



## From Speeches to Tweets: The Mapping of Trend and Evolution of Political Communication in Digital Media

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### Abstract

This study explores the trends and evolution of political communication in digital media through a scientometric review, focusing on publications from the Scopus database from 2004 to 2024. Through bibliometric analysis and network visualization using RStudio, VOSviewer, and CiteSpace, the research identifies key themes, emerging topics, and the interaction between digital and traditional media in political communication. The findings confirm that social media platforms, especially Twitter/X and Facebook, have become crucial in shaping political discourse and public participation, supporting the primary hypothesis that digital media plays a central role in contemporary political communication. Contrary to the secondary hypothesis, however, traditional media such as television retain their influence, particularly in verifying information and countering misinformation. Despite the growing dominance of digital media, challenges such as disinformation, echo chambers, and political polarization persist, highlighting the need for future research to address these issues. This study concludes that political communication now operates in a hybrid ecosystem that combines digital immediacy with the credibility of traditional media, requiring theoretical and practical strategies to maintain healthy political discourse.

### Keywords

Political communication, Digital media, Social media, Traditional media, Political polarization

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## Introduction

The development of digital technology has brought about significant changes in the way political communication takes place (Shah, 2016). From public speeches to instantly shared tweets (Dworakowski et al., 2023), political communication patterns continue to adapt to new media that are more dynamic and fast-paced (Keller & Königslöw, 2018). This research is important because this transformation has changed the delivery mechanism of political messages, expanding the reach of audiences and the speed of public response. Studying how this evolution of political communication occurs through digital media such as Twitter/X platform is important for understanding shifts in power and influence in contemporary politics, especially in how the public receives and interprets political messages.

This research is closely related to previous studies that have discussed political communication in the context of traditional media and the transition to digital media (Schroeder, 2018). However, unlike previous studies, this research focuses on the evolution of political communication from a historical perspective, with a longitudinal analysis comparing communication strategies through traditional media, such as public speeches, with today's rapidly evolving social media platforms. A literature review using data from Scopus revealed a gap in understanding how modern communication tools, particularly Twitter/X, shape political discourse in real time and how differences in media affect the narratives conveyed.

This research design uses a literature analysis approach through the Scopus database to identify key trends and patterns in political communication in the digital age. The design is based on a hypothesis that focuses on the relationship between changes in media technology and the evolution of political messages. The implications of this research are not limited to the development of modern political communication theory, but also include the immediate practice of political campaigns, the communication strategies of political leaders, and how the public processes political information in the fast-paced digital age. This research is expected to provide new insights into the importance of understanding and managing political messages in the ever-evolving era of social media.

The evolution of political communication in digital media is worth examining because of the drastic changes in communication patterns between politicians and the public (Breeze & Ana, 2020). Social media, such as Twitter/X, have shifted the delivery of political messages from formal one-way communication, such as speeches, to interactive communication open to real-time public participation (Mutiarin & Lawelai, 2023). This shift has had far-reaching implications for the

dynamics of political campaigns and public perceptions of political issues (Munger et al., 2022). However, previous research still shows inconsistent results regarding the effectiveness of social media compared to traditional media (Hornik, 2016; Idid et al., 2017). There is a need to expand the theoretical reach in understanding how digital media, with its short and fast-paced nature, affects the quality, accuracy, and appeal of political messages. The inconsistency of previous studies is due to differences in the context of use and characteristics of the audience and the purpose of communication. Social media, such as X and Facebook, are at the forefront of the speed of information dissemination and interaction, making them quite effective for public mobilization and participation. However, traditional media, such as television, are still more credible in verifying facts and preventing misinformation. This inconsistency is also due to variations in research methods, such as focusing on different platforms or measuring different impacts. Inconsistency is also due to the influence of echo chambers and algorithms that filter information.

This research also has strong applied relevance, as social media has become a key tool for politicians worldwide to build their image and influence public opinion. Studying the effects of these changes is important for understanding how modern political interactions are shaped, especially in the context of campaigns, crisis response, or political information dissemination. Given the controversy over the effects of social media on political polarization and information manipulation, it is important to provide a balanced and thorough overview of both sides of the argument (Lee et al., 2018).

Research on the transformation of political communication has followed changes in the media used by politicians and the public. Initially, television was the main medium used to shape public perceptions of politicians, but over time the role of digital media, especially social media, began to dominate (Buyens, 2024). Social media, such as Twitter/X, allow for more personalized and interactive communication, where politicians can deliver messages more quickly and directly to the public (Fatema et al., 2022). These messages are often more informal and tailored to the audience, creating a closer relationship between politicians and voters (Lee & Oh, 2012). At the same time, the use of social media in political communication also affects the dynamics of public engagement and response to political messages (Chen et al., 2016).

While many studies have addressed the role of social media in political communication (Alperin et al., 2018; Darshan & Suresh, 2019; Permadji et al., 2019), there are still aspects that need to be further explored, especially regarding the long-term shift from traditional to digital media. This research offers a new perspective by analyzing how political communication patterns have evolved

over the past decade. This research focuses on how political messages in traditional media differ from messages delivered through digital media, as well as their implications for the relationship between politicians and audiences in the increasingly fragmented context of the digital age.

