Domain-specific influence on Facebook: How topic matters when assessing influential accounts in four countries

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Against the backdrop of rising concern over misinformation and disinformation, a growing number of studies have considered the important role played by influential social media accounts when particular news stories attract attention online—with special attention given to Facebook, the most widely-used social network for news. However, little is known about what kinds of accounts are among the most influential information curators on Facebook, and where news organizations fit into this broader landscape. In this study, we examine how influence on Facebook plays out across different national contexts and different topics. We draw on a unique dataset from CrowdTangle, sampling over a six-month period in 2021 across four countries (Brazil, India, the United Kingdom, and the United

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States). We compare what kinds of sources (e.g., news organizations, politicians, or other kinds of influential accounts and groups) are among the most influential accounts in each location when it comes to three specific subjects: COVID-19, political leaders in each country, and climate change—which we also compare to general queries that do not specify a subject domain. Our findings show that the types of influential accounts on Facebook vary considerably by subject domain and country. News media accounts are among the largest share of these influential accounts in each country, but not necessarily the types of news media organizations presumed to be most influential offline.

Keywords: Facebook, influential accounts, social media

Introduction

Against the backdrop of rising concern over misinformation and disinformation, a growing number of studies have considered the important role played by influential social media accounts when particular news stories attract attention online. Studies often focus on Facebook, the social platform used more widely than any other service as an intermediary for news (Andı, 2021; Pew Research Center, 2021). Research has found that Facebook diversifies people's news exposure (Fletcher et al., 2021; Stier et al., 2022), but also that it drives attention to low quality, emotionally charged sources that advance extreme views on particular topics (Hagey & Horwitz, 2021; Vicario et al., 2016), potentially contributing to eroding levels of trust in news worldwide (Kalogeropoulos et al., 2019). In common with other social platforms, but unlike many other forms of information access online, algorithms and networks of social ties on Facebook combine to surface political information even when people are using it for other purposes (Boczkowski et al., 2018; Fletcher & Nielsen, 2018).

Little is known about what kinds of accounts are among the most influential information curators on Facebook (as in Thorson & Wells [(2016)]), promoting the stories that go viral and driving attention to them. Prior studies examining what accounts people interact with most on Twitter (Heiberger et al., 2021) and YouTube (Lewis, 2020) are consistent with theories suggesting that conventional news media organizations—though still present—may be relatively less influential in these digital spaces as agenda-setters or gatekeepers of information than they are in other media environments. Legacy news outlets must compete for attention with a wide range of actors on platforms including not only "digital-born" news organizations (Nicholls et al., 2016) and partisan news organizations, but also accounts associated with politicians and politically-aligned groups, celebrities, sport stars, and other influential voices (Freelon et al., 2018; Park et al., 2015) who also wield influence in these spaces. Studies have also shown that news, much less political news or "fake news," tends to be only a small fraction of what most people see and interact with online (Allen et al., 2020; Beam et al., 2018; Chauchard & Garimella, 2022; Giglietto et al., 2022; Guess, 2021; Wojcieszak et al., 2021)—or, for that matter, offline (Konitzer et al., 2021). In fact, Facebook itself has emphasized in its public reports that the most viewed URLs posted on the platform in the US are generally unrelated to news or politics at all (Facebook Transparency Center, 2021).

These previous findings, however, may obscure the extent to which legacy news organizations continue to wield influence in particular online contexts when it comes to specific news-related subjects. After all, much of the existing research on influential accounts on platforms does not differentiate by subject matter (e.g., Newton, 2020). Nor are media environments outside the US typically the focus. In one study that does make these distinctions, Majó-Vázquez and colleagues' (2017) found that legacy news was particularly dominant in driving interaction on Twitter during the 2017 French election debates. More recently, when studying amplification of elite sources about COVID-19 on Twitter in the US, Gallagher et al. (2021) also showed how different groups—including news organizations, health professionals, and politicians—amplify messages from different sources, most often elites that are demographically similar to them. Additionally,

Altay and colleagues (2022) show that outlets rated as more trustworthy dominated news use both on web and on Facebook before and during the pandemic in different countries (though 14% of Facebook engagement was with untrustworthy outlets). Together, these studies reinforce the notion that understanding who is influential on social media may depend on the topic or geographic location in which influence is studied. Such differences may be overlooked if researchers simply aggregate across entire corpuses of social media messages or populations.

In this study, we go beyond prior analyses of link-sharing patterns on Facebook overall—especially those that focus only on a single country (typically the US)—and examine how influence on the platform plays out across different national contexts. As in Kim's (2009) work on "issue publics," we focus on domain-specific influence, classifying the types of public groups and pages that receive the most interactions on the platform when sharing top-trending links pertaining to specific topics. We draw on a unique dataset from CrowdTangle, a social monitoring tool owned by Facebook, which tracks interactions with all posts made by public groups and pages on the platform. By sampling over a six-month period in 2021 across four countries (Brazil, India, the United Kingdom, and the United States), we assess and compare what kinds of sources (e.g., news media, politicians, or other kinds of influential accounts and groups) are among the most influential accounts in each location when it comes to three specific subjects: COVID-19, political leaders in each country, and climate change—which we also compare to general queries that do not specify a subject domain.

Although we do not make causal claims about how influential these interactions may be on audiences, nor assess relative differences in levels of influence between the accounts we examine, we use CrowdTangle interaction data to identify and then provide valuable descriptive analysis of the composition of influential accounts in each country. Here we define influential accounts as those whose public posts containing links to external content received the most engagement on the platform. The analysis that follows focuses on assessing how prominent legacy news media may be relative to other types of accounts.

Therefore, in examining domain-specific influence on Facebook, we pose two research questions. First, we ask: (**RQ1**) What proportion of influential social media accounts on Facebook are associated with news media compared to other kinds of influential accounts (e.g., accounts aligned with political groups or figures versus other kinds of non-political or non-media accounts)? We ask this with respect to (**RQ1a**) different topics and (**RQ1b**) different countries. Second, we ask: (**RQ2**) Among the influential social media accounts on Facebook associated with news media, what proportion are associated with legacy versus non-legacy news media? We also ask this with respect to (**RQ2a**) different topics and (**RQ2b**) different countries.

