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Article

**A bird’s eye view: Supranational EU actors on Twitter.**

**Abstract**

Given the politicization of European integration, effective public communication by the European Union matters. Especially for usually rather detached supranational executives, social media platforms offer unique opportunities to communicate to and engage with European citizens. Yet, how do these actors actually use social media? This article provides a bird’s eye view of and quantitatively describes about one million tweets from 113 supranational EU accounts in the 2009-2021 period by focusing on linguistic style and publicity of the communication. We benchmark these message characteristics against large samples of tweets from national executives, other regional organizations, and random Twitter users. We show that supranational Twitter relies strongly on the multimedia features of the platform and outperforms communication from other political executives on many dimensions. However, we also find a high textual complexity of supranational messages, skewed user engagement metrics, and high levels of variation across actors and messages. We discuss these findings in light of the legitimacy and public accountability challenges that supranational EU actors face and derive four promising areas of future research on supranational social media messages.

**Keywords**

European Union; social media; political communication; politicization; automated text analysis

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**1. Introduction: Why we should care about supranational Twitter activity**

The European Union (EU) has an increasingly precarious relationship with the citizens it governs. The politicization of European integration in public debates has markedly increased in recent years: incidences such as the failure of constitutional referenda in 2005, the raging debates about supranational authority during the Euro- and Schengen crises after 2009 and 2015, the infamous Brexit decision of 2016, and more generally, the rise of Eurosceptic mobilization in national and European election campaigns clearly illustrate that the EU can no longer rely on a permissive consensus among the wider citizenry (De Wilde and Zürn 2012; Hooghe and Marks 2009; Rauh 2021a). In such controversial debates, the EU’s rather detached supranational institutions are frequently addressed in national debates by members state politicians, often as the scape-goat for unfavorable policies in an attempt to shift the blame (Gerhards *et al.* 2009; Harteveld *et al.* 2018; Heinkelmann-Wild and Zangl 2020; Rittberger *et al.* 2017; Schlipphak and Treib 2017; Traber *et al.* 2020; Vasilopoulou *et al.* 2014)

Previous research shows that supranational authorities are not only on the receiving end of these debates. They are often rather responsive and enthusiastic about engaging in public communication in the face of politicization by professionalizing their communication and adopting new channels such as social media platforms(Ecker-Ehrhardt 2018; Ecker-Ehrhardt 2020). The extant literature, however, demonstrates that the EU faces both internal and external challenges when it comes to communication with their citizens via traditional media channels (Altides 2009; Boomgaarden *et al.* 2013; Brüggemann 2010; Hobolt and Tilley 2014; Rauh *et al.* 2020; Rauh 2021b).

Even though we know the EU institutions and officials seems to be enthusiastic about communication potential of the social media platforms, we have limited knowledge on the state-of-affairs when it comes to their public communication on these novel platforms. Extant literature offers theoretical analyses and cases studies of the EU on social media (e.g. Barisione and Michailidou 2017; Krzyżanowski 2020; Zaiotti 2020) yet empirical work on the quality of communication by the EU supranational authorities on social media and its potential relationship with citizen engagement with the EU politics on these platforms are still lacking. Extant studies tends to focus on EU actors with direct electoral accountability, such as governmental representatives in the Council or EP members (European Parliament. Directorate General for Parliamentary Research Services. 2021; Fazekas *et al.* 2021; Haßler *et al.* 2021; Nulty *et al.* 2016; Umit 2017) while neglecting the executive side of the EU.

Against this backdrop, we pose two questions. First, we ask how and to what extent do supranational EU executive actors communicate on social media. We focus on comprehensibility and linguistic style of their communication on Twitter to answer this question. Then we turn our attention to the influence of these factors on the individuals’ engagement with EU politics on the platform. Our study aims to contribute to this literature in two ways. First of all, we aim to gain insights into current state of affairs on the EU public communication on a novel platform with a comprehensive description. Such mapping enables us to learn more about how and to what extent the EU’s communication ailments are persistent in a new communication environment. Secondly, examining the association between communication style and engagement with the EU public communication can help us understand public communication’s potential to assist with the EU’s legitimacy problems.