#### *Research Questions*

- (1) How have trends in the emergence of political communication topics in digital media developed in recent years?
- (2) What is the network structure of political communication in digital media and how are political topics mapped in online discussions?
- (3) How has political communication in digital media developed?

#### **Method**

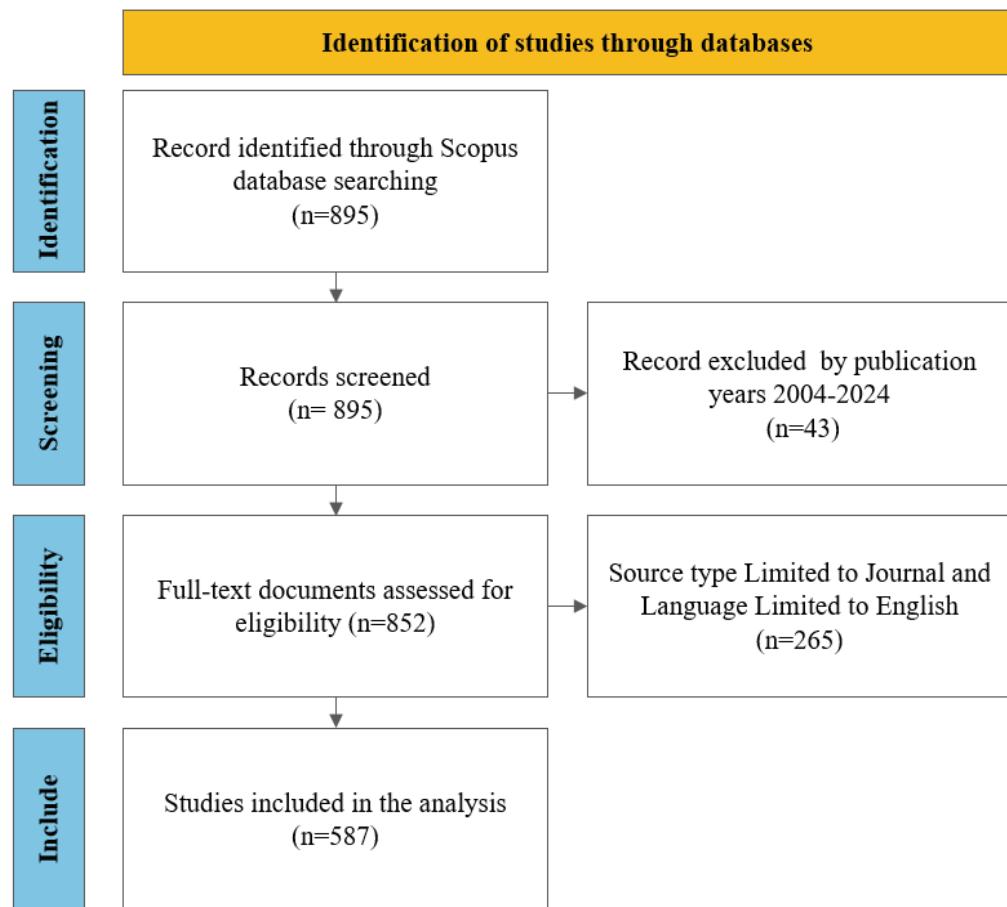
##### *Research Design*

This research uses a scientometric review design (Mingers & Leydesdorff, 2015), to map the trends and evolution of political communication in digital media. A scientometric review is an approach that combines quantitative analysis of relevant scholarly literature to understand the evolution of issues in a systematic and measurable way (Barbosa et al., 2018). Through bibliometric analysis of relevant publications (Prakoso et al., 2023), this research can identify patterns, key themes, and relationships between evolving concepts in the study of political communication in digital media. Using this technique, the research can reveal the evolution of the topic, network and publication trends that influence the field of political communication.

##### *Data Source*

The data source of this research is taken from the Scopus database, covering publications from 2004 to 2024. The data selection focused on English-language journal articles to ensure the quality and international readability of the study results. The selection of these 20 years allows researchers to observe how the development of political communication in digital media occurs longitudinally. Data from Scopus is considered comprehensive because it includes reputable scholarly journals from various disciplines (Lawelai, 2023), thus providing a rich picture of the evolution of the topic.

*Data collection technique*



**Figure 1** Modified PRISMA diagram illustrating the item selection process

**Source:** Authors' PRISMA 2020 flow diagram based on Scopus search results, 2004-2024.

Figure 1 shows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology used to guide the data screening and selection process (Wang et al., 2019). Initially, 895 documents were identified and filtered for publications from January 1, 2004, to August 31, 2024, reducing the dataset to 865. Finally, refinement resulted in 587 documents, with source type limited to journal and language limited to English. These steps ensure the inclusion of high-quality, relevant literature that follows the PRISMA guidelines for transparency and reproducibility, thereby enhancing the credibility and reliability of the review.

