News coverage of social protests in global society

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Abstract

This article links media and social movement studies with world society theory to explain cross-national variations in media attention to domestic social protests. We compile a novel large-scale dataset with over 1.2 million protest-related news articles from 12,644 web news sites across 140 countries/areas in 2015–2020. Our cross-national analysis shows that both media- and country-level characteristics explain news coverage of domestic social protests. Our findings show that web news outlets with high web traffic and a propensity to report conflictual events tend to cover more protests. In addition, web news sites in nations with vibrant civil society organizations report more protest events. We also find that there is a positive relationship between online censorship and news coverage in general. But this is driven by news media in democratic countries, and news sites in authoritarian regimes experiencing strong censorship cover fewer protest events. Finally, news media in authoritarian nations with more organizational ties to the international community cover more domestic protests.

Keywords

Big data, Internet censorship, social movements, social protests

Media attention to social movements has been seen as a critical success to the mobilizing efforts made by social movement organizations (SMOs) and activists (Andrews and Caren, 2010; Earl et al., 2004). Media are central in the construction of movement frames and narratives that shape public opinions, and social movements rely on news coverage to seek policy-makers' acceptance and reshape policy agendas (Gamson et al., 1992; Gamson and Modigliani, 1989; Gamson and Wolfsfeld, 1993). In this article, we seek to explain cross-national variations in media attention to domestic social protests in authoritarian and democratic countries.

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Media and social movement scholars have developed various theories to explain news coverage of social movements (Andrews and Caren, 2010; Bennett, 1996; Earl et al., 2004; Gamson and Wolfsfeld, 1993; McCarthy et al., 1996). Media scholars show that news media, editors, and journalists, serving as gatekeepers, determine who gets what kind of coverage, when, and how (Andrews and Caren, 2010; Entman, 2007). Media act as a filter selecting newsworthy protest events that fit into their routine practices (Scheufele and Iyengar, 2012; Terkildsen and Schnell, 1997). Social movement scholars, however, emphasize the role of SMOs and political opportunities in shaping the news-making process (Gamson and Modigliani, 1989) through producing newsworthy movement events that fit into the issue attention cycle (Amenta et al., 1992, 2005, 2009, 2017; Seguin, 2016).

Scholars have also attempted to integrate these multilayered factors, including media, social movements, and political conditions, into a more holistic framework to explain media attention. For instance, the hierarchy of influences model proposed by Shoemaker and Reese (2014) suggests that media attention to social movements is a function of individual gatekeepers, routine practices, media organizations, social institutions, and social systems. Scholars have further extended this approach by linking social movement theories with world society theory to explain news attention to protests in recent years. World society theorists argue that global norms, institutions, and actors can facilitate the mobilization of local social protests and help activists gain international media attention by providing tangible and intangible resources, creating political opportunities for local movements, and diffusing international norms for human rights and freedom of association and expression (Evans et al., 2020). For instance, Evans et al. (2020) show that environmental protests occurring in less democratic nations with strong organizational ties to the international community attract more attention from international media.

However, prior empirical work testing these different theoretical perspectives often focuses on a limited number of news outlets in a single country, a comparative study of major news outlets in a few countries, or a single type of social movement across different countries (Amenta et al., 2009; Evans et al., 2020; Humprecht and Udris, 2019). First, due to data constraints, existing studies tend to focus on limited media sources (e.g. *the New York Times*) and overlook the impact of media characteristics on movement coverage. Existing scholarship often examines whether or how a list of SMOs receives attention from *one* or a couple of national or local news outlets (Andrews and Caren, 2010; Smith et al., 2001). Such a research design may cloud our view of the impact of *varied* media characteristics on protest coverage (Amenta et al., 2017). Prior research in political communication suggests that protest attention varies across different mass media, depending on news media's political stance and market position (Dunaway, 2013).

Second, previous research often explains media coverage in democratic contexts such as the United States and some European countries, where critical news reporting and freedom of expression are the norm, but pays scant attention to authoritarian regimes (Earl et al., 2004; Ortiz et al., 2005). Even though comparative media studies show some evidence of media convergence (e.g. commercialization and Americanization) in global society, cross-national differences still persist, especially between democratic and authoritarian countries (Humprecht and Udris, 2019). The most common research design in prior studies is to assess a dichotomous or continuous measure of media coverage in the United States across different periods (Rafail et al., 2019). Although this design allows scholars to examine how changes in editorial regimes and political environments shape media attention to protests, these findings might not be extended to authoritarian countries because of different political factors such as a higher level of government censorship.

Third, much of sociological work focusing on the longitudinal analysis of protest coverage typically uses protest data in 1960–1995 from the Dynamics of Collective Action (DoCA) project (Earl et al., 2004; Rafail et al., 2019). Even though the DoCA project presents an opportunity for scholars

to better understand the historical evolution of news coverage of social movements, these findings might not be extended to the current era, as rapid development and adoption of information and communication technologies in our societies have transformed media and social movements (Humprecht and Esser, 2018; Humprecht and Udris, 2019; Rafail et al., 2019). One big shortcoming of current scholarship is that we lack critical studies examining the dynamics of media attention to social movements, especially about digital media during the contemporary period.

Fourth, we still lack critical comparison studies of news coverage of protests at the media level on a global scale. Much of sociological work focusing on cross-national analyses of protests relies on country-level outcomes (i.e. number of visible protest events in a country reported by international news media) and neglects the media-level variation in protest coverage (Evans et al., 2020; Jenkins et al., 2008). Limited research has examined how news outlets report domestic protests on a global scale due to data accessibility.

We rely on the Global Database of Events, Languages, and Tones project (GDELT) to evaluate media coverage of domestic social protests on a global scale. GDELT provides a comprehensive list of web news media with varied *multilingual* sources, and it uses natural language processing techniques to identify main actors, locations, and tones in protest coverage. This allows scholars to examine media attention across authoritarian and democratic countries. We acknowledge the potential underestimation bias of event occurrence in GDELT, but this article focuses on media attention instead of the amount of protest. We only use its online news and do not include its print, broadcast news, and radio sources. Thus, it is appropriate to use GDELT to examine media attention to domestic protests worldwide.

We fuse conventional media and social movement theories with world society theory to interpret how media, social movements, national political conditions, and international forces relate to news coverage of domestic social protests in the past 6 years. Drawing on data from GDELT's 37,789 web news media, we build a unique media-level news coverage of social protests dataset spanning from 2015 to 2020 on a global scale. We organize our theoretical and hypothesis development based on the hierarchy of influences model (Reese and Shoemaker, 2016; Shoemaker and Reese, 2014). Our cross-national analysis shows that web news attention to social protests is related to media, social movements, Internet censorship, and international forces. Particularly we also show that online government censorship and international forces serve different roles in gaining media attention between democratic and authoritarian countries. We close by discussing theoretical and empirical implications to social movement and media studies.

