. On the other hand, higher degrees of populism, lower trust in news media, higher use of social media for news consumption are contributing to its vulnerabilities in this framework. Hungary only performs positively in terms of Shared Media, which is adequate as indicator of resilience in this case, and in Media Market Size, but the meaningfulness of the latter is doubtful so far, both as pointed out above. Slovakia performs now in the middle field, in overall scores added up even in front of countries like Germany and France. This indicates it enforces higher resilience even though it is more targeted by disinformation.

Looking only at the variable on prodemocratic *Mass Mobilization* component of the Civil Society Index—potentially especially important to counter disinformation when democracy is challenged—the societies experiencing (threats of) democratic backsliding are most active here, apart from Hungary. Conversely, in Poland and Hungary, *Civil Society Spaces* in general are repressed and controlled by their governments, which is why both perform least also in the aggregated index. This finding further suggests that *Mass Mobilization* of civil society grows more important when democracy is undermined, as it can become a space for free information and accountability capacities, aside from the state (see also Bernhard 2020). The same pattern is visible in Spain, Italy, and Greece, where Civil Society in both regards is positively displayed. Civil society mass mobilization might therefore offer a path to building resilience in countries where other structural conditions and the *Civil Society Spaces* are weaker.

Having demonstrated the descriptive patterns of these different indicators in line with the original study, we once again follow Humprecht et al. (2020) by presenting the results of ordinary least squares (OLS) regressions of the framework indices and online disinformation. In Table 5, we present the results using the original framework (1), and our advanced framework (2), in both cases extending the sample to include the four Visegrád countries. As in the original study, the indices explain a large proportion ($R^2 = 0.865$) of the variance in the level of exposure to disinformation in the replication of the original model (1). Our advanced model explains even more of this variation ($R^2 = 0.901$), suggesting that our additional theoretical dimensions further help us understand disinformation exposure. In particular, the interaction of media trust with media capture makes this variable more substantively important in predicting the level of exposure to online disinformation. Whether as one index or separated, *Civil Society* is not significantly predictive of exposure to disinformation.

Table 5: Regression Results

	<i>Disinformation Exposure</i>	
	Original (1)	Advanced (2)
Populist Communication	0.221 (0.149)	0.202 (0.155)
Societal Polarization	0.091 (0.211)	-0.109 (0.229)
Media Trust	0.336** (0.149)	
Media Trust x Media Capture		0.485** (0.191)
Strength of PSB	-0.036 (0.187)	0.023 (0.167)
Shared Media	-0.135 (0.112)	-0.075 (0.105)
Size of Online Media Market	-0.069 (0.170)	0.018 (0.169)
Social Media News Consumption	0.508** (0.205)	0.511** (0.193)
Civil Society		-0.118 (0.211)
Observations	20	20
R ²	0.865	0.901
Adjusted R ²	0.787	0.828
Residual Std. Error	0.462 (df = 12)	0.414 (df = 11)
F Statistic	11.008*** (df = 7; 12)	12.450*** (df = 8; 11)

Standard Errors in Parentheses

*p < .05. **p < .01. ***p < .001

Discussion & Conclusion

In this paper we apply an existing framework of resilience to disinformation into countries experiencing democratic backsliding, the Visegrád Group. In doing so, we highlight a series of potential improvements and advancements to the original framework which should be considered for non-consolidated Western democracies.

Empirically, we show that Slovakia is the most resilient of the V4 countries, with the highest value in pro-democratic Mass Mobilization helping to combat disinformation independent of state institutions. Slovakia could further improve its resilience by improving its PSB, Slovakian citizens pay the lowest license fee in Europe, and many people are exempted from the payment (Botiková 2020). Czechia demonstrated a stronger PSB and lower polarization than its neighbors. Since Babiš left office, the new government, led by Petr Fiala, has attempted to improve diversity and independence in the media market again and to build

safeguards to restore trust and confidence (Daniels 2022). Despite these positive steps the threat of authoritarian populism in Czechia remains, with ANO is still one of the main parties.

After the advancement of the framework, the high performance of Poland among the V4 in the original framework appears less convincing. Poland's means of propaganda appear to have been so effective that trust in media overall cannot simply be taken as a sign of resilience. The same pattern holds for Hungary, where other indicators are performing low enough to be visible in the model. Deriving practical implications for those two countries is, after our advancements, complicated. Both governments have profited from disinformation and conspiracy narratives by concentrating media power and inducing fear among public critics of their governmental ideologies and tools. The new Polish government reestablishing the independence of the PSB appears a first step to improve the situation (Wójcik 2023).