#### *Data analysis technique*

Data analysis was conducted through topic mapping and evolution of political communication in digital media using software such as RStudio, VOSviewer, and CiteSpace. In data analysis using RStudio, this study visualization used WordCloud, *conceptual structure maps*, *clustering by coupling*, and *thematic evolution* to understand trends and relationships in literature. WordCloud provides a *visualization of word frequency* that helps identify dominant terms. A *conceptual structure map* uses correlation analysis to map the relationships between terms, illustrating the conceptual structure of the research (Lourenço et al., 2023). *Clustering by coupling*, groups documents based on similarity of words or terms, helping to identify key themes (Aria et al., 2024). *Thematic evolution* shows how research topics or themes evolve over time, providing insight into trends and changes within the field of study (Bai & Li, 2022). Together, these techniques allow researchers to gain a deep understanding of literature and identify patterns and future research directions.

In data analysis with VOSviewer, the *network topic visualization* is used to illustrate the relationships between different topics in scientific literature based on data such as *keyword co-occurrence* or *bibliographic linkage*. This visualization helps to identify groups of related topics and how they are connected in the research network. Meanwhile, CiteSpace's *topic burst visualization* reveals topics that have experienced a significant increase in citations over a given time period, indicating topics that have recently gained widespread attention in the scientific community (Chen, 2006). In addition, CiteSpace's *summary of the largest clusters* provides a summary of the largest clusters, indicating key research groups and dominant topics in the literature (Chen, 2005). Together, these techniques provide comprehensive insight into trends, evolution, and patterns within a given research area, as well as identifying emerging and influential topics.

This technique allows the visualization of the network of concepts, themes, and keywords in literature (Kemeç & Altınay, 2023; Lawelai & Nurmandi, 2024). This mapping will show how key issues in political communication have evolved and the interaction between digital media and political communication practices. In addition, visualizing the evolution of trends allows for a deeper understanding of how various topics have evolved and provides insight into future research directions in the field.

## **Results**

### *Trends in the occurrence of political communication topics in digital media*

This subsection presents the findings on topic trends; the scientometric methods are detailed in the Methods section. The evolution mapping indicates a shift from early labels such as new media and online communication (2004-2010) toward the centrality of social media

platforms—notably Twitter/X and Facebook—during 2011–2016, followed by a strengthening of mis/disinformation, political polarization, and algorithmic curation since 2017. In 2020–2024, themes related to fact-checking, digital participation, and social network analysis exhibit marked increases in interconnectedness (as evidenced by the thematic evolution map and the time series of citation bursts), while legacy media (television/news portals) continues to function as a credibility anchor within a hybrid ecosystem. These findings suggest a research emphasis that has moved beyond mere adoption of new media toward concerns with information quality and algorithmic governance mediating cross-platform political communication.



**Figure 2** Word cloud of political communication topic in digital media

**Source:** Authors' visualization from Scopus records, 2004-2024

(query in Title/Abstract/Keywords). Processed in VOSviewer.

Figure 2 shows a word cloud of the evolution of key themes in political communication on digital platforms. The most dominant topic is “social media,” followed by “political communication,” “digital media,” “internet,” and “journalism,” which collectively demonstrate the primary focus of research on the utilization of social media in political communication. Additionally, words such as “Twitter/X,” “Facebook,” “populism,” and “elections,” as well as “disinformation,” are also represented, reflecting the utilization of digital platforms in political campaigns, information dissemination, and political engagement. These trends indicate that social media is becoming a pivotal instrument in forming contemporary political discourse, with subjects about democracy, political participation, and the influence of digital technology also frequently addressed.

The rise of social and digital media as primary arenas for political engagement defines the complex and evolving landscape of political communication in the digital age (Klinger & Svensson, 2015). The terms “social media” and “political communication” have become inextricably linked, highlighting the central role of digital platforms such as Twitter/X and Facebook as critical infrastructures for disseminating political messages, influencing public opinion, and mobilizing large numbers of people (Ding et al., 2023; Stieglitz & Dang-Xuan, 2013). Social media’s instantaneous and interactive nature allows politicians and political groups to transmit information and construct narratives that influence perceptions in real-time.

However, despite the apparent accessibility and global reach of digital media, the emergence of concepts such as “disinformation,” “echo chambers,” and “populism” highlights the potential for negative consequences within this ecosystem (Rae, 2021). On the one hand, social media facilitates broader and more participatory political engagement (Theocharis et al., 2023). However, it also creates conditions that allow for the polarization of views and the manipulation of information (Tucker et al., 2018). This illustrates that digital media is not only a conduit for disseminating messages but also a site of contention and contestation of political discourse. For example, “disinformation” describes the spread of misinformation that can exacerbate public distrust of democratic institutions. In addition, “echo chambers” reinforce existing biases by isolating users in an information environment consistent with their pre-existing beliefs (Gill & Rojas, 2021). This can contribute to exacerbating political polarization.

In the current digital age, the dynamics of political communication have changed significantly, shifting from a traditional top-down model to a more horizontal one (Gill & Rojas, 2021). In this new paradigm, audiences are no longer passive recipients but rather active actors in creating and disseminating narratives. This condition requires researchers and practitioners of political communication to examine how messages are conveyed and how they are received, retransmitted, and transformed by the public in a broader context. As a result, digital media, especially social media, are revolutionizing the way political communication is conducted and posing new challenges to understand its impact on democracy and political participation.