Media attention to protest

We rely on some key insights from the hierarchy of influences model proposed by Shoemaker and Reese to develop and organize our hypotheses to explain how different levels of factors affect media attention to domestic protests (Reese and Shoemaker, 2016; Shoemaker and Reese, 2014). The hierarchical model synthesizes individuals, routines, media organizations, social institutions, and social systems into a holistic framework to explain media attention. We extend this framework by adding an extra layer of international forces and examine media attention on a global scale. We start by introducing how conventional media and social movement scholars explain news coverage of social movements and then move to the world society theory.

News media

Media and political communication scholars tend to focus on the central role of media institutions, editors, and journalists in news-making (Entman, 2007). It argues that news media act as a filter,

and editors and journalists are gatekeepers who independently select newsworthy information into the news production process. In this article, we focus on two aspects of media organizations that shape their attention to protests: *media stance in reporting conflictual events* and *relative position in the media market*.

Media stance in reporting conflictual events is often seen as a good indicator of potential media attention to social movements (Oliver and Maney, 2000; Rafail et al., 2019). Media scholars consistently show that journalists and editors assess news value before deciding whether to cover such events. A standard prescriptive list of news value criteria consists of prominence or importance, such as the number of people affected, the magnitude of the effect, and conflict or controversy (Oliver and Maney, 2000). Prior studies have consistently shown that intensified events such as larger size, presence of violence, presence of police or repression, and property damage strongly increase the likelihood of gaining media coverage because of the newsworthiness (Ortiz et al., 2005; Reynolds-Stenson, 2018). Thus, conflictual, large, or sensationalistic events are more likely to be covered or featured prominently by mass media (Oliver and Maney, 2000; Oliver and Meyer, 1999; Rafail et al., 2019). In addition, news media may use conflictual or controversial events as part of their media strategies to attract audiences and obtain more engagement (Berry and Sobieraj, 2013; Davenport, 2009). Sobieraj and Berry (2011)'s work on outrage discourse in blogs, talk radio, and cable news clearly demonstrates that both liberal and conservative media outlets use overgeneralization, sensationalism, misleading information, and partial truths to provoke a visceral response from audiences.

Media and movement scholars also note that media attention often occurs in cascades because of the competition among news outlets chasing hot news. For instance, Seguin (2016) finds that media attention to SMOs is featured by the rich-get-richer positive feedback process. He suggests that "media attention is path-dependent and routinely punctuated by large cascades of attention to previously obscure SMOs" (Seguin, 2016: 998). Thus, if a news outlet reports more conflictual events in its historical coverage, it is also more likely to report more on social protests as these conflictual events including social protests fit into its issue attention cycle or cascades.

H1a. News media with a higher propensity to report conflictual events tend to cover more domestic social protests.

Another important factor that shapes news content is a news outlet's market competition (McManus, 1995) and its audience's demographic characteristics (Hamilton, 2004). Since the mid-1980s, journalism has shifted to a market-based commercial news production (Hamilton, 2004; Humprecht and Udris, 2019; McManus, 1995; Napoli, 1997). Today, it is almost common knowledge that media size, ownership, and profit orientation are considered the first of many filters that determine what will get news coverage (Herman and Chomsky, 2002). The financial commitment theory of media competition suggests that as the intensity of media market competition grows, to maintain and compete for more share of the media market, news organizations will increase the amount of money committed to producing "high-quality" news content for attracting wider audiences (Lacy, 1992; Litman and Bridges, 1986). In addition, to maximize profits for media investors and owners, commercial news media often cater to groups appealing to profitable advertisers (Dunaway, 2008). For instance, newspapers may tailor their content to meet the demand of ideological predispositions of consumers for an economic incentive (Gentzkow and Shapiro, 2010). Thus, news outlets with a better media market position may be less tempted to shirk professional journalism norms to seek profits, which makes them consistently cover substantive news stories (Dunaway, 2008, 2011, 2013).

Since our research focuses on web news outlets, we use website traffic data to measure news site's relative position in the media market. Media and webometrics scholars have used various data sources to study the web and its association with varied social, political, and economic outcomes (Vaughan and Yang, 2013). For instance, Vaughan and Yang (2013) compared how website traffic data from Alexa Internet, Compete, and Google Trends correlate with academic and business performance measures for a series of universities and business entities. They find that web traffic data can explain the variation in educational/business performance, and Alexa Internet is the best among the three web traffic data sources provided. Following this approach, we assume that a news site with more web traffic holds a better market position, and therefore, it might be more likely to cover more social protests.

H1b. News media with a better market position, that is, more web traffic, tend to cover more social protests.

Social movement theory

Next, we move to how social movement scholars explain media attention to social protests. Particularly, we focus on two dominant approaches in social movement literature, resource mobilization and political opportunity.

Resource mobilization. Resource mobilization scholars emphasize the importance of SMOs and their interactions with news organizations in shaping media attention to social movements. On one hand, social movements target mainstream media as important and indispensable channels to reach constituencies, policy-makers, and third parties for achieving their agendas (Gamson and Wolfsfeld, 1993; Koopmans, 2004). On the other hand, mass media need newsworthy stories featured as notorious, consequential, extraordinary, and culturally resonant to attract wider audiences (McCarthy et al., 1996). Thus, SMOs can influence media practices through making movement events that filter into the issue attention cycle (Amenta et al., 2009; Andrews and Caren, 2010).

Prior studies have consistently shown that SMOs can mobilize human, financial, and symbolic resources to signal newsworthiness and gain news coverage (Gamson and Wolfsfeld, 1993; Ganz, 2000; Staggenborg, 1988; Zald and McCarthy, 1987). For instance, Staggenborg (1988) finds that paid staff in formal pro-choice organizations could maintain relationships with journalists. Rohlinger (2002) argues that the established communication department not only helps SMOs create networks with mainstream journalists but also helps them efficiently respond to breaking news and journalist requests for information. Andrews and Caren (2010) also reveal that professional and formalized groups that mobilize numerous human resources to advocate for issues resonating with newspapers' focus on local economic growth and well-being can attract more attention from local news media.

Some scholars argue that we are experiencing (or have entered) a global shift toward a social movement society, where social protests are a part of modern life and institutionalization and professionalization have become the major avenues of contentious claims (Jenkins et al., 2008; Meyer and Tarrow, 1998). In their seminal work, McCarthy and Zald (1977) emphasize the significance of discretionary resources available at the societal level to a social movement industry, and the prosperity of SMOs in a society is the key to their success in mobilization. This is especially important in authoritarian regimes. Previous empirical studies show that the levels of freedom afforded to civic associations can serve as "organizational opportunities" that provide a base for social activism (Almeida, 2003), and SMOs can use civil society openness to mobilize for their agendas

(Davis and Zhang, 2019). Thus, we should expect news media in nations with strong civil society organizations (CSOs) to cover more social protests.