To these ends, we analyze the EU supranational executives’ communication on Twitter in terms of its linguistic style, specifically language choice, readability, and multi-media use, and publicity of the messages with automated content analysis by utilizing the full population of their messages on Twitter. We then proceed to benchmark their communication to their peers; national governments and other regional organizations such as Association of Southeast Asian Nations (ASEAN). We show that supranational public communication on Twitter often outperforms domestic and other regional organizations. While the text of supranational messages is comparatively hard to access for average citizens, supranational actors champion non-textual communication, enriching their messages with visual content, external links, and meta-linguistic elements such as emojis much more often than other executives do. In terms of publicity, while the number of followers has been strongly increasing for some supranational EU actors, the rates of direct user engagement remain low in absolute terms. They stay within the range observed for domestic and international actors. Against the backdrop of public politicization and communication deficits, our results hint that supranational EU executives try to use the communication potential of social media, yet important fruitful avenues for further research remain.

**2. the EU public communication problems and social media’s potential**

Public communication is vital for political systems to produce and reproduce popular legitimacy. First and foremost, public communication is a viable and an important tool for producing and reproducing legitimacy for a polity. As the recent research clearly indicates that most political authorities increase their public communication effort when they are politicized, and their legitimacy is questioned (Ecker-Ehrhardt 2018; Rauh *et al.* 2020). Secondly, for political systems that lack a direct accountability mechanism such as national elections, the line between specific and diffuse support, as Easton put it, is rather blurred. Unfavorable policies and scandalous authority holders can easily be damaging to the legitimacy of the political system, if the audience of the political authority is unable to hold the individual authorities accountable for misconduct and unpopular policies. this is exactly the case for the EU since the EU lacks such an accountability mechanism for its supranational executives(Hobolt 2014; Wilde and Trenz 2012). Under these circumstances, as the case is, the public communication offers a lifeline to political authorities beyond nation states to produce and reproduce popular legitimacy.

Public communication, however, should have three features in order to contribute to the popular legitimacy of the polity. The first among these features is the *comprehensibility*. Comprehensibility refers to ease-of-read of the message, i.e how much cognitive mobilization and education is required from the reader to comprehend the key information in a given text (Flesch 1948). The public communication can assist producing or reproducing legitimacy if and only if the messages are understandable to its audience. Extant literature demonstrates that citizens integrate political information into their political knowledge structure much better if the information is delivered in a easy to comprehen manner(Bischof and Senninger 2018; Tolochko *et al.* 2019). Therefore, public communication messages should be easy to understand to have any effect on the individuals’ perception of the political authority.

The second required feature is *transparency.* Transparency in this sense refers to the fact that political institutions report conflicts and responsibilities in political decisions on the allocation of resources (Curtin and Meijer 2006). Underlying assumption is that transparency of responsibilities allows citizens to make a better informed decision in democratic systems. While the EU lacks any such mechanism for citizens to make a direct decision about their executives, it still provides mechanisms to aggregate citizen preferences such as the European parliament elections. Thus, public communication can help the EU executives to maintain popular legitimacy if it reports on political responsibilities, i.e provide transparency, as the recent research indicates that citizens, in fact, want the EU to be more transparent(Schafer *et al.* 2021).

The last feature is the *publicity*. Publicity refers to the degree to which the audience engages with the issues, acts and processes of the political system (Hüller 2007). In other words, the message is not consumed by a specialized group, but larger audience and it becomes a regular part of political discussion. While comprehensibility and transparency are necessary for public communication to assist with popular legitimacy, they are not sufficient by themselves. The audience should read and engage with the public communication message. In other words, it is not enough to put information on political responsibilities with a simple language out in the ether. Citizens should be aware of this information, actively engage and digest this information. Only then, public communication messages can be expected to influence both individuals’ perception of the political authority and broader public debate about the legitimacy of the polity.

the EU supranational public communication faces several obstacles in meeting these necessary and sufficient conditions. Part of these obstacles are internal; public communication is often subject to internal conflicts and competition over limited resources (Altides 2009; Bijsmans and Altides 2007; Hartlapp *et al.* 2014: ch. 9). In institutions with delegated powers that often involve high levels of expertise, consensus-orientation, and diplomatic restraint, public outreach has traditionally not been a primary concern (Brüggemann 2010; Meyer 1999) thus can offer limited transparency.

Moreover, supranational communication of the EU is often found wanting in terms of comprehensibility. When facing controversial public debates, moreover, supranational institutions may have incentives to avoid clear communication in their strategic efforts to calm controversial debates (Biegoń 2013; Bressanelli *et al.* 2020; De Wilde and Zürn 2012; Schimmelfennig 2020). In effect, supranational communication efforts are often illegible for the wider public (Rauh *et al.* 2020; Rauh 2021b).