In the context of CiteSpace analysis, the term “strongest citation bursts” is used to describe a notable and rapid increase in the number of citations received by a specific keyword or topic over a relatively short period of time (Miura et al., 2021). This phenomenon indicates that the keyword or topic has recently gained significant attention and recognition from the academic community, often due to its relevance or groundbreaking nature within the field (Jeon & Jung, 2024). Citation bursts can serve to identify emerging trends, influential research, or pivotal advancements that are influencing the direction of scholarly discourse.

**Table 1** Top 15 topics with the strongest citation bursts

Keywords	Year	Strength	End	2004 - 2024
Information Technology	2005	1.86	2006	
Communications Media	2006	2.22	2014	
Internet	2005	2.04	2011	
New Media	2004	5.42	2015	
Social Network	2011	2.64	2017	
Social Networking	2011	1.9	2015	
Political Participation	2012	3.14	2016	
Social Sciences	2013	2.35	2014	
Priority Journal	2014	3.01	2018	
Public Opinion	2015	2.05	2018	
Political Information	2018	1.91	2022	
Political Discourse	2012	2.76	2021	
Fake News	2021	2.01	2024	
Social Network Analysis	2022	2.19	2024	

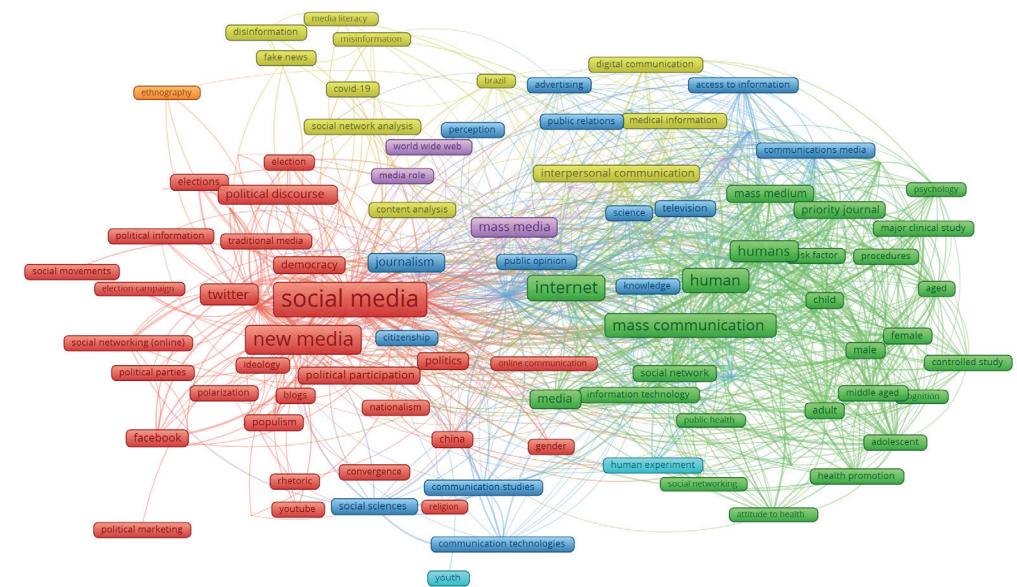
Table 1 shows the topics with the strongest “citation bursts” over the period 2004-2024, with the red color representing the period when the topic experienced a significant increase in citations, and the blue line representing the entire period for the topic.

Significant thematic shifts in research related to communication and digital technologies have occurred over the past two decades. At the beginning of the period (2005-2011), topics such as “information technology,” “communication media,” and “Internet” dominated with a significant increase in citations (Kling, 2007; Royal, 2005). This suggests that the first research phase explored new technologies and digital media infrastructure. Researchers were interested in technological development and how digital media began to change how people communicate, with technological innovation at the forefront. After 2010, however, these topics tended to stabilize or decline, suggesting that the technological aspects themselves were beginning to be established or sufficiently understood by the academic community (Willson, 2010).

At the start of the next decade, topics such as “social network analysis,” “political discourse,” and “fake news” experienced a surge in citations, which continues through 2024. This reflects a shift in research focus from simply understanding technology to analyzing its impact on society, politics, and public information (Klinger & Svensson, 2015; Kreiss & McGregor, 2018). This surge is linked to the rapid development of social media and concerns about the spread of disinformation and intense political polarization. Issues such as “fake news” are becoming increasingly relevant in the context of global elections, information crises, and increased attention to the impact of digital media on democracy. This development demonstrates a scholarly shift from technological infrastructure to more complex socio-political consequences, showing how digital media acts as a communication tool and a space for contestation and transformation of public discourse.

Network analysis and topic mapping of political communication in digital media

In this study, we used VOSviewer to create a network map of political communication in digital media (Figure 3), RStudio to create a conceptual structure map (Figure 4), and RStudio to perform clustering by coupling analysis (Figure 5).