H2. Media in nations with strong CSOs cover more domestic social protests.

Political opportunities. The political opportunity approach to analyzing social movements investigates external political factors that affect SMO activities, including political institutionalization, elite influence, elite allies, and "state capacity and propensity for repression" (McAdam et al., 1996: 27). SMOs' and activists' mobilization outcomes depend on political opportunities and constraints (Amenta et al., 1992, 2005, 2009). If we conceptualize media attention as an SMO's mobilization outcome, then a movement's influence on media coverage should vary across different political regimes.

However, movement scholars often focus on news coverage in the context of Western democratic states with freedom of expression and critical news reporting (Amenta et al., 2009), and it is not clear whether these models can explain protest attention in different political regimes. Thus, instead of asking how SMOs affect protest attention, scholars now tend to ask under what conditions SMOs can influence protest coverage in news media on a global scale.

One direct and important political condition that influences media attention in the digital era is Internet censorship (Humprecht and Esser, 2018; King et al., 2013; Lei, 2016). In general, censorship refers to efforts to prevent content from being circulated by government authorities. Censorship imposes taxes on information by increasing costs on users for accessing or spreading information (Roberts, 2020). Political communication scholars have long debated whether government authorities can suppress the spread of information via the Internet (Diamond, 2010; Roberts, 2020).

We suspect that Internet censorship functions differently in democratic and authoritarian countries as these nations' capacities and practices may vary dramatically (Pan, 2017). In democratic countries, media are often seen as the fourth estate (in addition to the traditional clergy, nobility, and commoners) because freedom of expression allows them to gain social influence through framing political issues (Schultz, 1998). Even though government authorities in wealthier democratic countries have the technology and capacity to censor media content, they might cause backfire as the cost of resisting censorship is relatively low and censorship is seen as unjust and erosion of media independence and freedom of speech and expression.

H3a. Media in democratic nations with strong Internet censorship cover more domestic protests.

However, media tend to be more heavily censored under non-democratic regimes (Egorov et al., 2009). Under authoritarian regimes, to control information flows that may threaten the social order, government authorities often censor sensitive content such as political scandals in media (Chia et al., 2004) and collective action potentials (King et al., 2013) via various methods such as Internet blocks, content removal, and online filtering systems. China is an often-cited example of pervasive censorship in which censorship is most heavily imposed on content aimed at arousing collective action against the state (King et al., 2013). In authoritarian regimes, some governments also use extralegal intimidation to deter users from spreading information (Roberts, 2020). Through threatening journalists and online users with some costly punishment, censorship via fear has become an efficient tool to suppress online expression. For instance, Pan and Siegel (2020) find that Saudi Arabian Twitter users imprisoned and then released for their online speech tend not to speak out against the government online. Similarly, Tanash et al. (2017) find that a large proportion of Turkish

Twitter accounts were self-deleted after the 2016 attempted coup because of the high political risks. Therefore, we should expect that media in authoritarian countries experiencing strong censorship tend to report fewer protest events.

H3b. Media in authoritarian nations with strong Internet censorship cover fewer domestic protests.

Word society theory

World society scholars focus on how global cultural and associational processes affect nation-states and societies (Meyer, 2010; Meyer et al., 1997). They argue that

> [w]orldwide models define and legitimate agendas for local action, shaping structures and policies of nation-states and other national and local actors in virtually all of the domains of rationalized social life—business, politics, education, medicine, science, even the family and religion. (Meyer et al., 1997: 145)

The institutionalization of the world model has been widely used to explain structural isomorphism in global phenomena, for instance, the Americanization trend in the global media market. Comparative media studies have long debated whether news content converges in global society (Humprecht and Udris, 2019). Some scholars have argued that the digitalization of news media, the rapid development of information and communication technologies, and the continuing commercialization due to globalization in the 21st century have led to the increasing homogenization of news contents, a process driving "a convergence of world media toward forms that first involved in the United States" (Hallin and Mancini, 2004: 26).

In recent years, scholars have begun to connect world society literature with social movement theories to explain the emergence of social protests and their international media coverage (Evans et al., 2020; Lim and Tsutsui, 2012; Tsutsui, 2006; Tsutsui et al., 2012; Tsutsui and Shin, 2008). Prior studies have consistently shown that the diffusion of global norms, cultures, and institutions can bring resources and opportunities to facilitate the development of local protests and attract domestic media attention. For instance, Tsutsui (2006) argues that global political and cultural transformations have facilitated mobilization for globally legitimated human rights issues because of the expanded political opportunities worldwide and the intensified international flows of material resources and discursive frames. Murdie and Bhasin (2011) find that increases in human rights international non-governmental organization (INGO) activities are associated with higher levels of both violent and non-violent protest in 1991–2004. Evans et al. (2020) show that the presence of INGOs and the global diffusion of environmental norms and institutions help local environmental protests gain global media attention.

H4a. Media in nations with more INGO linkages cover more domestic social protests.

We also suspect that INGOs may play a different role in democratic and authoritarian regimes as these nations have different political environments (Evans et al., 2020). There is ample literature documenting the challenges in social movement mobilization in non-democratic and repressive contexts (Almeida, 2003; Earl, 2011; Kadivar, 2018). In authoritarian regimes, local NGOs and social activists often lack critical resources and opportunities for social movement mobilization and local news media are reluctant to cover protests because of governmental control and censorship. Prior studies have shown that local SMOs and social activists could achieve their agendas via

the Boomerang effect, that is, they could seek out international actors to petition the state when state actors are not responsive to their demands since the presence of INGOs puts pressure on local governments and creates opportunities for media (Evans et al., 2020). In addition to material and human resources, the presence of INGOs also diffuses global norms on issues like human rights and environmentalism which legitimize local SMOs and activists' agenda in authoritarian regimes, leading to gaining more news coverage. For instance, Yang (2005) shows that the environmental INGO, *Friends of Nature*, promoted various activities such as environmental education, nature conservation, and policy advocacy in China through a series of national campaigns, leading to a growing acceptance of environmental issues in the Chinese political context. Thus, we suspect that the role of INGOs in media attention to domestic protests among authoritarian regimes is more critical compared to democratic regimes, as media in democratic countries have more news freedom.

> *H4b.* The effect of INGO linkages on news coverage of social protests is stronger in authoritarian countries.

Data, variables, and methods

Data

To test the hypotheses, we compiled the integrated media-level cross-sectional protest coverage data from 12,644 web news sources across 140 countries (see Appendix 1) from 2015 to 2020 based on 1.2 million news articles. News coverage of social protests is drawn from the GDELT. GDELT monitors broadcast, print, and web news reports breaking worldwide in near real time and updates its database every 15 minutes. Relying on Google Cloud's natural language processing and deep learning techniques, GDELT translates the world's news in 65 languages in real time to identify various attributes and objects such as events, people, organizations, locations, themes, and emotions. GDELT builds its massive inventory of the media of the non-Western world by partnering closely with governments, think tanks, academics, NGOs, and citizens in each country.