Our findings show that the types of influential accounts on Facebook vary considerably by subject domain and country. News media accounts are, in fact, among the largest share of these influential accounts in each country, but not necessarily the types of news media organizations presumed to be most influential offline. We also show how the US may be highly unusual compared to other countries. In Brazil, for example, political groups and accounts tied to Jair Bolsonaro constitute a particularly large share of these influential accounts, more so than the other three countries. Likewise, whereas individual (and often conservative) media personalities and digital-born outlets are especially prominent in the US (as previously reported in the press by Roose (2021)]), legacy news organizations (especially the BBC and the Daily Mail) tend to be particularly prominent among influential accounts in the UK. We also find exceptionally high levels of engagement with content shared by UNICEF in the US, a pattern that does not appear in other countries. Some of these differences may be related to Facebook's publicly announced efforts to combat COVID-19 misinformation (Schechner et al., 2021), underscoring the role played by the platform's algorithm in shaping what domain-specific influence looks like in practice. Others may at least in part be artifacts of how the CrowdTangle data (and the underlying Facebook data) is structured—whereby organizations with an international audience may list their headquarters in the US— demonstrating how decisions made by platform companies can limit what researchers can learn from the data they make available.

Data and Methods

This study describes domain-specific influential accounts on Facebook in four countries: Brazil, India, the UK, and the US. We selected these four places, which represent a significant proportion of the world's population, because they capture significant variation in terms of both their political and media systems. Brazil and the US have presidential systems—the first with a fragmented multiparty parliament and the second characterized by a bipartisan divide—while India and the UK have parliamentary systems. When it comes to their media systems, the UK and the US are usually described as liberal (Hallin & Mancini, 2004) or hybrid (Humprecht et al., 2022), with medium levels of media market inclusion, journalistic professionalism, political parallelism, and state support (although the UK differs from the US in its strong state support for public service media). Meanwhile, Brazil shares commonalities with the Polarized Pluralist model (Hallin & Papathanassopoulos, 2002), characterized by high levels of political parallelism and lower levels of market inclusion, professionalism, and state support. India's media system has not been classified but it includes extensive commercial offerings on television and in print in varying languages and reporting styles. All four countries exhibit high Facebook usage overall but with considerable variation in the proportion who use the platform to get news. According to data from the Reuters Institute's Trust in News Project (Mont'Alverne et al., 2022), 52% of Brazilians, 39% of Indians, 67% of Britons, and 73% of Americans say they used Facebook for any purpose in the previous 30 days, but as a source for news daily, rates are higher in Brazil (34%) and India (33%) than in the UK (27%) or US (30%).

To identify influential accounts in each country, which includes both pages and public Facebook groups, our data collection focused on six randomly selected weeks during the first six months of 2021. For each week and for each country, we made a series of queries using CrowdTangle. We began by identifying the top 10 trending posts each week

containing links from pages with admins based in each of the four countries.[1] We did this for content overall (without any keyword applied) as well as for three specific sets of keywords: (1) "covid" or "coronavirus"; (2) "Jair Bolsonaro" or "Bolsonaro" (Brazil), "Narendra Modi" or "Modi" (India), "Boris Johnson" (UK), "Joe Biden" or "Biden" (US); and (3) "climate change" or "global warming" ("mudança climática" or "aquecimento global" in Portuguese). In India, we analyzed only posts in English. For each of the top-trending stories (links) identified in this first step, we next used the CrowdTangle API to collect lists of all accounts that posted these URLs. To limit our attention to the most influential of these accounts, we selected no more than five accounts per link and excluded accounts whose posts containing these links had fewer than 100 total interactions. This process generated a list of 840 unique accounts, which posted 1,628 times and generated 75,972,324 total interactions.[2] Some of these accounts will have significant numbers of interactions from outside the country we are looking at, and for a few sites, like UNICEF, this number may be so large that it limits our ability to assess how important they really are in any individual country—but the way Facebook structures the data social scientists can access through CrowdTangle provides no way of parsing this out.

Although we applied the same thresholds as cutoffs across each search query, there is significant variation in the average number of total interactions these top-trending posts received when examining domain-specific shared links (by topic and by country) versus top-trending posts overall where no keyword was used. Top-trending posts for climate change-related content received the lowest number of total interactions relative to the other topics in all countries. This likely reflects how rare such posts are, especially in some places, compared to the other topics examined.[3]

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[1] We further restricted our lists of top-trending stories to posts that were shared in Portuguese (for Brazil) or English (elsewhere).

[2] Data was collected in September 2021. Although limiting our focus to only posts that contained links (URLs) may have some impact on the kinds of influential accounts we identified, doing so was necessary in order to identify all the accounts sharing the same top-trending external content during a given week.

[3] Our study is unable to differentiate between coordinated and organic activity on Facebook. In 2021, Meta published a report detailing networks that were removed from the platform due to

Once we identified populations of domain-specific influential accounts, we next set out to classify these accounts. Although our approach in this study draws on a systematically collected sample of 840 accounts, the labor-intensive approach employed for categorizing these accounts required keeping this sample at a modest scale. We rejected alternative approaches to categorizing larger numbers of accounts given the dearth of prior research on this subject and uncertainty about the relevant categories we might find when examining influential accounts across the four countries. Although the sample size means we are limited in our ability to make reliable inferences about differences between some of the more granular subcategories, we also note that the number of accounts in many of these categories remained roughly consistent across the six-week duration of the study. That is, when we examine our findings at the weekly level as opposed to across the full six-week span of our corpus, our results do not appear to be driven by any unusual activity specific to one of the randomly selected weeks in which our CrowdTangle queries were conducted (see the appendix for more detail). Furthermore, despite the size of the sample, the study's main strength comes from its comparative focus, which improves upon the limitations of single-country studies that often raise questions about generalizability.