**Figure 3** The network topic of political communication in digital media

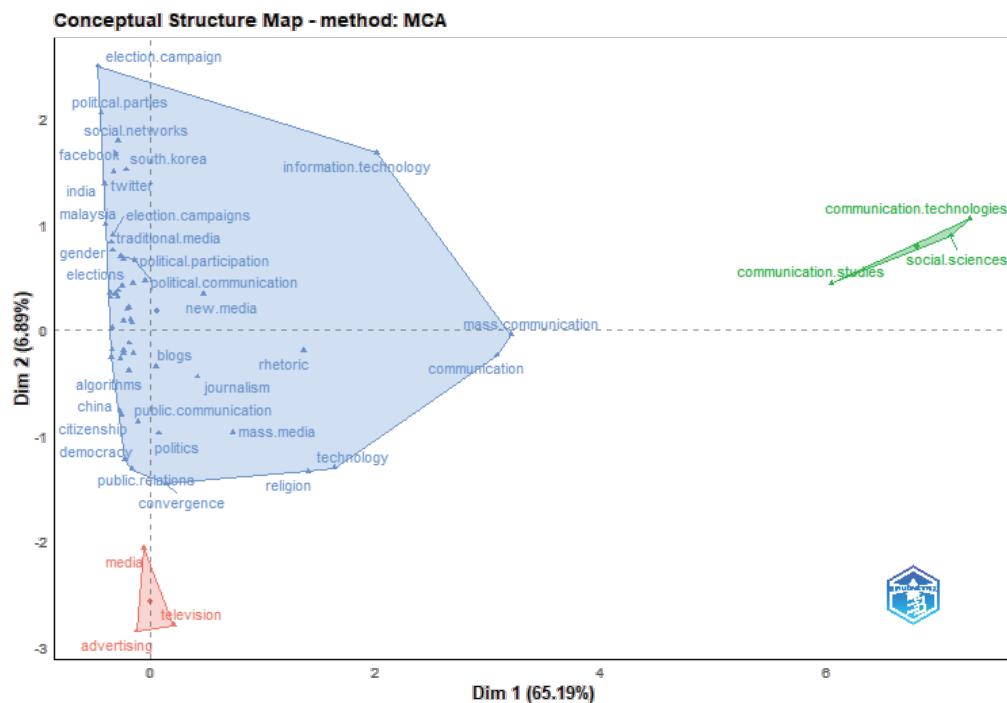
**Source:** Authors' analysis using Scopus metadata, 2004-2024;

Network built and visualized in VOSviewer.

Figure 3 shows a network map of political communication topics in digital media, represented by *nodes* (topics) and *networks* (relationships between topics). The larger nodes, such as social media, new media, and mass communication, indicate the most frequently discussed topics, while the edges connecting the nodes reflect the relationships between the concepts. The network shows how social media (red nodes) are closely related to political discourse, democracy, and social movements. In contrast, the Internet and mass communication (green and blue nodes) serve as a medium for wider dissemination of information. The map also illustrates how the nodes on disinformation and fake news are strongly linked to politics and social media, showing the complexity of political communication in the digital age.

In the thematic map, the red cluster stands out as the center of research on political communication through social media. Topics such as "social media," "new media," and platforms such as Facebook and Twitter/X are central, indicating the central role of social media in influencing political discourse (Stier et al., 2018). Within this cluster, concepts such as "democracy," "political discourse," "political participation," and "social movements" are strongly interconnected, illustrating how social media has become a key tool for organizing social movements and political participation (Mattoni, 2017). Social media allows for rapid and dynamic discourse on politics, which links to issues such as disinformation and fake news, demonstrating the significant challenges posed by the spread of misinformation in the digital political sphere.

On the other hand, the green and blue clusters focus on the role of mass communication and the Internet in a broader context, particularly human communication, and access to information. The green cluster, which includes themes such as "mass communication," "people," "health promotion," and "priority issues," emphasizes the importance of digital media in disseminating health information and its impact on society (Jiang, 2024). Meanwhile, the blue cluster includes "mass media," "interpersonal communication," and "journalism," showing the importance of the relationship between traditional media and interpersonal communication in the digital age (O'Sullivan & Carr, 2018). This suggests that despite the dominance of social media, mass communication, and traditional media still play an important role in educating the public and providing credible and verified information.