We focus on GDELT's geocoded web news sites, and the majority are concentrated in the United States (14,111), United Kingdom (1950), Italy (1810), France (1041), Russia (1024), Canada (887), Germany (884), China (780), Turkey (725), and India (686). Web news sites related to these top 10 countries account for 65% of global sources in GDELT. We use Google BigQuery to access the GDELT event database to retrieve all protest events, such as demonstrations, rallies, and protests, that occurred between 2015 and 2020. We then match these protest events with GDELT global knowledge graph database to obtain protest-related news articles worldwide. Based on the geographic location of protest actors and news sites, we restrict our analysis to news articles covering domestic protests related to their own countries. Following previous research, we focus on primary news sources with high traffic and remove countries with less than 10 unique news sources in GDELT. This yields 2.79 million unique news articles related to social protests from 21,683 news outlets in 141 countries or areas. Given that US news sources account for 42% of the total 37,789 news sites and 1.59 million news articles of the total coverage of social protests in the GDELT, we exclude the US case in our main analysis to avoid the case that model estimates are largely driven by US media outlets. Our final analytic dataset includes 1.2 million protest-related news articles from 12,644 unique websites in 140 countries or areas. We report additional results with the US case for the robustness test.

Table 1. Protest types in GDELT.

Tactics	# Articles (excluding the United States)	# Articles (including the United States)
Engage in political dissent	48,437 (4%)	133,297 (5%)
Demonstration or rally	927,678 (77%)	2,216,177 (79%)
Hunger strike	57,563 (5%)	67,953 (2%)
Strike or boycott	77,643 (6%)	147,139 (5%)
Obstruct passage, block	17,609 (1%)	63,271 (2%)
Protest violently, riot	80,889 (7%)	168,364 (6%)
Total	1,209,819	2,796,201

GDELT: Global Database of Events, Languages, and Tones project.

Dependent variable

Our key dependent variable is news coverage of social protests *at the media level* in a given year. Unlike prior studies focusing on country-level media attention, we measure media attention to social protests by the logged number of news articles a web news outlet covers pertaining to social protests its own country engaged in between 2015 and 2020. In GDELT, we use CAMEO root event code "14 PROTEST" to extract all protest-related news articles covering demonstrations, rallies, hunger strikes, strikes, boycotts, riots, obstructing passages, and other engagements in political dissent. Table 1 shows the distribution of the number of articles for each protest tactic in GDELT, and the majority of protest events are demonstrations and rallies in 2015–2020.

Figure 1 maps the total news articles of domestic social protests worldwide in the GDELT. The top 10 countries accounting for 79% of the total news coverage of social protests consist of the United States (1,586,382), Israel (144,538), India (139,067), the United Kingdom (103,140), Ukraine (63,588), Australia (52,042), Canada (43,035), Nigeria (42,635), Russia (37,545), and Pakistan (31,489).

Independent variables

The central explanatory variables in the analysis consist of a series of media- and country-level factors that influence news coverage of social protests. We gathered most of our media and country variables from GDELT, Alexa Web Information Service, and the Varieties of Democracy (V-Dem) project.

Media-level variables. We use site popularity to measure a news outlet's *market position*, operationalized as the 10-quantiles of global ranking by Alexa Web Information Service (AWIS). AWIS provides site popularity, related sites, and traffic statistics of web pages and sites. Alexa Internet collects all these data through its extensive web scrawl and usage analysis. AWIS estimates a website's global ranking based on its daily visitors and pageviews. We obtained AWIS global ranking in 2015–2020 through Amazon Web Services API. Because AWIS does not provide ranking metrics for all websites due to a lack of sufficient information for some websites that have low traffic and pageviews, we treat these websites as the 10th quantile. After reversely adjusting, we obtain a market position score ranging from 1 to 10, with a higher score indicating a better market position.

Media stance on social movements is operationalized as the reversed average Goldstein scale of all events a news outlet has covered from the GDELT project. The Goldstein scale is a numeric
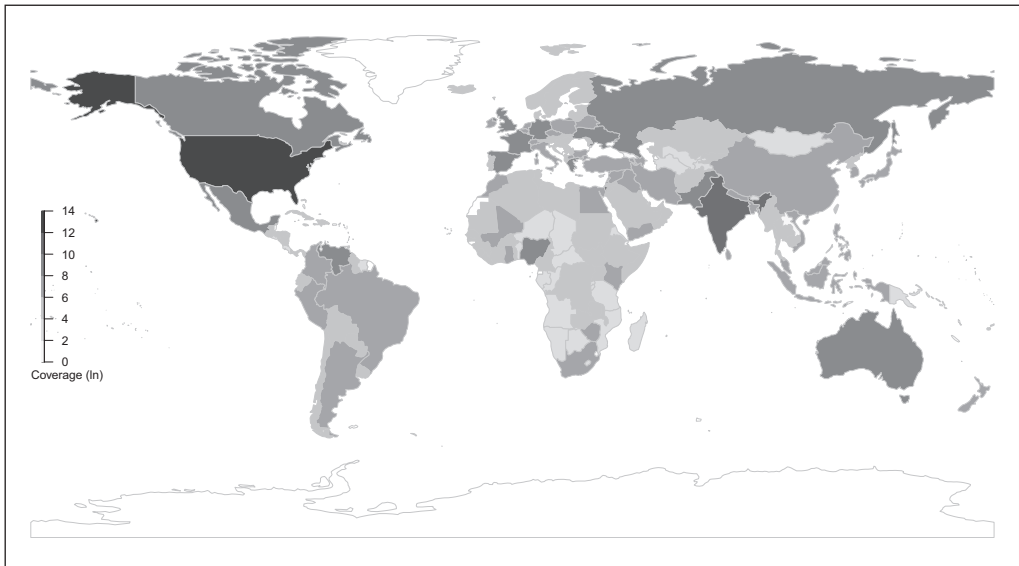
Figure 1. World map on media attention to domestic social protests.

score from −10 to 10, capturing the potential impact that type of event will have on the stability of a country (Goldstein, 1992). We first compute the average Goldstein scale for each media outlet and then reverse the scale to measure the degree of contentiousness of an event, such that a larger score represents a media outlet's tendency to cover more conflictual events. This is a proxy measure of media stance on social movements.

Resource mobilization variable. We use the CSO's participatory environment from the V-Dem project to capture the vibrancy and strength of CSOs in a given country. The V-Dem project, based at the Department of Political Science at the University of Gothenburg, tracks different dimensions of democratization worldwide over time (Coppedge et al., 2020; Lindberg et al., 2014), and its democracy measurements such as electoral, deliberative, participatory, and egalitarian indexes have been widely adopted in sociological research (Kadivar, 2018). *CSO strength* is a numeric score ranging from 0 to 10, in which a large CSO strength score indicates the better autonomy and vibrance of CSOs in a given country.