The existing framework focuses disproportionately on governments and media outlets as disinformation is often part of foreign attempts of gaining influence or even of means of war (Manning and Romerstein 2004). Yet, our findings also underscore the importance of non-government or media actors for resilience in backsliding democracies, captured in the form of *Civil Society Spaces* and pro-democratic *Mass Mobilization*. Though the space for civil society is greatest in the most consolidated democracies, pro-democratic mobilization is more visible in the V4 group, implying that societies react to threats of democratic backsliding with a high awareness and build capacities to inform and mobilize others. Where state institutions fail to reduce the dissemination of disinformation, these networks and alternative information providers also become a crucial source against disinformation. A growing number of organizations in the V4 are already dedicated to these activities (Syrovátka 2021). Instances of civil society resistance against disinformation include the “Czechian elves”, a societal organized group that counters polluted disinformation by Russian bots (Filipec 2019). As seen across the V4, these groups can help support information flow outside of captured professional media. One contribution of this work is to advocate for the importance of civil society activities as a capacity or resource which can be further built on by political actors. Such capacity

appears especially important when state institutions fail or are unwilling to combat the spread of disinformation.

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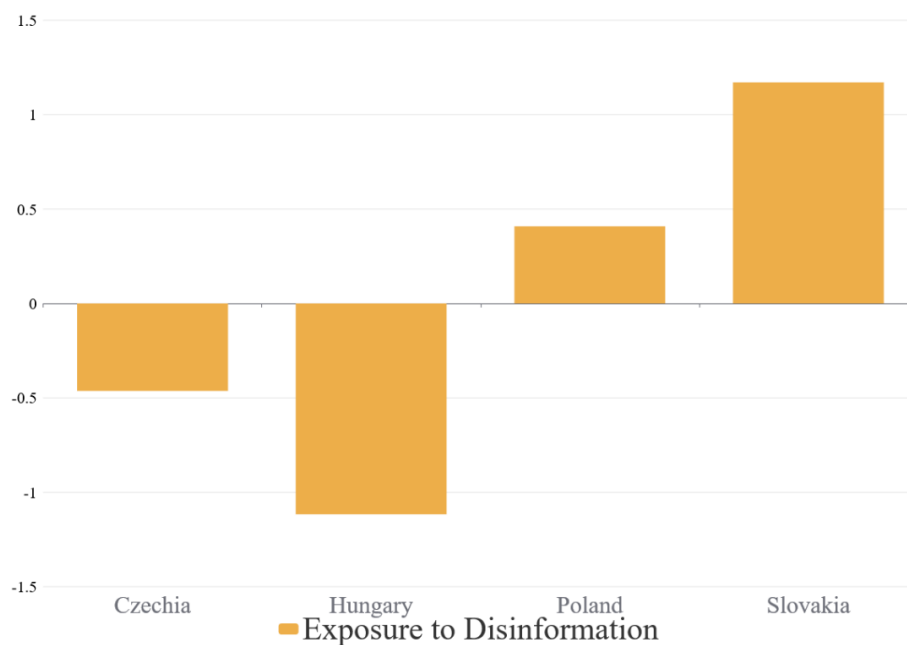
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Supplementary Material

Descriptive Statistics

In Figure A.1 we present the values of our outcome variable, reported exposure to disinformation. Higher performance of the resilience indicators coincides with lower disinformation exposure. Here, Slovaks report the lowest rates of exposure among the four countries, while Hungarians detect the highest share of disinformation. While Poland experiences the second least dissemination, Czechia also shows a higher share. Therefore, the formerly made nuance of resilience is supported by the rates of reported exposure to disinformation.

Figure A.1: Reported Exposure to Disinformation



Note. Standardized values. Higher values mean less reported exposure to disinformation.

In Figure A.2 the absolute reported percent values of recognized disinformation for all cases is visualized. It shows us that the V4 are all located in the second half here as well.