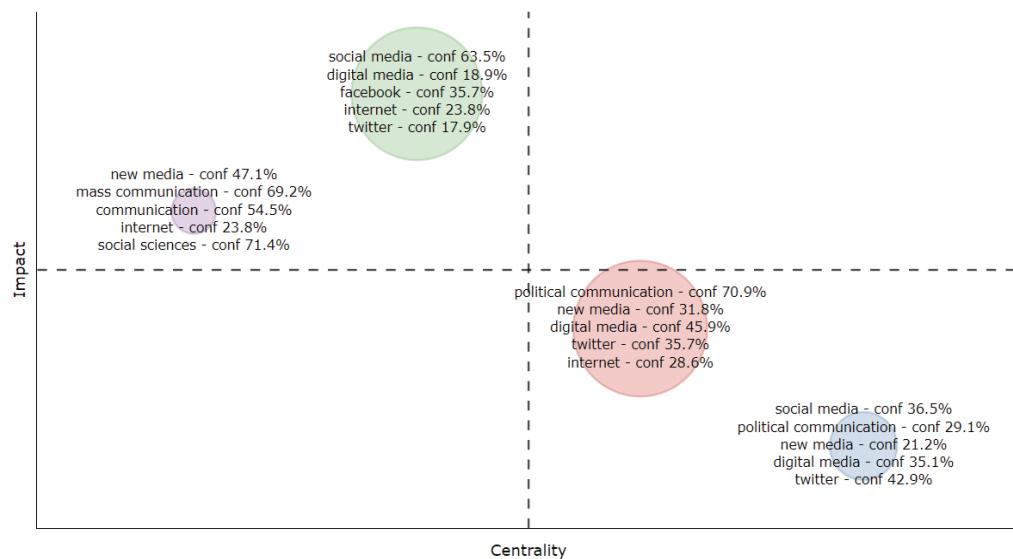
**Figure 4** Conceptual structure map of political communication in digital media

**Source:** Authors' computation from Scopus records,  
2004-2024; computed and plotted in R bibliometrix.

Figure 4 shows the political communication and digital media topics based on two dimensions, Dim.1 and Dim.2, which allow us to see the distribution pattern of the issues based on their conceptual similarity. Dimension 1 can be interpreted as a spectrum between topics related to technology and digital innovation (such as "information technology" and "communication technologies") on the positive side, and traditional topics (such as "media" and "television") on the negative side. Meanwhile, Dimension 2 seems to represent a spectrum between practical political activity and mass communication, with topics such as "election campaigns" and "political parties" at the upper end and topics related to public communication and theory at the lower back.

The topics clustered in Cluster 1 (blue) include most of the terms related to political and digital communication, such as “social media,” “political communication,” and “new media” (Elishar-Malka et al., 2020). This suggests that this cluster’s topic relates to how digital media influences politics, public participation, and political discourse. Twitter/X, Facebook, and YouTube have become key platforms in contemporary political communication (Gerodimos & Justinussen, 2015). Issues such as disinformation and fake news also appear in this cluster, suggesting that much attention is being paid to the negative effects of social media on democracy, such as the spread of misinformation and political polarization.

In contrast, Cluster 2 (red) consists of topics that are more related to traditional media and advertising formats, such as “television,” “advertising,” and “media” (Reinares-Lara et al., 2016). This shows that although digital technology has dominated modern political communication, traditional media still plays an important role in certain contexts. Cluster 3 (green), which includes topics such as “social sciences” and “communication technologies,” focuses on the academic and theoretical dimensions of communication and technology (Kutsyk, 2023), highlighting how communication studies evolve with technological advances and enrich the theoretical framework for understanding their impact on society. This cluster tends to focus on more abstract or conceptual studies, linking scientific research with technological innovations and their social impact.



**Figure 5** Clustering by coupling political communication in digital media

**Source:** Authors' analysis of Scopus articles/reviews, 2004-2024;

Bibliographic coupling computed and visualized in VOSviewer.

Figure 5 shows the clustering of documents based on their coupling, which maps the evolution of political communication in digital media across two main axes: the relationship between the *impact*, along the vertical axis, and the *centrality*, along the horizontal axis, of the documents in question. This organization of documents or concepts demonstrates how specific subjects within the domain of political communication through digital media evolve and interact. In this graph, the concepts with the highest impact are considered the most relevant and significantly influence the study of political communication. In contrast, high centrality indicates concepts that are the focus of numerous studies and have robust connections with other themes.

In the upper left quadrant, we observe the presence of clusters comprising concepts such as “new media” (with 47.1 percent confidence), “mass communication” (69.2 percent confidence), and “social sciences” (71.4 percent confidence) (Kutsyk, 2023; Wüest et al., 2021). This cluster demonstrates that new media and mass communication-related topics have a relatively high impact but a moderate centrality (Weimann et al., 2014). This already indicates that although the concept of new media has become a significant element in political communication studies, its application has not been incorporated into the central framework of the wider literature. This is also pertinent to the social sciences, where the field has made significant contributions but has not been a central point of interaction for a wider range of themes.

In the lower right quadrant, clusters featuring themes such as political communication (confidence 70.9 percent), digital media (confidence 45.9 percent), and Twitter/X (confidence 35.7 percent) demonstrate higher centrality but lower impact (Bucy & Evans, 2022). This indicates that political communication and digital media, particularly Twitter/X, are significant within the field of political communication literature (Hutchins, 2016). Nevertheless, their impact remains concentrated on groups rather than offering a comprehensive shift in our understanding of political media. Twitter/X, for instance, despite its status as a pivotal platform in political communication, has thus far exerted a relatively concentrated impact on a select group of users, namely politicians and journalists.

Furthermore, in the upper right quadrant, a cluster is dominated by social media (confidence 63.5 percent) and Facebook (confidence 35.7 percent). Given its high centrality and impact, social media, particularly Facebook, has become one of the most influential instruments in political communication in the digital age (Bossetta, 2018). The concept is highly integrated with various other themes and has a significant impact on influencing the way politicians communicate with the public. The results of this study confirm the importance of social media in changing the political communication landscape. However, other themes, such as new media and mass communication, are still evolving and have yet to have a broader impact on literature.