Political opportunity variable. We focus on digital media freedom, given that our news sources are web-based. We use *government Internet filtering in practice* from V-Dem to capture the degree of digital censorship by the government using methods like filtering text, audio, images, or video on the Internet or blocking access to certain websites from V-Dem. We reversed the score, so a high value indicates that the government frequently removes political content, except from pro-government sites.

World society variable. Following previous work by world society scholars (Evans et al., 2020; Shandra et al., 2009; Shorette et al., 2017), we use the logged number of INGOs to capture a nation's position in the world society. Due to data availability, we use the average number of

INGOs a country had in 2015–2018. Data are from the Union of International Associations' Yearbook of International Organizations.

Control variables

Macro-level explanations of contemporary social protests tend to locate protest sources in a society's political, socio-economic, and cultural realms (Jenkins et al., 2008). Thus, we control for country-level political, social, and economic factors that might influence protest occurrence and media attention to protests.

GDP per capita (ln). Prior studies show that economic conditions contribute to the emergence of social protests (Gurr, 2015; Jenkins et al., 2008). For instance, economic affluence may encourage the adoption of the postmodern value that prioritizes self-expression, and economic fluctuations such as unemployment and inflation may cause more grievances, leading to social protests. Thus, we use logged GDP per capita in thousands to control for economic development in our analysis. We obtain GDP per capita (constant 2010 US dollar) from Bank national accounts data and the Organization for Economic Co-operation and Development (OECD) National Accounts data files (worldbank.org).

State capacity. Recent scholarship documenting threat and repression shows that movement success partly depends on the state's capacity to control and repress social protests (Earl, 2003, 2011). Strong states may efficiently control or repress social protests but they may encourage social protests by providing a centralized target for the opposition or signaling the greater capacity for responding to activist demands (Jenkins et al., 2008). We incorporate two variables—state authority over territory and state fiscal source of revenue—to control for state capacity that influences social movements. State authority over territory measures the extent of recognition of the preeminent authority of the state over its territory, and state fiscal source of revenue captures the central government's capacity to extract taxes to finance its activities.

Democracy. Previous research shows that democracy or democratization should open opportunities for protest (Della Porta, 2015; Fallon et al., 2012; Kitschelt, 1986). This is partly because freedom of speech and demonstration is one of the fundamentals for democracy. Existing scholarship consistently shows that activists and SMOs use protest to draw media attention when facing grievances and social injustice in democratic countries (Earl et al., 2004). We incorporate electoral democracy from V-Dem to account for different aspects of democracy system that might influence social protests and media coverage (Kadivar et al., 2020).

Freedom of expression. We add an additional variable in our models to capture the freedom of expression in a given country from V-Dem. The weighted composite index captures the extent to which a government respects press and media freedom, the freedom of ordinary people to discuss political matters, and the freedom of academic and cultural expression.

Authoritarian. We use the polity2 score from the Center for Systemic Peace to create a dummy variable indicating whether a country is an authoritarian regime. Polity2 score has been widely used by scholars in political science and sociology, and it captures the regime authority spectrum on a 21-point scale ranging from −10 (hereditary monarchy) to +10 (consolidated democracy). Following previous studies (Chenoweth, 2013; Davis and Zhang, 2019), we classify a country as authoritarian if its average polity2 score is less than −5. We use this variable to test whether the

effect of censorship and INGO linkages on news coverage varies across different types of countries.

In addition, we add the logged population size and territory size in our models. We also control for the logged number of news articles a media outlet has in GDELT to account for the fact that more news articles might inflate protest attention. All independent and control variables are lagged 1 year except for those time-invariant variables. Table 2 reports the variables, definitions, and descriptive statistics used in the analyses.

Analytic strategy

Drawing on worldwide news coverage data from GDELT, we examine how media, movements, censorship, and international forces shape protest attention on a global scale. The data are structured as *news media by year*. We use random-effects regression models to estimate the association of media, movements, censorship, and INGOs with news coverage of domestic protests. Given that US news media sources account for 42% of the total 37,789 news sites in GDELT and a large proportion of news coverage of social protest is from US news sources, we exclude all US news outlets in our main results. We also replicate our analyses using negative binominal models and the sample with the US case as robustness tests. Results are consistent across different model specifications and samples.

Results

Table 3 reports random-effects ordinary least squares (OLS) regression results testing the hierarchical model. Before turning to our main findings, we report some noticeable, statistically significant relationships for control variables in our full model (Model 7), which captures the direct and indirect effects of media stance and market position, CSO strength, censorship, and INGOs on news coverage of domestic protests. Note that our dependent variable is the logged number of news articles related to social protests by a news outlet. We find that news coverage of social protests is positively and statistically significantly associated with GDP per capita, the level of freedom of expression in a nation, and population, but it is negatively associated with state authority over territory and state fiscal capacity.

News media

Next, we assess how media characteristics explain news coverage of social protests after accounting for control variables. Turning to Model 1, we find that news outlets with a higher propensity to cover conflictual events will report more social protests ($e^{0.031} = 1.031$; $p < 0.001$). This suggests that a unit increase in media-level preference to cover conflictual events would lead to a 1.031 increase in news articles on social protests. Similarly, we find that news sources with a better market position devote more attention to social protests. News sites' popularity ($e^{0.016} = 1.016$; $p < 0.001$) is positively associated with media coverage of social protests. We would expect a 1.016 increase in news articles by a news outlet on protest events for a unit increase in the AWIS site popularity scale.

In summary, our evidence in Model 1 suggests that a news site's popularity and propensity to cover conflictual events can help explain media attention to domestic social protests. Supporting Hypotheses 1a and 1b, we find that media stance and market position are both strong predictors of news coverage of protests.

Table 2. Variables, definitions, and sources.

Variables	Technical definitions	Sources	N	Mean	SD
Media coverage of social protests	The logged total number of domestic protest that a web news outlet has covered	GDELT	136,926	0.691	1.243
Media market position	AWIS site popularity (1–10). A large score means higher popularity with more traffic	AWIS	136,920	5.775	2.850
Media stance on social movements	Reversed Goldstein scale; a high value indicates the preference to cover conflictual events	GDELT	93,842	−1.070	1.612
CSO strength	The level of civil society organization's participant environment	V-Dem	136,926	1.278	1.203
Internet censorship	The government's attempt to censor news content in a given country	V-Dem	136,926	−0.645	1.444
INGOs (ln)	The logged number of international non-governmental organizations a country has	INGO yearbook	134,142	7.723	0.638
GDP per capita (ln)	Economic development indicator	V-Dem	133,790	2.922	1.013
State authority over territory	State capacity to control its territory	V-Dem	136,626	93.806	8.016
State fiscal capacity	State capacity to extract revenue from taxes and other economic transactions	V-Dem	136,926	1.911	0.969
Electoral democracy	The level of democracy in a given country	V-Dem	136,926	0.664	0.267
Freedom of expression	The level of freedom of expression by media and the public	V-Dem	136,926	0.751	0.288
Population (ln)	The logged population size	V-Dem	136,926	17.563	1.414
Territory (ln)	The logged territory size	V-Dem	136,926	13.187	1.844
Authoritarian	A dummy indicating if the polity2 score is less than −6.	Polity2	136,926	0.071	0.257
# Articles	The logged number of articles in GDELT a news outlet has	GDELT	96,514	6.317	2.742

GDELT: Global Database of Events, Languages, and Tones project; AWIS: Alexa web information service; CSO: civil society organization; INGOs: international non-governmental organizations; V-Dem: Varieties of Democracy.