Figure A.2: Reported Exposure to Disinformation

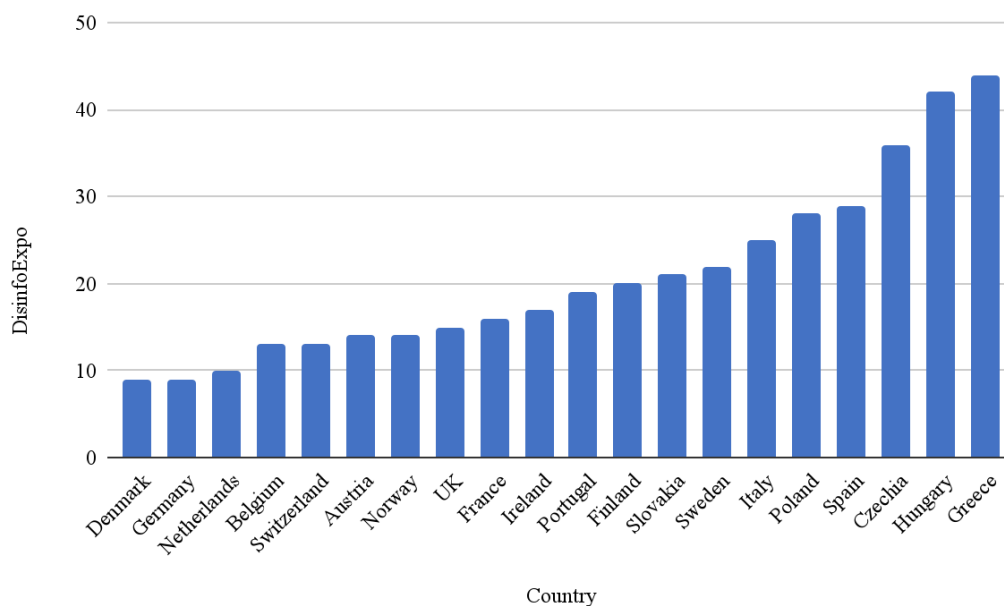
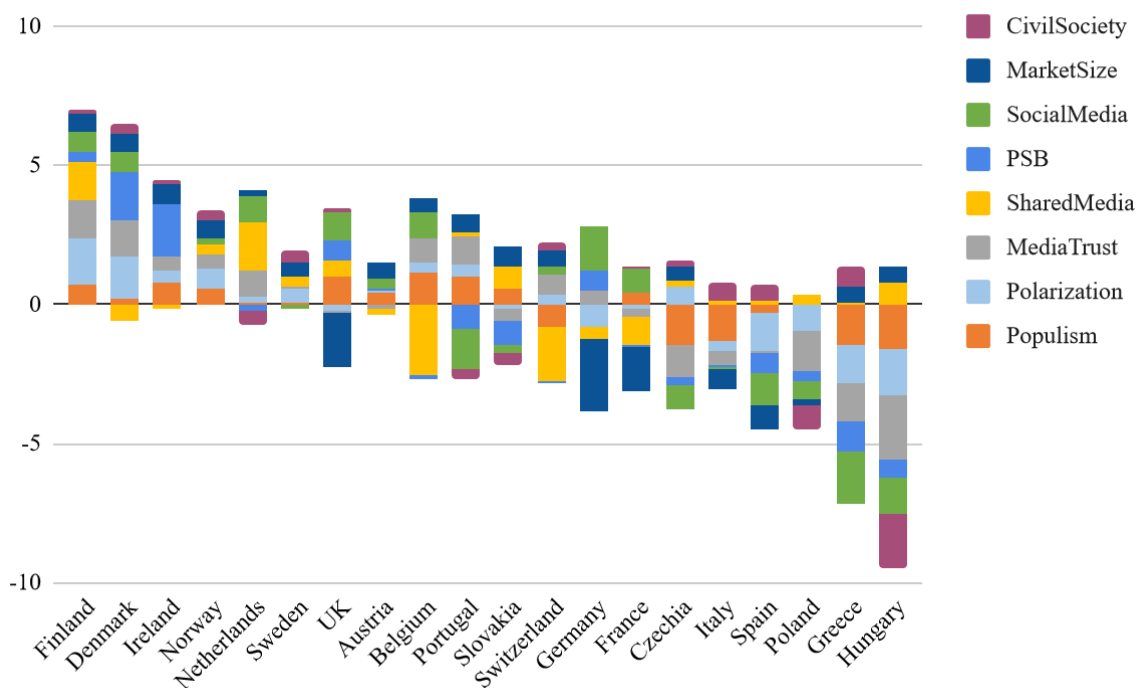


Figure A.3 shows the stacked bar plots of the resilience indicators for the advanced framework, but here with one aggregated index on Civil Society. In comparison to Figure 2 above we see that the values of CS Space and Pro Democratic Mass Mobilization often balance each other out to nearly zero.