Two members of the research team coded accounts based on a modified version of a categorization scheme used in Gallagher and colleagues' (2021) study of social media influence and COVID-19. The coders discussed the categorization using an iterative process to reach a consensus when there was disagreement or uncertainty about how to code an account. After a pilot stage, in which coders sought to apply the previously used categories and revised the scheme to suit the present study, discussing discrepancies between the coders with respect to specific accounts, the entire sample was divided

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coordinated inauthentic behavior, but they do not include the countries studied here. In 2020, the platform removed a network of social media accounts connected with Bolsonaro's family, which was accused of spreading misinformation and divisive political content in Brazil. See more: https://about.fb.com/news/2021/12/metas-adversarial-threat-report/ and https://www.reuters.com/article/ctech-us-facebook-disinformation-brazil-idCAKBN2492Y5-OCATC.

between the two coders, who each independently coded subsets of the accounts. In individual cases where uncertainties were raised, the coders and other members of the research team reviewed each other's work and came to a mutually agreed upon coding. We opted for this approach given differences in language and domain-specific expertise. Because many categories contained only a small number of accounts, we focus much of our analysis on three broader categories that capture differences relevant to our research questions: media accounts (including legacy media and non-legacy media accounts[4]), political accounts, and other accounts. These and the additional subcategories coded are summarized in Table 1.[5]

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[4] Within the category of non-legacy media accounts, we classified brands as "digital news media" even if part of larger conglomerates that owned legacy news organizations. In Brazil, for example, web portal UOL was coded as "digital news media" even though its parent company Grupo Folha owns both UOL and Folha de Sao Paulo, a legacy newspaper.
[5] To see all accounts coded in each category, click here.

Table 1 – Categories of influential accounts.

	Category	Subcategory	Description	Examples of accounts
Media accounts	Legacy News Media	Legacy media	News organizations with print or television properties	Globo, The Hindu, BBC News, ABC
	Other News Media	Media personalities	Journalists and other media figures like political commentators and television hosts	José Tolentino, Sakshi Joshi, Peter Stefanovic, Becky Hillier
		Digital news media	Internet-based brands	UOL, Indiatimes, LADBible, Daily Wire
Political accounts	Political Figures	Elected officials	Members of the Parliament, mayors, state governors, president, prime minister	Marco Feliciano, Achyuta Samanta, Jeremy Corbyn, Ted Cruz
		Public servants	Employees of public office, ministers, secretaries.	Major Palumbo, Piyush Goyal, Sid Miller
		Political candidates	Politicians who present themselves as candidates	Lula, Dr. Shama Mohamed, Nigel Farage, Keith Kuder

		Political figures (other)	Political figures that do not fit the other categories	Ryan Fournier
	Political Groups	Political organizations and movements	Advocacy organizations, grassroots movements	Movimento LGBT (LGBT Movement), BJP West Bengal, Leave.EU, Alexandria Ocasio-Cortez Progressives
		Other political groups	Facebook groups whose main theme is politics	Bolsonaro 2022, NARENDRA MODI ERA, Back Boris, Trump Keep America Great 2020
Other accounts	Other Influential Figures	Non-political public figures	Athletes, entertainers, public intellectuals, religious leaders	Paulo Gustavo, Indian Cricket Team, Manchester United, Lisa Daggs
		Health experts	People that hold positions in public health institutions and public health entities, medical professionals, epidemiologists	PAHO
	NGOs	NGOSs	NGOs and charity institutions	UNICEF, UniteWomen.org
	Other	Animals	Pages about animals	Eu amo os cachorros (I love dogs), Justice For Cecil The Lion, Cat Lovers Only

		Non-political group	Facebook groups that do not have politics as the main theme	Reclame Aqui SJC (Complain Here SJC), Falkland Islands - News & History, Open Water Swimming UK
		Non-political shared interests	Pages and groups that share a specific interest on a non-political topic	Acervo do Conhecimento Histórico (Historical Knowledge Archive), Star Wars Empire, Catholic
		Other	Accounts that do not fit any of the other categories	Magazine Luiza, Restaurant Worker News, Big Think

In the analysis that follows, we calculate the proportion of accounts in each of the relevant categories and calculate basic inferential statistics (t-tests) to assess where differences across subjects and countries are statistically significant.

Results

Examining overall differences in types of influential accounts

We begin by presenting results summarizing the proportion of influential accounts in each major category in each country when we examine accounts identified without any keyword applied (Figure 1). By first focusing on what percentage of influential accounts are associated with media organizations or figures versus political organizations or figures versus other areas when no subject domain has been applied, we establish a baseline for comparisons with the three specific keywords that we focus on in the next part of our findings where we more specifically take up RQ1a and RQ1b.
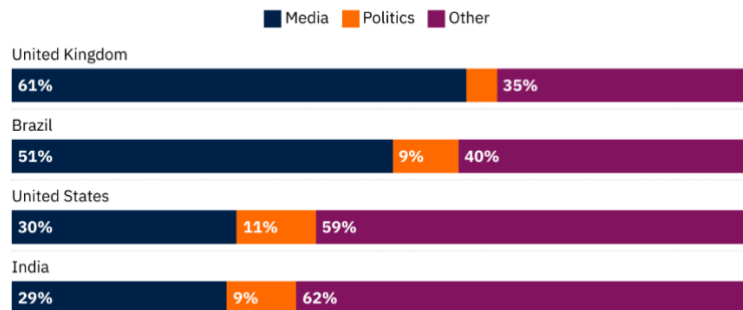

Figure 1 – Types of influential accounts identified with no keyword by country.

This first set of descriptive results clearly shows that accounts associated with news media (broadly defined) account for a majority of the influential accounts identified in Brazil and the UK and a minority (though still sizeable) in India and the US. The accounts that appear most frequently in posts with no keyword in each country are: Caras Brasil (Brazil), Indiatimes (India), Daily Mail (UK), and UNICEF (US). With the exception of

UNICEF, all of these accounts belong to news organizations (and see above on the difficulties of interpreting the numbers for UNICEF specifically). Moreover, political accounts are consistently a relatively small share of influential accounts in all four countries, constituting approximately 1 in 10 of these accounts. Non-political and entertainment-related accounts (aggregated in the "other" category) also represent a significant percentage of influential accounts when querying the CrowdTangle database with no keywords applied. Examples of these accounts are: Eu amo os cachorros (I love dogs), Star Wars Empire, or Cat Lovers Only.

Next we consider additional differences across subject domains (RQ1a) and countries (RQ1b) by examining the share of domain-specific influential accounts and compare these results to the "no keyword" condition. We plot these percentages in Figure 2.

We draw attention to two findings here. First, we note that political accounts constitute a much larger share of influential accounts for top-trending links pertaining to the political leaders in each country, with a statistically significant difference in the proportion of political accounts in these posts when compared to other domains ($p < 0.05$) (We summarize these t-tests in Appendix B.) In the aggregate, political accounts account for 54% of posts about political leaders, 19% of those about COVID-19, and 23% about climate change.