Table 3. Regression results predicting news coverage of social protests.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
GDP per capita	0.021**	0.010	0.015+	0.026***	0.008	0.032**	0.040***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.011)	(0.012)	(0.012)
State authority	−0.008***	−0.008***	−0.008***	−0.008***	−0.009***	−0.009***	−0.009***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
State fiscal capacity	−0.037***	−0.029**	−0.028**	−0.028**	−0.036***	−0.039***	−0.045***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Democracy	−0.816***	−0.781***	−0.738***	−0.808***	−0.826***	−0.827***	−0.756***
	(0.091)	(0.093)	(0.093)	(0.096)	(0.099)	(0.100)	(0.099)
Freedom of expression	0.780***	0.661***	0.804***	0.816***	0.740***	0.706***	0.815***
	(0.074)	(0.079)	(0.079)	(0.079)	(0.078)	(0.078)	(0.087)
Population (ln)	0.048***	0.044***	0.037***	0.038***	0.037***	0.045***	0.029***
	(0.005)	(0.005)	(0.006)	(0.006)	(0.008)	(0.008)	(0.009)
Territory size (ln)	−0.002	−0.001	0.001	0.001	−0.001	−0.003	0.005
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
# Articles in GDELT	0.352***	0.334***	0.334***	0.333***	0.334***	0.334***	0.352***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
AWIS popularity	0.016***						0.016***
	(0.001)						(0.001)
Goldstein scale (rev.)	0.031***						0.031***
	(0.001)						(0.001)
CSO strength		0.018*					0.015*
		(0.007)					(0.008)
Internet censorship			0.033***	0.041***			0.046***
			(0.008)	(0.008)			(0.008)
Authoritarian				0.084		−1.200***	−1.766***
				(0.082)		(0.335)	(0.340)
Authoritarian × Censorship				−0.105**			−0.135***
				(0.034)			(0.035)
INGOs (ln)					0.032	−0.010	−0.017
					(0.022)	(0.024)	(0.025)
Authoritarian × INGOs (ln)						0.154**	0.280***
						(0.048)	(0.050)
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	−1.495***	−1.198***	−1.183***	−1.216***	−1.175***	−1.022***	−1.134***
	(0.134)	(0.136)	(0.135)	(0.135)	(0.145)	(0.152)	(0.150)
Observations	92,210	94,844	94,844	94,844	94,119	94,119	91,533

GDELT: Global Database of Events, Languages, and Tones project; AWIS: Alexa web information service; CSO: civil society organization; INGOs: international non-governmental organizations.
Robust standard errors are in parentheses.
$+p < 0.1$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

Social movement

Resource mobilization. Model 2 evaluates Hypothesis 2. We add a nation's vibrancy of CSOs as a proxy of the development of SMOs into analytic models to test the association of SMOs with protest attention across both democratic and authoritarian countries. Regardless of authoritarian or
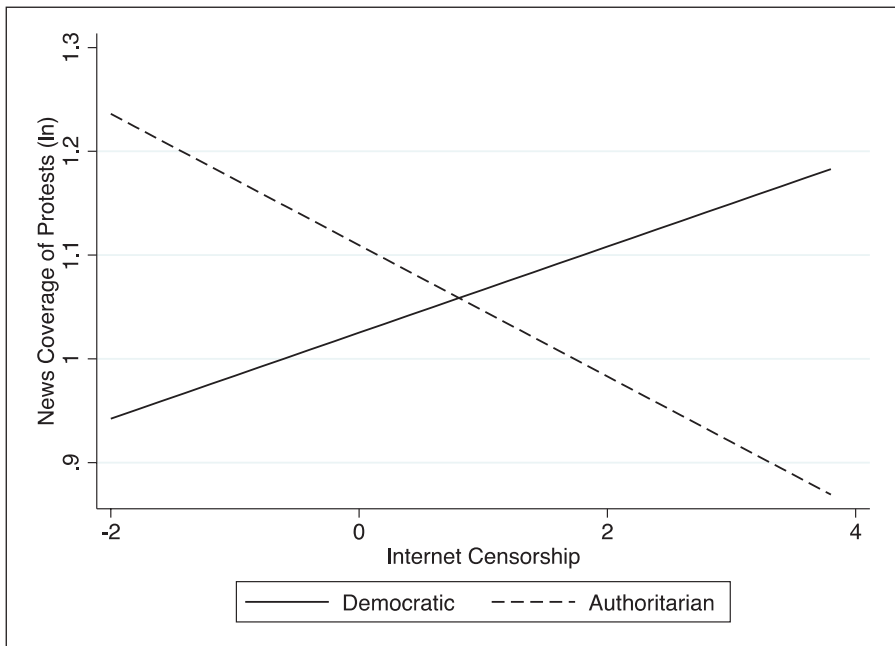
Figure 2. The relationship between Internet censorship and protest coverage varies across democratic and authoritarian counties.

democratic regimes, we find a positive and statistically significant relationship between CSO strength and coverage ($e^{0.018} = 1.018$; $p < 0.05$). This suggests that media in a nation with vibrant CSOs tend to cover more domestic protests.

Political opportunity. Next, we turn to the political opportunity approach focusing on the relationship between Internet censorship and news coverage of domestic protests. First, in Model 3, we find that Internet censorship can lead to some backlash. Government Internet censorship is positively associated with news coverage of protests, and it is statistically significant ($e^{0.033} = 1.034$; $p < 0.001$). However, in Model 4, we find the censorship-coverage relationship varies across different types of regimes. Figure 2 plots the two-way Internet censorship-authoritarian regime interaction effects based on Model 4. The dotted line shows the trend for authoritarian regimes, and the solid line shows the trend for non-authoritarian regimes. As expected, media in authoritarian nations tend to cover fewer domestic protests as the Internet censorship intensifies, but we also find an opposite relationship that media in more democratic nations report more protests when governments tend to filter online content frequently. This evidence supports Hypothesis 3a and 3b.