Supranational institutions also face notable communication obstacles in the broader communication environment. Although supranational institutions are tasked with defending the European interest in their policy areas, mass-mediated public spheres tend to be fractured along national borders, languages, and media systems, thus forcing supranational institutions to communicate via national media (Koopmans and Statham 2010; Risse 2014; Trenz 2004; Walter 2015). National media are, however, rather selective in covering EU affairs, as traditional journalistic selection logics are often partial to national interests, domestic executives, and their challengers (De Vreese 2001; De Vreese *et al.* 2006; Trenz 2008). Media coverage of the EU is then primarily driven by controversial and contested events such as summits of the heads of state and government, European Parliament (EP) elections, and scandals on the European level (Boomgaarden *et al.* 2013; Hobolt and Tilley 2014). Thus, supranational institutions have a hard time getting their message across via traditional media channels and achieve publicity.

Social media platforms can be a solution to some of the external obstacles. With a view to external constraints, social media allow citizens to engage with content beyond national boundaries (Bossetta et al., 2017), thus potentially ameliorating adverse effects of fractured public spheres. Furthermore, social media imbue users with a degree of gatekeeping power (Wallace, 2018). The decentralized structure of these platforms, where users themselves can choose which messages will be allowed and amplified in the information environment, gives supranational EU actors some freedom to determine which issues to highlight, thus allows them to partially circumvent traditional media selection logics to generate publicity. Moreover, social media platforms, specifically Twitter, can act as a ‘double-barrelled gun’ for reaching out to the citizenry: recent research shows that journalists tend to pick up tweets from political actors (especially highly engaging tweets) and incorporate them in news articles (Cage *et al.* 2020; Oschatz *et al.* 2021), boosting their communication potential further.

Furthermore, social media has the potential to mitigate internal conflict over limited resources and comprehensibility. Firstly, It takes mere minutes to set up an account and they are rather easy to maintain. In addition, platforms usually reward clear and concise messaging which are arguably cheaper to produce than press releases. Secondly, the platforms usually reward clear and concise messaging which are arguably cheaper to produce than press releases. Thirdly, social media allow multimedia features that are also beneficial for accessible and engaging communication. Lastly, social media provide a low-hurdle and continuous information source for users. Unlike official webpages, social media do not require the user to consciously search for information about supranational activity in the EU. Users may encounter EU messages in their timelines from their connections on social media or they could simply follow respective accounts by a simple click.

**3. Data collection: Supranational tweets and relevant benchmarks**

We focus on Twitter to study the supranational public communication on social media. Our platform choice is motivated by three factors. First and foremost, Twitter has acquired a more significant place in the political communication environments compared to some of the other popular social media platforms such as Instagram and LinkedIn in the recent decade (Jungherr 2016; Segesten and Bossetta 2017; Stier *et al.* 2018). Moreover, Twitter is a unique social media platforms vis-a-vis public communication because it can serve as a “double-barrelled gun”. Recent research shows that journalists tend to pick up tweets from political actors (especially highly engaging tweets) and incorporate them in news articles (Cage *et al.* 2020; Oschatz *et al.* 2021), boosting their communication potential further. Lastly, Twitter as a platform offers a more transparent access to the historical data. Unlike other politically popular platforms such as Facebook, we can access to the full population of historical tweet without any curration on the dataset by the platform as we use academic track API 2.0 to collect our data. This allows us to provide a less biased, if not completely unbiased, picture of the EU executives’ public communication.

Identifying the population of relevant supranational Twitter accounts followed recent evidence in the literature. Institutions such as the European Commission or the European Central Bank (ECB) are often core addressees of public politicization and are equated with EU legitimacy more broadly in the minds of citizens (Silva *et al.* 2021). Accordingly, we identified the main Twitter accounts of the institutions falling under these definitions (e.g., @EU\_Commission), their individual sub-branches (e.g., @EUHomeAffairs) and dedicated EU agencies (e.g., @Frontex), as well as the personal accounts of the individuals heading these institutions such as Presidents (e.g., @vonderleyen), Commissioners (e.g., @TimmermansEU), or Director-Generals (e.g., @lemaitre\_eu) using the official webpages of the EU.

We combine personal accounts with institutional accounts for two reasons. Firstly, events and policies related to particular authorities such as scandals and unfavourable policies sponsored by office holders may come back as criticisms of the EU as a polity since there are limited direct accountability mechanisms, such as popular elections, for executives in the EU (Chatzopoulou 2015; Hobolt 2014; Trenz 2008; Wilde and Trenz 2012). Secondly, there seems to be a growing tendency of presidentialization and agenda setting of individual political authorities in the EU executive institutions(Hamřík 2021; Haverland *et al.* 2018; Kassim *et al.* 2017) which consequently pushes these authorities to seek more public consensus for their decisions. Considering these two factors, there is grounds to assume that verified accounts of individual executives have as much interest to engage in public communication on social media as any other institutional account.