Figure A.3: Reported Exposure to Disinformation



App. 1 - Table 2: Dataset Disinformation Resilience Framework

Dimension & Indices	Czechia	Hungary	Poland	Slovakia	Data Source
POLITICAL ENVIRONMENT					
Populist Communication Index					
Vote Share PopParties 2018 (inverted)	20,2	68,9	46,4	23,8	TAP 2019
Change Vote Share 08-18 (inverted)	7,4	24,3	10,5	-0,9	TAP 2019
Vote Share PopParties 2018 (inverted)	48	68,4	37,6	36,9	"Votes for Populists" Database
Change Vote Share 08-18 (inverted)	+35,2	+24,2	+2,7	-13	"Votes for Populists" Database
Polarization Index					
Polarization of society	1,85	0,02	0,04	0,53	V-Dem (2019)
Online media fractionalization	3,26	1,13	2,32	3,05	V-Dem (2019)
MEDIA ENVIRONMENT					
Trust in News Media Index					
Overall trust in news media	31%	29%	48%	34%	Digital News Report (2018)
Trust in news that I use	37%	52%	55%	45%	Digital News Report (2018)
Strength PSB Index					
Market share Public TV	30,1	10,8	28,60	13,90	European Audiovisual Observatory © Yearbook 2021
Public Revenue (license fee)	0,14	0,20	0,13	0,13	European Audiovisual Observatory © Yearbook 2023
Shared Media Index					
Share of most used media outlets/programs	54% (CT 24)	60% (RTL Klub)	56% (TVN)	60% (TV JOJ)	Digital News Report 2018
ECONOMIC ENVIRONMENT					
Online Media Market Index					
No. Online users per country	8.077.863	7.023.033	25.038.790	4.216.668	World Bank Data (2019)
Social Media News Consumption Index					
Social Media Use for news (inverted)	56%	65%	59%	51%	Digital News Report (2018)

Sharing news on Social Media (inverted)	32%	32%	26%	27%	Digital News Report (2018)
OUTCOME					
Reported Exposure to dis- and misinformation (inverted)	36%	42%	28%	21%	Digital News Report (2018)

App. 2 - Table 3: Additional Indicators

	Czechia	Hungary	Poland	Slovakia	Source	Variable name	Scale
MEDIA ENVIRONMENT							
Censorship Efforts Media	3,05	1,97	2,16	2,60	V-Dem (2019)	v2mecenefm	0 - 4 (direct & routinely - government rarely attempts to censor [...])
Online Media Perspectives	1,911	0,853	1,451	1,453	V-Dem (2019)	v2smonper	0 - 4
Media Self-censorship	3,18	1,70	2,38	3,62	V-Dem (2019)	v2meslfcen	0 - 3 (rescaled 0 - 4)
Media Bias	3,22	1,97	2,67	3,71	V-Dem (2019)	v2mebias	0 - 4
Print / Broadcast Media Critical	3,24	2,27	2,57	3,64	V-Dem (2019)	v2mecrit	0 - 3 (rescaled 0 - 4)
<i>Media Capture Index</i>	0,64	0,10	0,32	0,80	We calculated averages of the five variables, which are between 0 and 4. We then calculated : <i>(Average : 2) - 1</i> , so the resulting Media Capture index value is scaled from -1 to +1.		Ordinal scales of variables were chosen from V-Dem
CIVIL SOCIETY ENVIRONMENT							
CSO Entry and exit	3,34	2,17	2,79	2,81	V-Dem (2019)	v2cseeorgs	0 - 4 (monopolistic gov. control - unconstrained)
CSO Repression	3,97	2,35	2,82	3,48	V-Dem (2019)	v2cademmo b	0 - 4
CSO Participatory Environment	2,25	2,02	2,11	2,08	V-Dem (2019)	v2csprtcpt	0 - 3

Mobilization for Democracy	3,45	1,55	3,73	3,85	V-Dem (2019)	v2cademmo b	0 - 4
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Robustness Checks

1) Test for internal consistency with Cronbach's alpha (Original Framework)

The psych package in R offers a function for testing Cronbach's alpha. Because some items were negatively correlated, the function "check.keys=TRUE" was added, so they became reversed automatically for this purpose. The respective indices are indicated by a minus behind the variable name. This hints towards an unexpected behavior of these variables, because, as in the original framework, they were inverted beforehand so that a higher value should represent higher resilience already. Without this additional inverting, Alpha is .63. With this additional inverting, alpha is .71 (see below).