The prominence of political accounts also varies according to the country. In Brazil, for example, two-thirds of the influential accounts identified when examining top-trending stories that reference Bolsonaro were associated with political accounts (67%). Likewise, in the UK, the majority of influential accounts identified for stories about Johnson were associated with political accounts (58%), and the differences in both countries are significant when compared to all other topics. Most of these accounts are coded under the subcategory of political "groups" such as Fechado com Bolsonaro 2022 (Support for Bolsonaro 2022) in Brazil (59%) and Rejoining the EU is best for Britain in the UK (56%),

rather than accounts belonging to individual political figures (8% in Brazil and 6% in the UK). (For a breakdown of political accounts per country and topic, see appendix C.)

Second, we find that media-related accounts are a relatively larger percentage of influential accounts for political leader stories in India (56%) and the United States (53%) compared to the no keyword condition. In posts about political leaders, the most frequent accounts identified in each country are Quebrando o Tabu (Breaking taboos) (Brazil), Republic (India), Leave.EU (UK), and Ben Shapiro (US)—a mix of news organizations, media personalities, and political groups. Media accounts are also the largest category for top-trending stories about COVID-19 and climate change in all four countries with one exception—COVID-19 stories in the US, where UNICEF, an NGO coded in the "other" category, is the account that appears most frequently. Elsewhere media accounts loom large. The accounts that appear most frequently in posts about COVID-19 in the other countries include G1 and UOL (Brazil), The Times of India (India), and ITV News (UK). When it comes to climate change posts, these accounts are: Economia Ecológica (Ecological Economy) (BR), We Don't Deserve This Planet (IN), World Economic Forum (UK), and media personality Dan Bongino (US), demonstrating a broader mix of different types of influential accounts.
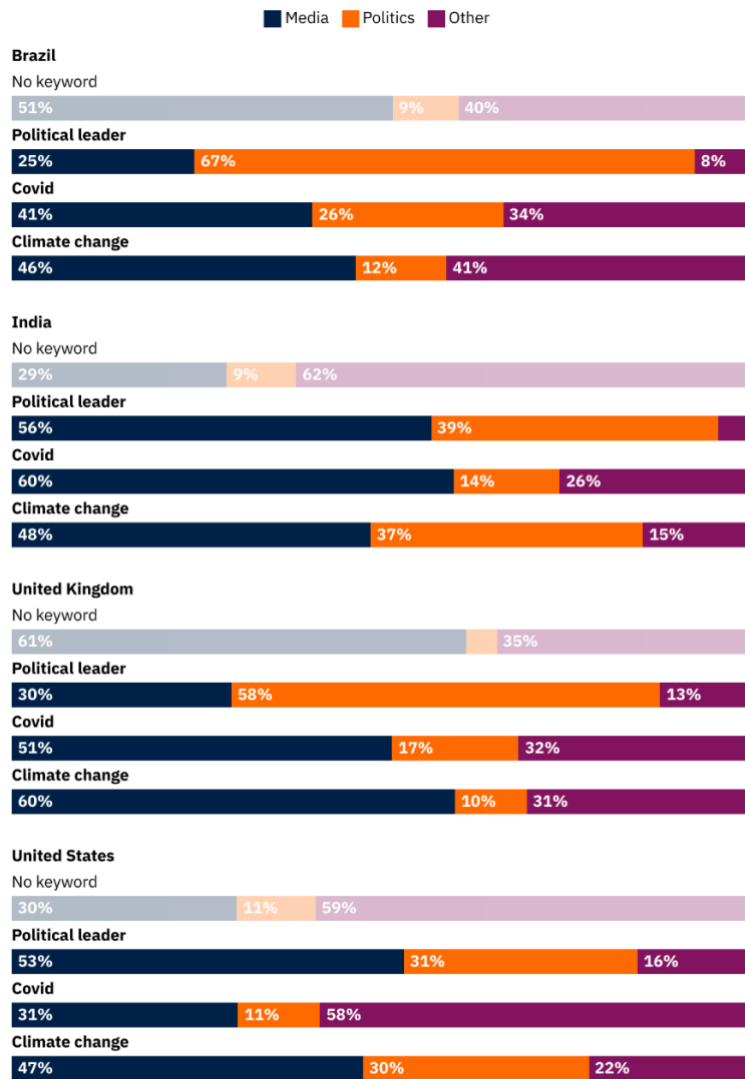
Figure 2 – Types of domain-specific influential accounts identified by country.

Examining differences in types of influential news media accounts

While the importance of country-level differences is apparent when it comes to whether news media organizations are among the most influential accounts, when we drill

down and examine different types of media accounts—specifically whether or not they are associated with legacy brands—we see further evidence of how influence often plays out in distinct domain-specific and country-specific ways. To examine RQ2, we focus on the set of influential accounts identified as being associated with news media and calculate the proportion within this category that are associated with legacy news media organizations versus other kinds of media accounts, which include both media personalities and digital-born organizations. In Figures 3, 4, and 5 we summarize differences in the proportion of influential accounts that are associated with legacy media in each country for each topic area, comparing these percentages in relation to baseline results where no keyword was applied. In Figures 6, 7, and 8 we do the same for other news media.
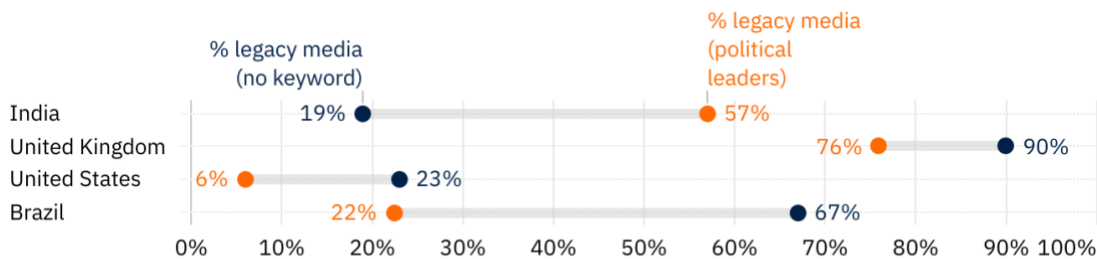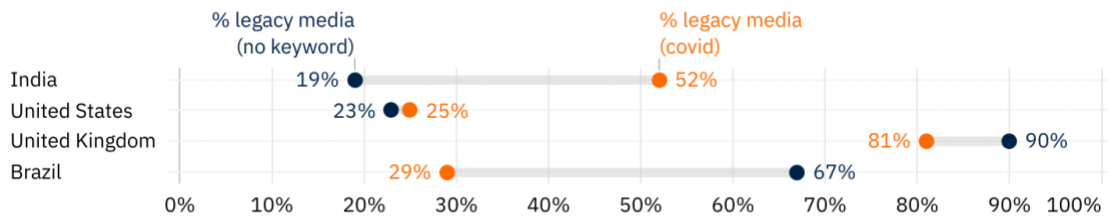