This resulted in *113* supranational Twitter accounts that are verified and active by May 2021 (full list in Appendix A1). For the institutional accounts, we collected the full corpus of tweets issued between the account creation date and May 3, 2021, through the Twitter API 2.0 academic track. In the case of personal accounts, however, we limit our dataset to the tweets issued between the day they assumed the office and collection date. This approach gave us a population of 960,831 supranational social media messages.

While this offers a thus far unprecedented empirical perspective on the social media messages of supranational actors, the information it contains cannot be easily assessed in some absolute sense. Thus, to put supranational communication behavior on Twitter into perspective, we collected *three additional benchmark datasets*.

The first benchmark simply aims to establish what constitutes ‘normal’ behavior on the platform through a by-and-large *random sample of tweets*. To construct this sample, we streamed in tweets from 26 of the EU countries for a week with five-minute windows through Twitter Decahose API using country bbox as selection criteria. This generates 83,823 tweets that we can use as a baseline for ‘typical’ tweet features.

More importantly, however, we have to note that the particular legitimacy challenges that EU actors face emerge from the fact that – in Delors’ words – the EU is an unidentified political object. On the one hand, its competencies approximate that of a nation state. On the other hand, it carries significant markers of an international organization where member states guide and decide on how the political authority will be exercised. Our other benchmark datasets focus on comparing supranational media communication to exactly these different levels of governance.

To approximate communication of national governments, we target the current UK government ministers, ministries, executive offices, agencies and individuals who are in charge of these institutions (see appendix XXX for the full list of accounts). Collecting the data analogously to the supranational EU actors above, this results in a benchmark of 2,218,278 tweets. The choice of using the UK executive branch as an approximation of national governments is mainly motivated by practical reasons. The measurement methods for our indicators are mainly geared towards English language. We are not aware of any method that can measure linguistic complexity in a multi-lingual corpus as languages tend to have strong differences. Considering that we are limited by the available methods and vast majority of messages from the EU are in English, the UK government constitutes an imperfect yet sufficient benchmark.

Our third set of benchmark dataset comprises of Twitter accounts of regional organizations with comparable policy scope. This choice is motivated by two reasons. First of all, the EU is still a regional organization constituted by states from a particular continent even though it has unprecedented levels of competence for a political authority beyond nation state. Therefore, the natural peers for the EU becomes regional organizations instead of international organizations. The second reason grounds the comparable policy scope part of our decision. The EU is by and large an outlier in terms of level of authority in different policy areas. To our knowledge, there is no other polity with such extensive political power beyond nation states. However, the EU is less of an outlier when it comes to the number of competence areas. Many of the regional organizations around the world has a comparable number of policy areas. Thus we identify a set of regional organizations that have a roughly similar policy scope as the EU, picking those organizations that are in the range of one standard deviation around the EU with regard to the number of policy areas using the MIA dataset (Hooghe *et al.* 2017). We identified their Twitter accounts utilizing the list collected and kindly shared by Matthias Ecker-Erhardt (2020; full list in Appendix XXX). This results in 55 accounts for which we could analogously collect 294,219 individual tweets for our final benchmark. The descriptive summary of the final dataset is presented in table 1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Account type** | | **Tweet count** | |
| **Sample** | **Institutional Account**  N = 190 | **Personal account**  N = 149 | **Institutional Account**  N = 2,504,782 | **Personal account**  N = 1,052,369 |
| EU | 70 (37%) | 43 (29%) | 789,006 (31%) | 171,825 (16%) |
| IO | 48 (25%) | 7 (4.7%) | 269,219 (11%) | 25,000 (2.4%) |
| Random tweets | - | - | - | 83,823 (3.3%) |
| UK | 72 (38%) | 99 (66%) | 1,362,734 (54%) | 855,544 (81%) |

Table 1: Summary of final dataset

**Indicators**

Besides describing and comparing the volume of supranational communication via Twitter, our primary interest lies in charting the characteristics of the collected tweets with a focus on what they can tell us about engaging with and engagement of citizens on this interactive platform. Along our discussion above, three blocks of indicators are of key interest here.

*Language choice:*  The crucial factor for publicity of a message is that the audience should be able to understand it. Thus, our first indicator focuses on the diversity of language in the EU supranational communication. While the Twitter API provides an indicator on the language of the message, it is rather crude and takes the tweet as a whole. We refine this indicator by applying language recognition on sentence level with Google’s compact language detector 2 as implemented in the cld2 R package, (Ooms and Sites 2020). While this method is not perfectly accurate in capturing the language diversity of the messages, it still provides us with a finer grained picture of the state-of-affairs.