	lower	alpha	upper						
	<dbl>	<dbl>	<dbl>						
Feldt	0.32	0.63	0.83						
Duhachek	0.39	0.63	0.87						
	raw_	std.alph	G6(sm c	average	S/N	alpha se	var.r	med.r	
	alpha	a)	_r	<dbl>	<dbl>	<dbl>	<dbl>	
	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	
Populism	0.5321 835	0.561894 4	0.730965 2	0.176113 3	1.282554 5	0.1614193 4	0.1138953 9	0.0790295 9	
Polarization	0.4585 272	0.488384 7	0.636759 1	0.137260 9	0.954593 7	0.1844479 5	0.1096904 6	0.0677401 5	
MediaTrust	0.4800 978	0.518608 1	0.705662 1	0.152220 2	1.077309 4	0.1801003 5	0.1152129 6	0.0677401 5	
SharedMedia	0.7343 425	0.746222 5	0.829367 3	0.328893 6	2.940460 2	0.0923408 7	0.0920953 3	0.4576284 8	
PSB	0.5628 280	0.581053 6	0.735054 8	0.187755 7	1.386940 2	0.1498448 3	0.1061831 8	0.0790295 9	
SocialMedia	0.5816 472	0.599127 1	0.689154 1	0.199418 9	1.494556 2	0.1426666 0	0.0776730 8	0.0790295 9	
MarketSize	0.7011 142	0.715786 2	0.756863 0	0.295648 8	2.518477 7	0.1001024 2	0.0959242 7	0.4576284 8	
	n	raw.r	std.r	r.cor	r.drop	mean	sd		
	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>		
Populism	20	0.6978918	0.7005453	0.6289487	0.5261293528	5.273559e-17	0.9303235		

Polarizati on	20	0.8443026	0.8468656	0.8709207	0.7460387125	-7.077672e-17	0.8907370
MediaTru st	20	0.7941724	0.7905280	0.7435536	0.6559184088	-1.533496e-16	0.9716634
SharedMe dia	20	0.1529733	0.1251661	-0.1121858	-0.1214340384	3.042705e-16	1.0000000
PSB	20	0.6225313	0.6566993	0.5914414	0.4654363193	9.436896e-17	0.7703921
SocialMed ia	20	0.5929295	0.6127750	0.6133499	0.3778197969	3.469447e-17	0.9651654
MarketSiz e	20	0.2735039	0.2503679	0.1736004	-0.0003834715	6.661338e-17	1.0000000

2) Test for internal consistency with Cronbach's alpha (Adapted Framework, CS as one indicator)

	lower <dbl>	alpha <dbl>	upper <dbl>
Feldt	0.33	0.64	0.83
Duhachek	0.41	0.64	0.86

	raw_alpha <dbl>	std.alpha <dbl>	G6(sm c) <dbl>	average _r <dbl>	S/N <dbl>	alpha se <dbl>	var.r <dbl>	med.r <dbl>
Populism	0.547831 5	0.574342 1	0.772012 3	0.161606 8	1.349304 4	0.1470727 3	0.1148782 1	0.1371215 4
Polarization	0.459908 1	0.489169 7	0.685039 6	0.120337 5	0.957597 3	0.1744018 0	0.1084315 4	0.0580616 3
MediaTrust	0.459099 4	0.494465 0	0.709966 8	0.122598 4	0.978102 4	0.1797865 7	0.0917110 8	0.0677401 5
SharedMedia	0.744399 0	0.747168 6	0.858617 1	0.296850 3	2.955205 3	0.0826475 1	0.0937986 8	0.3988180 7
PSB	0.565016 3	0.575647 3	0.784566 0	0.162331 8	1.356530 4	0.1400107 1	0.1134368 3	0.0677401 5
SocialMedia	0.582062 8	0.596250 8	0.737489 9	0.174215 2	1.476785 0	0.1352321 1	0.0923131 8	0.0677401 5
MarketSize	0.709123 9	0.715292 2	0.792449 7	0.264116 3	2.512372 5	0.0907652 3	0.1040324 7	0.3658327 7
CivilSociety	0.635738 5	0.658805 8	0.800798 8	0.216202 8	1.930882 2	0.1206292 5	0.1264345 5	0.3658327 7

	n	raw.r	std.r	r.cor	r.drop	mean	sd
	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>
Populism	20	0.6883689	0.6765911	0.6266390	0.53256925	4.718448e-17	0.884018
		8	2				6
Polarization	20	0.8833052	0.8773919	0.9169830	0.81088665	-7.077672e-17	0.890737
		8	8				0
MediaTrust	20	0.8608537	0.8663913	0.8963195	0.76257131	5.793976e-17	0.994793
		7	6				7
SharedMedia	20	0.0648815	0.0185475	-0.1920580	-0.19415339	3.042705e-16	1.000000
a		1	7				0
PSB	20	0.6439189	0.6730636	0.6061553	0.50004521	9.436896e-17	0.770392
		2	5				1
SocialMedia	20	0.6066841	0.6152433	0.6154934	0.40626530	3.469447e-17	0.965165
		5	0				4
MarketSize	20	0.2169098	0.1778187	0.1162052	-0.04653282	6.661338e-17	1.000000
		4	2				0
CivilSociety	20	0.3311285	0.4109473	0.3070860	0.18309889	-7.598089e-17	0.592216
		5	9				2