Figure 3 – Proportion of influential media accounts associated with legacy news organizations by country (for all posts versus posts that reference political leaders).
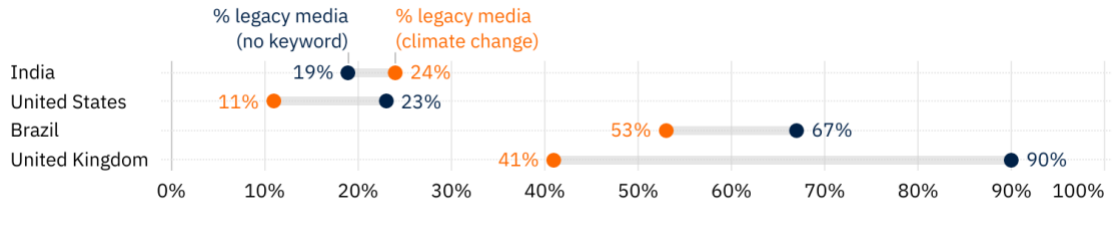*Note*: Percentages shown are as share of media-related influential accounts identified.

Figure 4 – Proportion of influential media accounts associated with legacy news organizations by country (for all posts versus posts that reference COVID-19).
Note: Percentages shown are as share of media-related influential accounts identified.

Figure 5 – Proportion of influential media accounts associated with legacy news organizations by country (for all posts versus posts that reference climate change).
Note: Percentages shown are as share of media-related influential accounts identified.

Several trends are apparent here. First, relative to searches without any keyword and for all three topics, legacy media are a significantly larger proportion of domain-specific influential accounts in India and the UK, constituting a majority of media-related influential accounts for two of the three topics in India and roughly three-quarters of all media-related influential accounts in the UK. In part this captures the importance of the BBC in the UK's media landscape; however, other legacy media organizations such as the Daily Mail also appear frequently across these topics. In Brazil, 6-in-10 of the influential media accounts identified were associated with legacy news organizations in the no keyword condition; however, this share was significantly smaller for stories referencing Bolsonaro (22%) or COVID-19 (29%), as other news media accounts, including those associated with media personalities and digital born organizations such as UOL, constituted a larger share of influential accounts. In the US, on the other hand, legacy news media were a smaller share of the influential media accounts identified, and this is true for both the baseline condition and the topic-specific queries – the difference is non-significant only for posts about COVID-19. This reflects the prominence of individual news media personalities such as Dan Bongino and digital-born organizations, who frequently top the lists of influential accounts across these topic domains.

Figures 6, 7, and 8 summarize differences in the proportion of influential accounts that are associated with other news media in each country for each topic area, comparing

these percentages in relation to baseline results where no keyword was applied. In Brazil and the US, posts from other news media represent the majority of media accounts in posts about the presidents of these countries (78% and 94%, respectively) and those about COVID-19 (71% and 78%). This contrasts with India and especially the UK, where other news media account for a smaller share of posts about these topics (24% of posts from media accounts about Johnson, 43% about Modi, 19% about COVID-19 in the UK and 48% about COVID-19 in India) but are responsible for a significant percentage of posts from media accounts about climate change (60% in the UK and 76% in India).
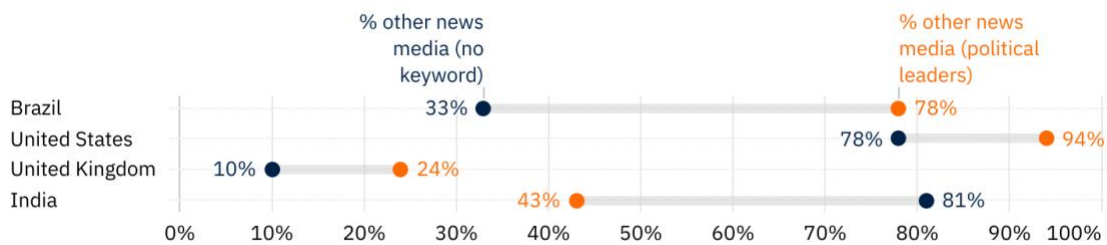

Figure 6 – Proportion of influential media accounts associated with other news organizations by country (for all posts versus in posts that reference political leaders).
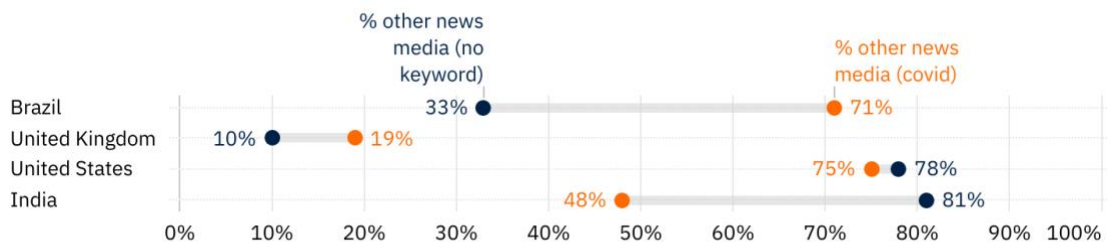*Note:* Percentages shown are as share of media-related influential accounts identified.

Figure 7 – Proportion of influential media accounts associated with other news organizations by country (for all posts versus posts that reference COVID-19).
Note: Percentages shown are as share of media-related influential accounts identified.
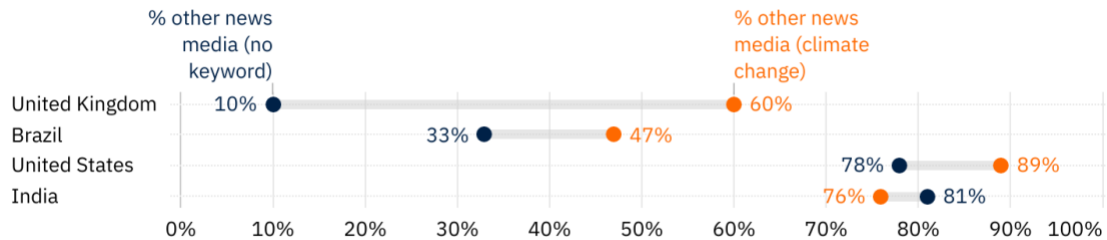
Figure 8 – Proportion of influential media accounts associated with other news organizations by country (for all posts versus in posts that reference climate change).
Note: Percentages shown are as share of media-related influential accounts identified.