*Comprehensibility:* As noted above a necessary condition for engaging messages is that the message is easily understandable and graspable in the first place. Exploiting the validations and tools provided by Benoit, Spirling, and Munger (2019) we thus extract three features from the English-language elements of each Tweet. First, we measure syntactic and grammatical complexity by the Flesh/Kincaid reading ease score. This compound indicator of sentence and word length captures the required cognitive mobilization (often described by anchoring it in education levels) to grasp the textual content of a message. Second, we measure familiarity of the vocabulary supranational actors use. This is proxied by the average frequency by which the words in a given tweet occur in the overall Google Books corpus as the broadest available representation of the English language. The intuition is that words that are more common in the English language, as opposed to rarer jargon, are better known and thus more readily understandable by a broad audience. Lastly, we measure the average verb-to-noun ratio in tweets. Linguists stress that texts express political agency better when they resort to a verbal as opposed to a nominal style (Biber *et al.* 1998: 65 pp. Thibault 1991). A nominal style, such as academic writing, uses many nouns and nominalizations, thus prioritizing abstract objects and process over action. A verbal style, such as conversations, uses many verbs, thereby clarifying who did what, and providing information on the temporal order of events and processes.

*Multimedia message content*: Beyond text, the Twitter platform allows various means of multimedia messaging. Symbols, pictures, or videos can transmit a large amount of information (Tang and Hew 2018), rendering their usage also relevant for engaging political communication at least in principle. Thus, we initially extract and count the number of emoticons and other special symbols from the content of each tweet. We also store whether a Tweet contains embedded pictures and/or videos as well as links to external URLs from the entities URL field offered by the Twiter API.

*Publicity of the messages*: Ultimately, we want to study to what extent communication style contributes to the publicity of the message. We focus on the main engagement tools that the platform offers. Favoriting allows the user to express a favorable attitude towards a given message. Retweets allow users to amplify the message by directly sharing it, again with a simply click of a button. More proactive forms of engagement that also allow critical stances in principles are quotes and replies. Here users can either contextualize or directly respond to the message with own bits of texts and/or symbols. For each tweet, thus, we utilize the counts of favorites, retweets, quotes and replies as supplied by the Twitter API. While the API provides historical meta-information on the messages, such information on accounts is lacking. Raw data from the API provides meta-information (eg. followers count) on the account at the time of query. Circumvent this, we exploit the information capture and stored by archive.org. Their web engine crawls the web and takes snapshots of individual sites. Some amount of meta information is available on our accounts. We linearly interpolate historical follower counts using this information and weight the publicity metrics by historical follower counts. Details of these pre-processing and replication scripts are presented in online appendix.



**4. Key characteristics of supranational Twitter messages**

*3.1. The language of supranational Twitter messages*

We begin our investigation on the features of supranational communication with a focus on the language choice. Our data indicates that English is clearly the lingua franca of supranational tweets. In total, 82% of all supranational tweets were solely written in English while 88.2% contained at least on English sentence. Other languages appeared much less frequently: we detected French in about 4%, Italian and Polish in around 1.5%, as well as Italian, Swedish and German in around 1% of tweets. This seems to suggest that supranational actors do not respect the EU’s linguistic diversity but that should not be overstated. Virtually all Twitter end-user applications offer reliable auto-translation at the click of a button.

Here we focus on the English-language content of the tweets and want to learn whether they contribute to making EU politics transparent. In this regard, very different literatures have repeatedly stressed that more political communication does not help if it does not clarify but rather obfuscates political responsibilities (Fairclough 2003; Fowler *et al.* 1979; Orwell 1946). Sending clear and easily understandable messages seems to be a particular challenge for detached, highly specialized institutions that often resort to a rather technocratic discourse (Moretti and Pestre 2015; Rauh 2021b; Thibault 1991).

Chart, scatter chart

Description automatically generated

**Figure 2**: Language clarity indicators

Figure 2 presents results from comparison of linguistic quality of communication. On average, supranational EU tweets tend to be clearer than those published by international organizations (with the notable exception of clarifying agency through a more verbal style). More importantly, however, supranational communication is clearly and significantly harder to understand for citizens when compared to random messages on the Twitter platform and especially when compared to the tweets of national institutions and executives from the UK. This reaffirms findings of a very technocratic approach to communication by supranational executive actors (Rauh 2021b).