3) Test for internal consistency with Cronbach's alpha (Adapted Framework, CS split into two indicators)

We can see splitting the Civil Society variables into two indicators (Civil Society Space and Prodemocratic Mass Mobilization) and add again on R's suggestion `check.key=true` to invert negatively correlated variables automatically makes sense here. This shows that Pro Democratic Mass Mobilization is correlated negatively, while Civil Society Space is positively. This increases alpha drastically to 0.8.

		lower <dbl>	alpha <dbl>	upper <dbl>			
Feldt		0.63	0.8	0.91			
Duhachek		0.67	0.8	0.93			
	raw_ alp ha <dbl>	std.alpha a <dbl>	G6(smc) <dbl>	average_ r <dbl>	S/N <dbl>	alpha se <dbl>	var.r <dbl>
Populism	0.7711003	0.3029321	0.6935763	0.05152367	0.4345805	0.07693359	0.1670600
Polarization	0.7745306	0.1748928	0.5562296	0.02581157	0.2119637	0.07583553	0.1503490
MediaTrust	0.7504379	0.2307708	0.6217146	0.03614489	0.3000027	0.08403869	0.1377631
SharedMedia-	0.8136506	0.5487315	0.7954796	0.13194214	1.2159756	0.06235133	0.1887756
PSB	0.7644957	0.3083732	0.7002751	0.05279109	0.4458665	0.07880258	0.1615326
SocialMedia	0.7416947	0.3500739	0.6533765	0.06308225	0.5386364	0.08639032	0.1476319
MarketSize-	0.8415209	0.5237245	0.7219224	0.12084292	1.0996253	0.05332265	0.1874684
CivilSocietySpace	0.7775864	0.3930759	0.7120831	0.07489344	0.6476525	0.07417403	0.1760865
CSPProDemocracy-	0.7596320	0.6870292	0.8196847	0.21531592	2.1951858	0.08132067	0.1063845
	n <d bl >	raw.r <dbl>	std.r <dbl>	r.cor <dbl>	r.drop <dbl>	mean <dbl>	sd <dbl>
Populism	20	0.6688424	0.6793459	0.6289286	0.55608504	4.718448e-17	0.8840186
Polarization	20	0.6475576	0.8641353	0.9297687	0.52883312	-7.077672e-17	0.8907370
MediaTrust	20	0.7872133	0.7898712	0.8321006	0.70219852	-1.873501e-17	0.9229813
SharedMedia-	20	0.4194264	0.1013891	-0.1071457	0.24106226	-7.360197e-01	1.0000000
PSB	20	0.7190906	0.6702371	0.6156372	0.63397775	9.436896e-17	0.7703921
SocialMedia	20	0.8272822	0.5962759	0.6125018	0.75158462	3.469447e-17	0.9651654
MarketSize-	20	0.2108064	0.1811577	0.1204368	0.01724836	-7.360197e-01	1.0000000
CivilSocietySpace	20	0.6258234	0.5113905	0.4300973	0.50638495	-4.926615e-17	0.8651696
CSPProDemocracy-	20	0.7373739	-0.4978070	-0.6857325	0.62683288	-7.360197e-01	1.0000000

4) Regression Adapted Framework and two indicators for Civil Society

Dependent variable:

DisinfoExpo

Populism	0.269 (0.159)
Polarization	-0.045 (0.240)
MediaTrust x Media Capture	0.327 (0.213)
SharedMedia	-0.077 (0.117)
PSB	-0.056 (0.181)
SocialMedia	0.511** (0.209)
MarketSize	-0.013 (0.186)
CivilSocietySpace	0.103 (0.160)
CSPProDemocracy	-0.082 (0.166)
Constant	0.000 (0.099)

Observations	20
R ²	0.896
Adjusted R ²	0.803
Residual Std. Error	0.444 (df = 10)
F Statistic	9.603*** (df = 9; 10)

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