*Cluster analysis and evolution of political communication in digital media*

Table 2, which summarizes the largest clusters, highlights how scholarly attention has evolved, identifies critical moments when research priorities have shifted, and reveals the emergence of new relevant questions. Visualization through this table is important for understanding the direction and dynamics of change in digital political communication, while also showing the relationship between global trends and specific issues shaping public discourse in the digital age. This study illustrates the timeline view using CiteSpace (Table 2) and the *thematic evolution* using RStudio (Figure 6).

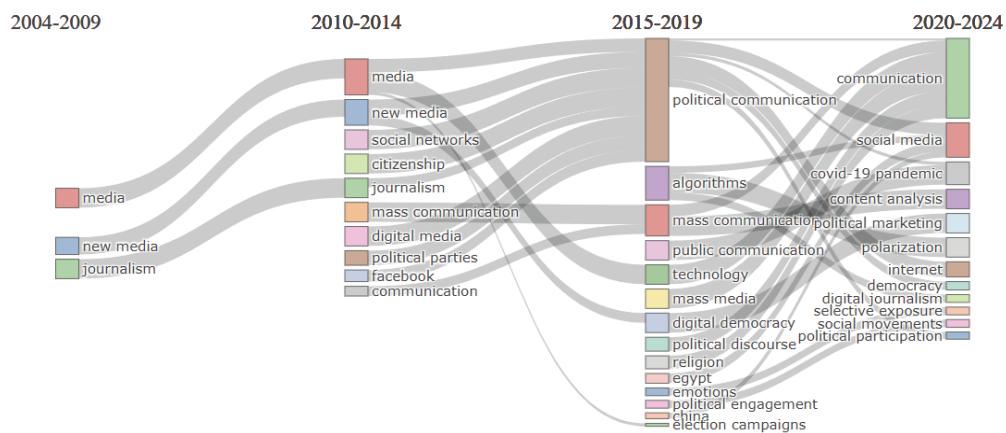
**Table 2** Summary of the largest clusters of political communication in digital media

ClusterID	Size	Silhouette	Label	Keyword	Average Year
0	80	0,907	political actor	social media, political communication, new media, digital media, social networks	2015
1	58	0,814	old wine	human, mass communication, internet, interpersonal communication	2015
2	57	0,643	big data era	access to information, communications media, information dissemination, utilization	2013
3	44	0,787	digital media use	adult, female, male, aged	2015
4	38	0,905	building capacity	communication, political participation, cultural anthropology, world wide web	2012
5	37	0,861	big data era	child, adolescent, information technology	2014
6	34	0,917	presidential campaign	political discourse, democracy, selective exposure	2015
7	19	0,963	regional media coverage	mass media, content analysis, traditional media, political parties	2016

Micro-targeting and personalized messaging-enabled by social media platforms such as Twitter/X and Facebook-have become central to contemporary political communication, allowing politicians to engage directly with publics and mobilize support (Franch & Micó, 2021; García-Carretero & Pérez-Altable, 2017). These “political actor” cluster results (80 members; silhouette = 0.907) reflect the field’s growing attention to such practices, with the most-cited keywords including “social media,” “political communication,” “new media,” “digital media,” and “social networks.” This digital turn coexists with, and often complements, legacy media in campaign strategy, while social networking sites provide spaces for political discussion, campaign activity, and content dissemination that can increase participation and engagement in electoral processes (Skripka, 2021).

The second largest cluster is *old wine*, with 58 members and a silhouette value of 0.814. The most cited keywords in this cluster are human, mass communication, internet, interpersonal communication. Social media platforms like Twitter/X blur the lines between mass communication and interpersonal communication, so that messages for a wide audience can be felt personally and directly. The Internet, particularly through Web 2.0 technology, has enabled the widespread dissemination of political messages, democratizing the creation and distribution of content (Boomgaarden, 2014). Interpersonal communication is essential in modern political strategy, as it allows direct interaction between politicians and the public, influencing public opinion and engagement (Flanagan, 2017).

The third largest cluster is the *big data era*, with 57 members and a silhouette value of 0.643. The most cited keywords in this cluster are access to information, communications media, dissemination, utilization. Digital media has revolutionized communication, democratizing access to information and enabling political actors to reach a broad audience directly (López-Meri et al., 2021). Social media platforms like Twitter/X have shifted political discourse from traditional media to digital platforms, allowing politicians to engage with the public, share updates, and influence media coverage (Coelho et al., 2017). Social media facilitates rapid dissemination of information, particularly in political campaigns and crisis communication. Effective utilization of digital platforms involves strategic content creation and interaction, allowing politicians to engage with constituents, shape public opinion, and respond to current events (Franch & Micó, 2021).



**Figure 6** Thematic evolution of political communication in digital media

Source: Authors' processing of Scopus data, 2004-2024;

Thematic evolution computed in RStudio.