However, notable variation within the supranational population exists. Based on the standardized averages of the three language-clarity indicators, the messages by current Commission President Von der Leyen, Commissioners Timmermans and Vestager, as well as Matthew Baldwin (European Coordinator for Road Safety) are easiest to understand. The least accessible messages - on average - are sent by the European Maritime Safety Agency, by the Commission Director-General for Competition Policy (ironically headed by the clearly communicating Margrethe Vestager), Justice Commissioner Reynders, and the European Defense Agency. Averaged across indicators, the tweets from supranational actors tweeting in personal capacity are easier to understand than tweets from institutional accounts.

While our empirical results are insufficient to draw causal relationships, there are a few contender explanations regarding the difference in clarity of communication between personal and institutional EU Twitter accounts. As previously noted, there has been a growing tendency to presidentialize in the last two EP election cycles. Consequently, the individual authority holders are grasping more of the limelight. As they are more visible, it stands to reason that they aim to have a clearer communication with their audience. Another possible explanation pertains to the von der Leyen commission itself. The current commission sponsors a set of very ambitious political goals such as complete carbon neutrality in the EU. It is beneficial to have the public’s backing as they champion such controversial and ambitious policies. Therefore, individual commissioners may be investing more resources to maintain a clearer communication to achieve their political goals.

*3.1. Media usage*

Beyond text, Twitter offers various multimedia features designed to attract attention and generate engagement with messages. To what extent do supranational actors and institutions use this additional communication potential? Relying on the raw tweet texts as well as on the URL entities object of the Twitter API, we aggregate data on multimedia usage in Figure 3.

Chart, scatter chart

Description automatically generated

**Figure 3**: Multimedia usage

The top left panel of Figure 3 shows that around 35 to 40% of all supranational tweets embed at least one picture. This clearly exceeds picture usage in the tweets by domestic political actors as well as by institutional accounts of international organizations. Likewise, videos occur frequently in supranational tweets – at least in relative terms. Institutional accounts of supranational actors feature a video in around 6% of all messages which is only surpassed by the around 8% of Tweets from domestic executive institutions in the UK.

Furthermore, Twitter is notorious for having popularized the use of special characters and especially emoticons in public communication. Including such pictograms into the tweet text(an example in Table 2 above) can encode large amounts of information and attracts visual attention, thus aiding message comprehension (Tang and Hew 2018). The lower left panel of Figure 3 indicates that supranational EU tweeters are indeed champions of using such special symbols in their messages. Additional analyses show that the by far most used symbol is the EU flag, occurring more than 50,000 times and thus in about 5% of all supranational tweets. Flags of different individual countries occur in a combined total of about 7% of tweets. Beyond that, supranational actors like to use various pointing hand and arrow symbols, a pictogram of the globe, as well as various versions of checkmark symbols.

Finally, communicators can enrich their messages by supplying links to external online content. This initially facilitates further information-seeking for message recipients. With regard to this communication feature, tweets from supranational EU actors are on par with or even exceed messages from domestic and international political actors. In about 60 to 80% of all supranational Twitter messages an external online source is referred to. Where these links lead citizens cannot be fully ascertained by automated means as around 41% of them use URL shortening services. Yet, in the remainders we see that supranational actors primarily refer to EU websites within the europa.eu domain (35% of all external URLs), pointing message recipients especially to information from the European Commission’s servers. A sizeable share of around 5% of external links point to other social media platforms, notably Facebook, LinkedIn, and Instagram. Supranational actors also seem to use services that automatically post content across different social media accounts (e.g. the dlvr.it domain accounts for around 3% of all external links).

**5. Publicity of supranational messages**

How strongly do these users actually engage with the supranational messages? Clearly, we have no off-platform information on what users do with the information they receive. However, we can observe their direct on-platform engagement. Twitter allows users to like messages, to amplify or contextualize them by retweets or quotes, or to directly publicly reply. We collect the counts of each of these engagements in response to each original, self-authored tweet by supranational actors. Since the number of users that may have seen the tweet in the first place affects the number of possible engagements, we express them as the percentage share of followers at the time each tweet was published. The results for the supranational EU personal accounts are limited to the time period between the day they assumed office and the collection date. For institutional accounts, we reduce our samples to accounts that have at least two archive.org snapshots, considering only tweets at or after the first of those snapshots due to the imprecision in interpolated follower counts noted above, Figure 5 plots these engagement ratios against our equally treated benchmark samples.