Discussion

In response to our research questions, our analysis of influential accounts on Facebook in Brazil, India, the UK, and the US demonstrates the continued centrality of accounts belonging to news media organizations across all countries, but in some places more so than others and generally for specific topics rather than for top-trending links overall. In other words, even if most people consume little news in general online (Guess, 2021; Wojcieszak et al., 2021), news media can still be central to understanding information flows on platforms. Although we did not formally code accounts for ideology, our results suggest that the prominence of highly partisan brands and accounts on Facebook, as found by Hiaeshutter-Rice and Weeks (2021) in the US, does not necessarily generalize to other countries, at least not those we examined, as established, non-partisan brands such as the BBC in the UK, UOL in Brazil, or The Times of India in India, were found to be particularly prominent in these markets alongside entertainment-related and tabloid websites.

These results build on and help contextualize previous findings that have also shown the continued importance of legacy news when it comes to specific topics on Twitter (e.g., Gallagher et al., 2021; Majó-Vázquez et al., 2017), demonstrating similar dynamics

extend to Facebook—a platform that is much more widely used, even as much Facebook news use is incidental. At the same time, the considerable variation we found by country and by topic underscores the importance of domain specificity when thinking about how to define the nature of social media influence and the role of news organizations as a force on platforms for driving the public agenda (Heiberger et al., 2021). Furthermore, when we differentiate legacy media from other kinds of media pages and accounts, the former constitute a majority of influential media accounts primarily in the UK and India—at least for news-related subjects—while the latter are more prominent in the US for all subjects. These results corroborate the centrality of legacy news organizations—especially the BBC—for how people in the UK consume news online found by tracking studies (Fletcher et al., 2021) while broadening our understanding of how these dynamics may differ in other country contexts.

Although much of our analysis focuses on media-related influential accounts, it is worth noting the importance of other kinds of influential accounts identified as part of this study, including political groups and pages who constitute a particularly large share of the most influential accounts in all four countries for top-trending links referencing political leaders. In Brazil and the UK in particular, political groups are the most prominent type of account for top-trending posts about Bolsonaro in Brazil and Johnson in the UK. These results may well reflect the fact that many of the reasons people say they use social media have little to do with news (Mont'Alverne et al., 2022), and when it comes to political content on platforms, many accounts that operate on them and may be influential on them have objectives in mind such as political mobilization rather than journalism. While these other uses may nonetheless be intertwined with exposure to information (Lewis, 2020), our findings raise questions about the consequences of Meta's decision to downgrade news in users' Facebook feeds.[6] Such actions could in effect give a relative boost to these other political groups and pages.

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[6] https://www.wsj.com/articles/facebook-shifts-resources-from-news-tab-and-bulletin-to-focus-on-creator-economy-11658250433

Our findings with respect to the composition of influential accounts in Brazil is particularly noteworthy, where we see a large percentage of legacy news media accounts when examining top-trending links overall, but relatively smaller percentages when it comes to stories about political leaders, where accounts associated with political groups are far more common. These results are in line with those documented by Santos Júnior (2023; 2019), suggesting that traditional brands may be becoming less dominant on digital platforms over time when compared to alternative sources and politicians, at least unless they in their rankings prioritize one or more signals that clearly benefits long-standing brands (as many newer voices feel that Google Search does through PageRank, for example). They also are consistent with results looking specifically at information about Bolsonaro in Brazil found on other platforms. In WhatsApp groups that support Bolsonaro, partisan personalities (or "political influencers") were previously identified as a particularly important source for shared content (Santos et al., 2022). Likewise, on Twitter, the former president's supporters were shown to be less likely to refer to legacy media organizations as well (Santos, 2021). While the individual influential political groups we identified sharing links referencing Bolsonaro on Facebook included both supporters and opponents, our findings point to the need for more research that seeks to better understand why such groups and figures are as prominent as they appear to be relative to news media— whether due to deliberate political strategies, reasons involving the political information environment, factors involving the platforms themselves, or a combination of these forces.

When it comes to differences across topics, the findings showing the importance of media-related accounts (and political accounts to some extent) on posts about COVID-19 aligns with Gallagher and colleagues' (2021) previous findings on the amplification of elite posting about the pandemic in the US. However, our results for the US also differ considerably from the other countries, since we see other kinds of accounts, namely UNICEF, constituting a particularly large share of the most influential accounts (though a significant share of interactions with this page are likely to be international, complicating interpretations of the result). These cross-country differences underscore the problem with relying on (and extrapolating from) US data only when studying social media influence.

While CrowdTangle is one of the few options available to study what widely circulates on Facebook, several caveats are important to acknowledge in relation to the data accessed through this tool. First, CrowdTangle only provides interaction metrics for public pages and groups, not which stories are most widely seen in users' feeds, which inevitably shapes the populations of influential accounts on which we have based our inferences. We also do not know to what extent is a proxy for reach or influence. Second, the reasons why CrowdTangle interaction metrics vary the way they do are often opaque—that is, we cannot tell what may be due to differences in the content posted, algorithmic ranking or "shadow banning," numbers of followers each page or group has previously amassed and how, or other factors involving metrics not provided by CrowdTangle (such as click-through rates or time spent dwelling on posts versus scrolling). Third, and related, our data are constrained by what Meta chooses to make available, which cannot be independently audited, to whom they choose to grant access, as well as how they choose to structure their data, as illustrated by the inability to differentiate from which countries interactions with global pages such as UNICEF may be coming from. Ultimately, relying on tools owned by platforms means that studies are subject to such decisions—a particularly salient point when it comes to CrowdTangle, which Meta has reportedly considered shutting down entirely.[7] All of these considerations underscore the real vulnerabilities of doing research in the current platform environment, and there are few reasons to believe this will improve as people increasingly use more closed networks like TikTok.