World society

Models 5 and 6 test world society theory in explaining news coverage of protests. We use INGOs linkages to capture a nation's organizational ties to the international community, indicating the impact of global norms, institutions, and actors. Hypothesis 4a suggests that media in nations with more INGOs tend to report more protests, but in Model 5, we did not find any statistically significant relationship ($e^{0.032} = 1.033$; $p > 0.05$). Still, there is a positive association between INGOs and protest attention in news coverage, as expected.
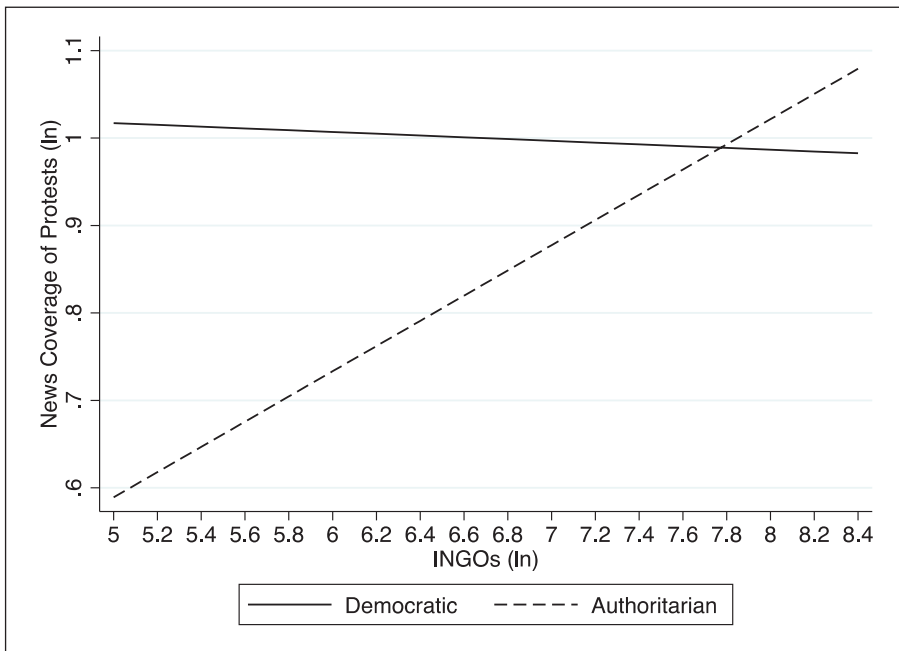
Figure 3. The relationship between INGO linkages and protest coverage varies across democratic and authoritarian countries.

We further test whether the relationship varies between democratic and authoritarian nations. Model 6 adds an interaction term between INGOs and authoritarian regimes, which is statically significant at the 0.01 level ($e^{0.154} = 7.609$; $p < 0.01$). Figure 3 plots the two-way relationship based on Model 6 after holding other factors at their mean values. The dotted line shows the trend for authoritarian regimes, while the solid line shows the trend for non-authoritarian regimes. The y-axis is the logged number of news articles related to domestic protests, and the x-axis is the logged number of INGOs. As the number of INGOs grows, media attention to domestic protests in democratic nations remains relatively stable, suggesting that INGOs play an insignificant role in helping local SMOs and activists gain domestic media attention in democratic countries. But this is not the case for media in authoritarian regimes. The number of news articles covering domestic protests grows significantly as a nation has more organizational ties to the international community. This suggests that the influence of international forces on media attention to domestic protests is stronger in authoritarian countries. This supports Hypothesis 4b.

Robustness tests

Here we briefly report our robustness tests in Table 4. Since the number of news articles related to protests is a count variable, we ran an additional random-effects negative binomial regression analysis in Model 8. We also report a full model with the US case in Model 9. Both results in Models 8 and 9 show consistent findings with the main results in Model 7 except INGOs. Model 8 shows a positive and statistically significant relationship between INGOs and news attention to protests. This actually supports Hypothesis 4a, that a greater presence of INGOs is positively associated with new coverage of domestic protest events. Model 9 shows an opposite relationship between INGOs and news coverage. This inconsistency can be explained by the huge number of US news outlets which largely drives

the result and relatively low protest coverage of US media outlets, given its number of INGOs. But both models show that INGOs play a more critical role in authoritarian regimes.

Discussion and conclusion

This article attempts to link media and social movement theories with world society theory to explain media attention to domestic protests on a global scale. Following the hierarchical model (Reese and Shoemaker, 2016; Shoemaker and Reese, 2014), we add an extra world society layer and integrate media, social movement, and international forces into a holistic theoretical framework to understand the cross-national variation in media attention to social protests. To test potential explanations of news coverage of social protests worldwide drawn from this framework, we rely on GDELT to compile a unique analytic dataset from 12,644 web news sources across 140 countries or areas from 2015 to 2020 based on 1.2 million news articles.

After accounting for confounding factors that influence media attention, we find that media attention to social protests is likely to be influenced by different levels of forces, including media organizations, movements, censorship, and international forces. Our cross-national analysis shows that news media in a position that prefers conflictual events and has more site traffic tend to cover more domestic protests (Hypothesis 1a and 1b). Turning to social movement theories, as resource mobilization theorists have expected, we find that news media in nations with vibrant CSOs likely report more protests (Hypothesis 2). We also show that political opportunities or constraints shape news attention. We find that Internet censorship leads to backfiring, but this is driven by news sites in democratic countries. We reveal that Internet censorship serves different roles in democratic and authoritarian regimes. News media in democratic countries cover more protests when experiencing strong censorship (Hypothesis 3a). But in authoritarian countries, Internet censorship seems to suppress media attention to domestic protests (Hypothesis 3b). We then further show that world society theory can contribute to explaining media attention to social protests. Although we cannot establish a general link between INGOs and media attention in our primary analysis, we find some evidence showing that INGOs play an important role in helping SMOs gain local news attention in *authoritarian* countries (Hypothesis 4b).

Before turning to theoretical and empirical contributions, we first discuss several noticeable limitations in this study. First, we only focus on the direct effects of media, social movements, censorship, and INGOs. A more nuanced approach is to add the two-way or multiple-way interaction terms in our models to test whether multilayered factors jointly affect news coverage. But this goes beyond our current research scope, and we leave it to future research. Second, we only examine some characteristics of media, movements, and political environments based on theoretical predictions. One direction for future research is to investigate how other prominent features, such as political ideologies of news media and SMO repression, shape news coverage. Third, for simplicity, we focus solely on news coverage of social protests instead of news quality such as media tone. GDELT did provide some media tone measures using natural language processing techniques, but scholars should be cautious using media tone in news articles to measure tone toward specific protests. Finally, we did not account for the number of protest events in a given country in our models. It is possible that news media in nations with more protest events likely report more protests. Even though we lack critical data on the occurrence of protest events, our additional analyses (not shown) that control for protest events from GDELT (an underestimated measure of protests) show consistent findings.