Chart, scatter chart

Description automatically generated

**Figure 5**: User engagement indicators

These data provide three main insights. First, supranational messages receive, overall, as much direct Twitter user engagement as messages from executive actors and institutions at the national and international levels. Supranational messages are, in fact, slightly more frequently liked and retweeted than those from national institutions and actors in the UK. Only UK actors tweeting in personal capacity received a markedly higher share of quotes and replies on their messages. Second, across all samples, Twitter users tend to engage more strongly with personal accounts than with institutional ones. Personalization of political messaging seems to matter on this social medium and for supranational EU actors as well. Third, direct engagement with executive tweets is not particularly high in absolute terms. On average, the number of direct engagements with supranational tweets by either liking, retweeting, quoting, or replying does not exceed a share of 0.14% of the number of users following the respective account.

There are a few notable exceptions to these results, however. For example, for 18 tweets from our supranational sample, the overall number of direct user engagements exceeds 30% of the follower counts at the time of the message. Table 3 provides six illustrative examples for extremely ‘engaging’ supranational tweets in our sample.

Caution is warranted when generalizing from such few and outlying examples, but we note that the most engaging tweets in our sample also seem to invoke highly politicized EU policy issues. Examples are Commissioner Dalli’s stance on LGBTI rights in Poland, the Frontex tweet embedding surveillance footage from the Mediterranean Sea (leading to a heated Twitter debate about whether priority should be given to sea rescue or the fight against human trafficking), the European Court of Justice’s announcement that the UK may unilaterally revoke its withdrawal request, and the farewell note from the European Medicines Agency when finally leaving London due to Brexit.

| **Tweet** | **Account** | **Date** | **Followers** | **All direct engagements** |
| --- | --- | --- | --- | --- |
| Meet Mismo 🐶, a customs sniffer dog, who will tell you all about his job. #50CU #DogsWithJobs More info about the 50th anniversary of the EU #CustomsUnion: https://t.co/tD9clkog5q https://t.co/5MXpNH3Fqy | *EU\_Taxud* | 2018-06-15 | 11,197 | 9,916 |
| EU values and fundamental rights must be respected by Member States and state authorities. This is why 6 town twinning applications invilving Polish authorities that adopted 'LGBTI free zones' or 'family rights' resolutions were rejected. #LGBTI #UnionOfEquality | *helenadalli* | 2020-07-28 | 9,756 | 8,036 |
| look at THIS !! The WHOLE core centre of brussels to go to 20kph for the summer from 1 May with priority to giving space to🚶‍♀️🚲 to exercise. Using the challenges of #CoronaVirus to rethink and transform mobility ... right here in Brussels... 👍👏🙏 https://t.co/RgmJNBgx89 | *Baldwin Matthew\_* | 2020-04-20 | 6,102 | 4,314 |
| Wait, wait. Why is that fishing trawler towing an empty wooden boat at high seas??? https://t.co/psy2z6z9Wp | *Frontex* | 2019-06-22 | 23,214 | 11,861 |
| Today, EMA staff lowered the 28 EU flags and symbolically said goodbye to their London offices. Guido Rasi expressed his thanks to the UK for its contribution to the work of the Agency and for having been a gracious host of EMA since 1995. https://t.co/KpsBvaXt42 | *EMA\_News* | 2019-01-25 | 39,251 | 18,853 |
| #ECJ: UK is free to unilaterally revoke the notification of its intention to withdraw from the EU – Case C-621/18 Wightman #Brexit https://t.co/KUOI2eQ48C | *EUCourtPress* | 2018-12-10 | 45,522 | 18,736 |

**Table 3:** Supranational tweet examples with extraordinary engagement rates

These examples of highly engaging outliers also showcase the message characteristics that we have discussed thus far. We see, for example, clear and concise language, numerous hashtags and emojis, as well as embedded media and external links. How much these characteristics affect user engagement is hard to model exactly, as the proceedings of the Twitter algorithms are not known and tweet virality seems to follow partially endogenous dynamics and punctuated patterns. However, a basic multivariate perspective (appendix A5) provides some valuable initial hints. Higher readability and more verbal style of a tweet is associated with modestly higher user engagement ratios. The inclusion of hashtags comes with slightly higher engagement rates as well. The most important factor in our initial model is visual information, however: embedded pictures as well as emojis are most strongly associated with user engagement in the samples of UK, IO, and EU tweets. It must be noted, in addition, that even when controlling for such message characteristics, user engagement is markedly higher for personal accounts. Individual communication triggers more engagement with supranational messages than messages from institutional accounts.