We have also gathered only modestly-sized samples for just three topics over a six-month period rather than examining a wider array of subjects or time periods. Specifically in the case of India, our sample is also limited to English-speaking accounts, which only covers a fraction of what is being posted in the country. Considering the degree to which influence appears to be so dependent on context, it is plausible that different choices around dates, topics or countries might produce different results, making it difficult to generalize

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[7] https://www.theverge.com/2022/6/23/23180357/meta-crowdtangle-shut-down-facebook-misinformation-viral-news-tracker

from these specific findings—although, as we noted, there is some stability in the patterns we found when disaggregating our data week by week. Our focus on political leaders may also limit how well the accounts in the sample represent the broader political discussion in these countries—although it is worth pointing out that all of them recently had (or still have) populists in power, and these figures tend to be at the center of the political debates even for topics that would not typically be divided along partisan lines, which we believe provides important insight into how public political discussion on Facebook works in these countries. Our coding scheme is also limited to specific kinds of influencers and could be further refined or adapted for future studies. We also note that although our analysis points to differences in the kinds of accounts that received the most interactions when posting top-trending links on Facebook, we are not able to assess how influential these accounts may be or why some accounts received more attention on the platform than other kinds of accounts. Higher rates of interactions may be due to how Facebook's algorithm surfaces stories or privileges some sources over others, or they might reflect different levels of interest from those encountering the news/information on platforms. Differences may also be due to strategic factors made by organizations themselves in how they post on the platform, sometimes using coordinated activity to boost their own engagement numbers (Giglietto et al., 2020). We are unable to evaluate the reasons behind the patterns we identify in the types of influential accounts we found.

Despite these limitations, this empirical study provides a much-needed systematic comparative assessment of the types of accounts that receive the most interactions with public content on Facebook, clarifying not only the continued importance of news media in these spaces but also of non-legacy organizations and media personalities in some media systems. As Facebook remains one of the most prominent platforms for information discovery in many countries, understanding what actors play influential roles in curating information there is increasingly important when considering how platforms affect information environments more broadly. Considering how opaque distribution of content on social media is, we believe this study contributes to our understanding of the information environments in these countries, adding nuance to what we know about influential accounts

on Facebook and also underscoring the importance of examining that influence in a domain-specific manner and across countries.

Funding

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Appendix

APPENDIX A. Variation of types of accounts per week

As we can see in Figure 1, the frequency of accounts (in absolute numbers) sharing top-trending links does not seem to vary drastically depending on the week when they were posted, indicating some stability in the results. However, there is no way of demonstrating how representative they are in comparison to the full universe of Facebook accounts over time.

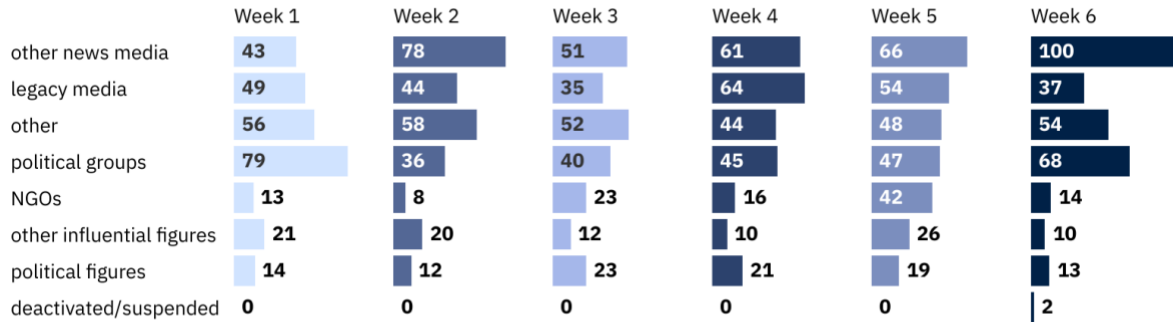## Variations of types of accounts per week

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
other news media	43	78	51	61	66	100
legacy media	49	44	35	64	54	37
other	56	58	52	44	48	54
political groups	79	36	40	45	47	68
NGOs	13	8	23	16	42	14
other influential figures	21	20	12	10	26	10
political figures	14	12	23	21	19	13
deactivated/suspended	0	0	0	0	0	2

Figure A1 – Variations of types of accounts per week.

APPENDIX B. T-tests results

The results below show which significant differences exist between countries and keywords. Frequencies of media accounts for most keywords across countries are significantly different from the no keyword condition, while there is also significant variation comparing keywords against each other. There are also significant country differences when it comes to the frequency of media accounts per keyword, except in posts about climate change.

Table B1. T-test results.

	i. Brazil			ii. India			iii. United Kingdom			iv. United States		
a. No keyword												
% Media	51.3	b, c	ii, iv	29.0	b, c, d	i, iii	61.2	c	ii, iv	30.3	c, d	i, iii
% Politics	8.9	b, c	–	9.3	c, d	–	4.1	b, c	iv	10.6	c, d	i
% Other	39.9	c	ii, iv	61.7	b, c, d	i, iii	33.7	c	ii, iv	59.1	c, d	i, iii
b. COVID												
% Media	40.5	a, c	ii	59.5	a	i, iv	51.2	c	iv	30.5	c, d	ii, iii
% Politics	25.6	a, c, d	iv	14.3	c, d	–	17.1	a, c	–	11.0	c, d	i
% Other	33.3	c	iv	26.2	a, c	iv	31.7	c	iv	58.5	c, d	i, ii, iii
c. Political leaders												
% Media	24.6	a, b, d	ii, iv	56.5	a	i, iii	29.6	a, b, d	ii, iv	52.8	a, b	ii, iii
% Politics	67.3	a, b, d	ii, iv	38.7	a, b	i, iii	57.8	a, b, d	ii, iv	31.5	a, b	i, iii
% Other	8.0	a, b, d	–	4.8	a, b	iv	12.7	a, b, d	–	15.7	a, b	ii
d. Climate change												
% Media	46.3	c	–	48.3	a	–	59.7	c	–	47.3	a, b	–
% Politics	12.2	b, c	ii, iv	36.6	a, c	i, iii	9.7	c	ii, iv	30.4	a, b	i, iii
% Other	41.5	c	ii, iv	15.0	a	i, iv	30.6	c	–	22.3	a, b	i, ii

Note. Statistically significant differences in percentages ($p < 0.05$) are denoted using a, b, c, d for comparisons between keyword queries and using i, ii, iii, iv for comparisons between countries.