Despite these limitations, this article advances the current literature of media attention to social movements. First, we extend the hierarchy of influences model on media attention to social movements by integrating media, movements, and government censorship with world society factors. World society theorists argue that global norms, institutions, and actors can help local SMOs and activists gain media attention as they can mobilize both tangible and intangible resources to legitimize and support movement agendas (Evans et al., 2020; Meyer, 2010; Meyer et al., 1997). Limited

Table 4. Robustness tests.

	Model 8	Model 9
	XTNBREG	XTREG (Including the United States)
GDP per capita	0.014	0.110***
	(0.016)	(0.010)
State authority	−0.008***	−0.008***
	(0.001)	(0.001)
State fiscal capacity	−0.180***	−0.035***
	(0.011)	(0.009)
Democracy	−0.824***	−0.968***
	(0.106)	(0.090)
Freedom of expression	0.793***	0.827***
	(0.090)	(0.080)
Population (ln)	0.022+	0.077***
	(0.011)	(0.007)
Territory size (ln)	0.033***	−0.000
	(0.005)	(0.004)
# Articles in GDELT	0.777***	0.391***
	(0.003)	(0.002)
AWIS popularity	0.007***	0.017***
	(0.002)	(0.001)
Goldstein scale (rev.)	0.125***	0.038***
	(0.005)	(0.001)
CSO strength	0.098***	0.028***
	(0.009)	(0.007)
Internet censorship	−0.003	0.014+
	(0.010)	(0.008)
Authoritarian	−0.655	−1.740***
	(0.476)	(0.345)
Authoritarian × Censorship	−0.157***	−0.109**
	(0.044)	(0.036)
INGOs (ln)	0.257***	−0.099***
	(0.032)	(0.018)
Authoritarian × INGOs (ln)	0.130+	0.262***
	(0.072)	(0.051)
Year	Yes	Yes
Constant	−7.748***	−1.688***
	(0.165)	(−0.146)
Observations	91533	152387

GDELT: Global Database of Events, Languages, and Tones project; AWIS: Alexa web information service; CSO: Civil society organization; INGOs: International non-governmental organizations.
$+p<0.1$, $*p<0.05$, $**p<0.01$, $***p<0.001$.

research has systematically assessed how international forces shape media attention. One notable exception is Evans et al.'s 2020 seminal work on globally visible environmental protests. They found that countries with more INGO linkages tend to gain more attention about their environmental protests from international news media. But their study can only speak to international news media. Our study shows that world society theory can help explain news attention to domestic protests globally. As we rely on news media from nations in both democratic and authoritarian regimes, we show

INGOs serve different roles in news reporting of social protests in various types of countries. Our results point out several future directions in this area. For instance, do the adoption of global norms on environmentalism, human rights, and women's rights shape news coverage of domestic protests?

Second, with few exemptions, prior sociological work on news coverage of social protests often focuses on single (e.g. *the New York Times* in the Dynamic of Collective Action project) or a few national newspapers (e.g. major international media in Evans et al., 2020 article), but such an approach cannot assess how news organizations' characteristics affect protest coverage (Earl et al., 2004). These studies tend to hold media characteristics constant and evaluate how the *varied movement characteristics* can help SMOs and activists gain attention from *fixed* media outlets. Even though a longitudinal design can allow scholars to examine how a newspaper's editorial and publishing regimes affect its attention to social movements (Rafail et al., 2019), we still lack critical comparison studies on the influence of varied news media characteristics on social media movements reporting. Thus, our research provides evidence supporting the notion that some features of news media, for instance, media market position and stance toward reporting conflictual events, are critical in news reporting of social protests. As the mainstream movement literature on news coverage overwhelmingly centers on the United States, our study shows how media organizations cover domestic protests in both democratic and authoritarian regimes.

Third, this study also answers the call for more research that goes beyond the case study orientation and examines whether prior work on media attention to social movements holds up across different countries (Amenta et al., 2017). Our results show that classic social movement theories such as resource mobilization and political opportunity help explain news coverage of domestic protests worldwide. We show that CSOs contribute to media attention, regardless of regime types. But we also show that political opportunities or constraints vary across regime types and may serve different roles. Specifically, we engage in the literature on the effect of government censorship. Prior studies have long debated on whether media censorship causes backfire or suppresses social movements (Hobbs and Roberts, 2018; King et al., 2013; Pan and Roberts, 2020). We show that media censorship may cause backfire in democratic countries but not in authoritarian regimes. This suggests that whether social movements can gain much attention from news media is contingent upon the broad environment of government censorship. This challenges the generalizability of prior work mainly from countries with freedom of expression and critical news reporting systems. It also warrants more future comparative movement research across countries.

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Appendix 1

Table 5. A list of countries or areas used in the analytic analysis.

Geopolitical regions	% of total countries/regions	Country or area names
Eastern Asia	4%	China, Taiwan, Japan, South Korea, Hong Kong
Eastern Europe and post-Soviet Union	19%	Ukraine, Russia, Lithuania, Hungary, Armenia, Azerbaijan, Georgia, Latvia, Bulgaria, Slovakia, Kyrgyzstan, Poland, Croatia, Bosnia and Herzegovina, Serbia, Slovenia, Macedonia, Kazakhstan, Romania, Belarus, Czechia, Albania, Montenegro, Estonia, Moldova, Kosovo, Uzbekistan
Latin America	14%	Argentina, Chile, Cuba, Uruguay, Brazil, Venezuela, Mexico, Colombia, Dominican Republic, Paraguay, Peru, Guatemala, Haiti, Costa Rica, Ecuador, Nicaragua, El Salvador, Panama, Bolivia, Honduras
North Africa and the Middle East	13%	Egypt, Iran, the United Arab Emirates, Kuwait, Turkey, Syria, Israel, Saudi Arabia, Yemen, Morocco, Oman, Tunisia, Iraq, Bahrain, Algeria, Qatar, Lebanon, Jordan
South-Eastern Asia	6%	Indonesia, Vietnam, Thailand, the Philippines, Malaysia, Singapore, Cambodia, Myanmar
Southern Asia	5%	India, Bangladesh, Sri Lanka, Afghanistan, Nepal, Pakistan, Bhutan
Sub-Saharan Africa	20%	Senegal, South Africa, Cameroon, Benin, Mauritius, Ethiopia, Nigeria, Somalia, Mali, Ivory Coast, Uganda, Gambia, the Democratic Republic of the Congo, Liberia, Guinea, Angola, Kenya, Sierra Leone, Gabon, Ghana, Burkina Faso, Mauritania, Sudan, Namibia, Zimbabwe, Tanzania, Zambia, Rwanda
The Caribbean	2%	Guyana, Trinidad and Tobago, Jamaica
The Pacific	1%	Fiji
Western Europe and North America	16%	France, Italy, Germany, the United Kingdom, Canada, Greece, the Netherlands, Switzerland, Spain, Portugal, Australia, New Zealand, Austria, Luxembourg, Norway, Belgium, Ireland, Sweden, Finland, Denmark, Cyprus, Malta, Iceland