**6. Conclusions**

In the face of public politicization, popular legitimacy challenges, and notable communication deficits, social media promise to be an attractive additional communication channel for the detached executive supranational actors of the European Union. Thus far, however, an aggregate picture on how these actors use social media has been lacking. This bird’s eye perspective of the full population of the more than one million messages from 115 Twitter accounts in the 2009-2021 period underlines that supranational EU actors put considerable effort in public communication via social media.

Firstly, our encompassing description shows that the volume of supranational social media communication has grown markedly since 2010, having reached or even exceeding the number of social media messaging that national executives or international organizations with comparable policy scopes provide. Second, several of the observed patterns suggest a growing professionalization of supranational social media usage. Supranational actors make extensive use of Twitter’s multi-media features, engage in cross-posting social media content, and try to garner attention to their own online resources outside of Twitter. Supranational EU actors are in no way inferior but often better than domestic and international executives on Twitter in this regard. Third, this communicative investment seems to pay off in terms of publicity. The number of users subscribing to supranational EU accounts has been growing on average, and in dramatic ways for some actors. Direct user engagement with supranational messages on the platform is not particularly high in absolute terms, but by and large corresponds to the engagement rates one can observe for executive messages form national and international actors.

Yet, our encompassing description also contains warning signs regarding the possible transparency and publicity effects of supranational communication. As has been found for other communication channels, the textual content of supranational communication is characterized by comparatively high syntactical complexity, less familiar vocabulary, and a rather nominal style that may obfuscate political agency. On this dimension, social media communication from domestic executive actors in the UK provides much clearer messaging in comparison. We also must note that the follower numbers and the engagement rates are hardly equally distributed across supranational communicators. They rather concentrate on a few selected institutional, and especially high-profile individual accounts of supranational actors. Generally, on most of our indicators, marked variation within the sample of supranational communicators and messages can be observed.

Our bird’s eye view indicates that social media are becoming increasingly relevant for supranational public communication, yet this is hardly the final step to understand the nexus of public communication, social media platforms and popular legitimacy. Whether and how the communication we describe affects the precarious societal legitimacy of supranational decision-making requires further analyses. For scholars willing to dig deeper into this type of data, the patterns we show provide four informative points. First, the sobering findings on textual understandability highlight the need to dissect supranational messages further in terms of the claims that supranational actors make, including their relation to actual political activity. Whether these public messages are mere propaganda or genuine, transparent political accountability reporting would help us understand to what extent public communication contributes to or possibly undermines the popular legitimacy of supranational actors. Second, our qualitative examples for the most engaging tweets highlight variation across externally politicized topics and suggests that topical contents of messages may provide valuable hints on the publicity that supranational messages generate. Third, our findings highlight that especially visual content is part and parcel of supranational public communication, requiring additional forms of content analyses. Fourth and finally, the clearer communication and higher engagement rates that accounts of individual supranational actors generate highlight that the personalization of EU politics can be meaningfully observed on Twitter.

Finally, we would like to draw attention to several notable challenges pertaining to studying citizen engagement with European politics on social as we encountered in our study. Cardinal among these challenges is perhaps the volume and variation the data entails. The volume is a Janus-faced characteristics of social media data. On the one hand, access to such vast amount of data, especially from transparent platforms such as Twitter, allows researchers to study full population of unit of analysis. In our case, this is all the tweets issued by selected accounts. Concomitantly, this allows researchers to obtain a less biased picture of the phenomena of interest. On the other hand, managing such large volumes of data entails major logistical problems. As the volume increases, storing, sharing, and analyzing the data becomes much more challenging. In our case, this reflected as waiting for several hours, if not a couple of days, to obtain descriptive information from our dataset. There are many convenient and free-to-use services with regards to storage and sharing the data. However, such free-of-charge services are not intended for large amounts of data and may take some creativity and ingenuity from the researchers. In our case, we have circumvented these problems by locally saving our dataset and sharing our analysis scripts via GitHub. Another attending problem of the volume relates to processing. Platforms offer such large datasets in formats that are unconventional in political science and similar fields such as JSON. Working with such formats often requires the researcher to be well-versed in data structures and storage techniques. As we are not trained computer scientists, this proved to be a learning moment for us. Finally, as the European politics transcends national boundaries so does the engagement with it on social media. This manifested itself as linguistic diversity in our study. Like in any other text data, most analysis methods have limited capacity to handle multi-lingual corpus, even more so when the corpus includes meta-linguistic features such as hashtags and emojis. Studying political phenomena in resource rich languages such as English, German, and French is rather easy. Unfortunately, doing the same thing with resource scarce languages such as Slavic languages is extremely challenging as available techniques and methods are very limited and comparable. We hope that soon these challenges will be eliminated by the future generation of scholars.

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