APPENDIX C. Proportion of influential political accounts associated with political groups or political figures

When detailing the categories aggregated as political accounts, it becomes clear the relevance of political groups in posts about political leaders and covid, especially in Brazil, the UK, and the US. In India, political groups represent a majority of political accounts posting about climate change only. In addition, political figures represent a significant share of accounts posting about covid and political leaders in the country. In the US, political figures account for the majority of political accounts posting about climate change only.
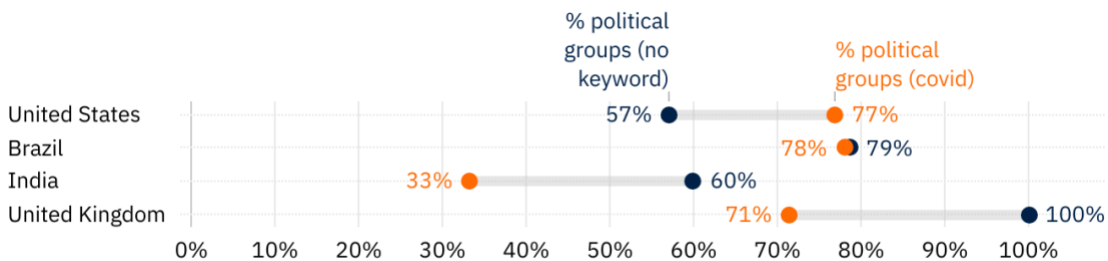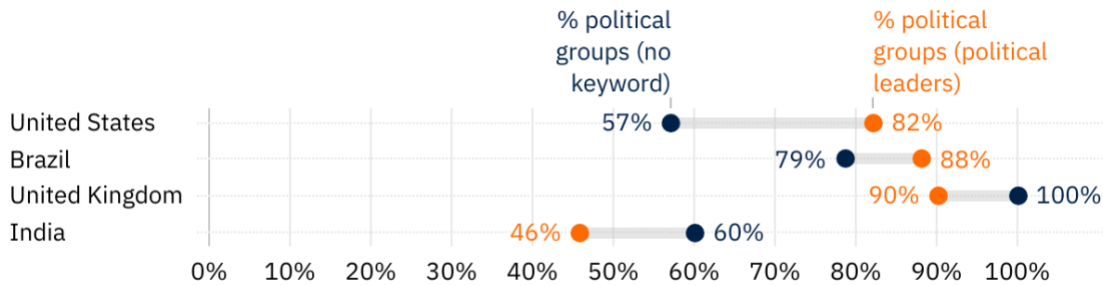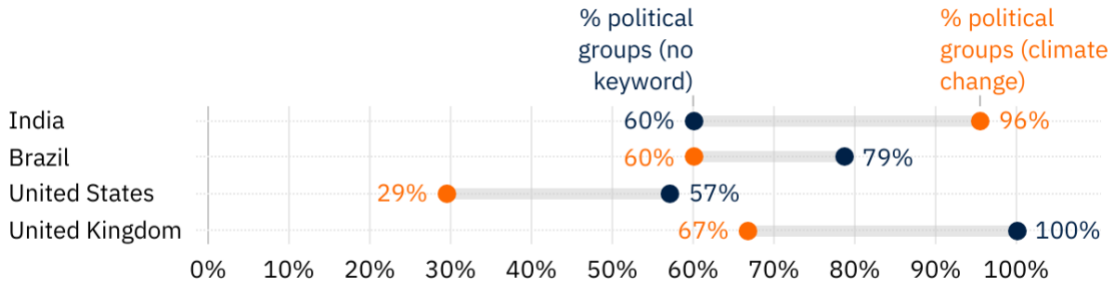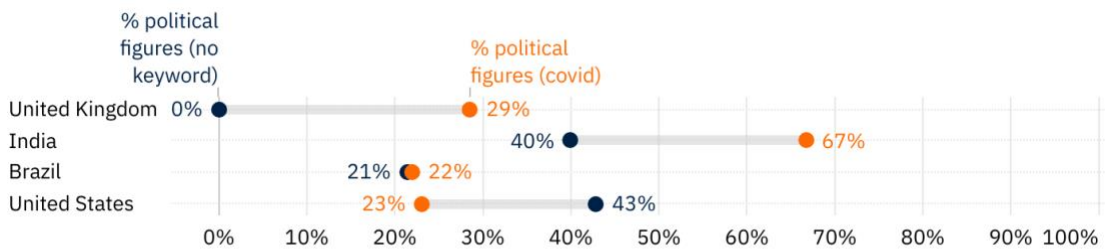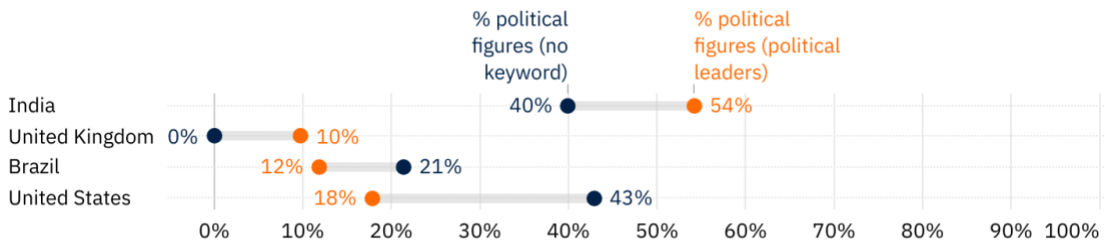
Figure C1 – Proportion of influential political accounts associated with political groups by topic area and country.

Note: Percentages shown are as share of political-related influential accounts identified.
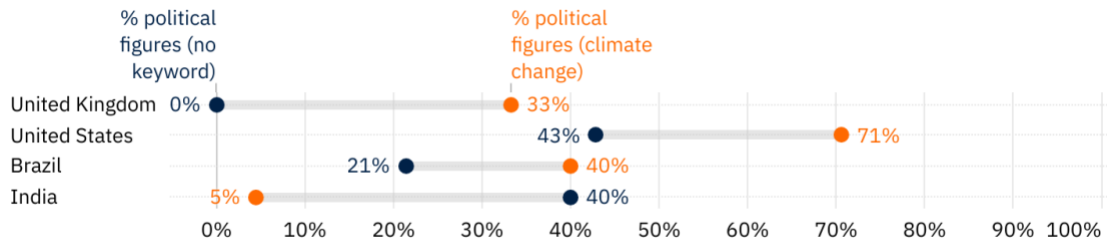
Figure C2 – Proportion of influential political accounts associated with political figures by topic area and country.

Note: Percentages shown are as share of political-related influential accounts identified.