Figure 6 shows the *thematic evolution of political communication in digital media* from 2004 to 2024, where certain topics have changed and evolved. In the first period (2004-2009), "media," "new media," and "journalism" were the most dominant themes (O'Sullivan & Heinonen, 2008). This reflected the aforementioned early focus on the role of traditional mass media and new media in political communication. During this period, the concept of new media emerged with the development of the Internet and digital platforms. Nevertheless, journalism and media remained the main actors in disseminating political information.

The second period (2010-2014) shows a broader shift towards social networks, civil society, digital media, and Facebook (Andrade, 2013). This shows social media and digital platforms' growing influence on political communication. Social networks became central to the study of digital politics, where social media such as Facebook played an important role in political participation and information dissemination. Meanwhile, the discourse on citizenship and political parties also gained momentum, illustrating how digital technologies have begun to shape political engagement and civic identity in the modern era.

In the third and fourth periods (2015-2024), there is a greater diversification of topics, including "algorithms," "polarization," "the COVID-19 pandemic," and "political communication" (García-Orosa, 2022; Robles et al., 2022). This reflects the impact of more advanced technologies and the global crisis (COVID-19 pandemic) on political communication. Algorithms are beginning to receive attention for influencing the political information users see, creating information bubbles and polarization. Topics such as "political communication," "public communication," and "digital

democracy" flourished, showing that political discourse is now more focused on how technology affects public opinion and democratic processes. The COVID-19 pandemic highlights the enormous role of the global health crisis in changing the landscape of digital political communication.

## Discussion

The findings of this study indicate a significant increase in the use of social media, especially Twitter/X and Facebook, in political communication. This is evident from the dominance of topics such as "social media," "political communication," and "digital media" in the trend map and topic evolution. This finding supports the primary hypothesis that digital media, particularly social media, has become an important tool in contemporary political communication. Several previous studies have also emphasized the great role of social media in increasing public participation and accelerating the dissemination of political information (Boulianne, 2019; Chen et al., 2019; Gil de Zúñiga et al., 2014; Hyun & Kim, 2015), in line with the findings of this study.

The network analysis conducted in this study revealed a strong relationship between social media platforms and political communication topics. The analysis using VOSviewer and RStudio showed that topics such as "social media," "political propaganda," and "political discourse" tend to appear together, and form interconnected clusters. This suggests a strong communication structure where political actors and the public interact in political discussions through social media. However, despite the dominance of social media, traditional media such as television still play an important role in disseminating more credible and verified information (Barnoy & Reich, 2019; Fišer & Držanic, 2021; Idid et al., 2017). This finding contrasts with the secondary hypothesis that traditional media have lost their relevance, where this study found that traditional media still play a role in maintaining the balance of information, especially in combating the spread of misinformation.

Political communication in digital media has grown rapidly, especially through more direct and participatory interactions between political actors and the public. The rapid and interactive nature of social media allows politicians to deliver messages more directly and in real time. However, this development also brings new challenges, such as increased political polarization and the emergence of "echo chambers," where social media users tend to consume only information that matches their political views. Previous studies have also shown that while digital media provide greater access to information, they can also increase political polarization (Lee, 2016; Yun, 2024; Zhu et al., 2024). This study confirms these findings and highlights the need for further research to mitigate the negative effects of disinformation and polarization, and to improve digital literacy and the quality of political participation in the social media era.

Future research can play a crucial role in reducing the negative impacts of disinformation and polarization by focusing on algorithmic transparency, media literacy interventions, and cross-platform comparative studies. Given that social media algorithms amplify divisive content (echo chambers on X and Facebook), studies should explore how platform design influences misinformation spread and whether regulatory or technical adjustments can mitigate harm. Additionally, experimental research on digital literacy programs could assess their effectiveness in improving critical thinking and source evaluation skills. For example, gamified learning or AI-driven misinformation detection tools may enhance public resilience against fake news.

The results confirm the important role of digital media in political communication but also show that integration with traditional media remains crucial in maintaining information balance. Challenges such as disinformation and political polarization require further attention from both theoretical and practical perspectives. Future research needs to focus on how digital ecosystems can be designed to encourage healthier and more inclusive political discussions and how individuals can be educated to respond critically to information in this digital age.

## Conclusion

This study confirms that social media has taken a leading role in modern political communication; however, the influence of traditional media has shifted from primary gatekeeping and first-exposure dissemination toward roles of verification, legitimacy, and interpretive depth. In practice, audiences often encounter political content first on platforms like Twitter/X and Facebook, then look to television and online newsrooms for fact-checking, investigative context, and authoritative framing. Traditional outlets also amplify and normalize platform-originated narratives through headline selection and editorial cues, with their influence peaking during high-stakes moments (elections, crises) when credibility is salient. Thus, rather than being displaced, legacy media now anchor credibility, provide accountability, and shape cross-platform agenda flow, complementing the immediacy and micro-targeted engagement afforded by social media.

In other words, political communication today relies on a hybrid ecosystem between digital and traditional media. Based on the analyzed Scopus data, it is concluded that political communication is now moving in a hybrid ecosystem through three main pieces of evidence: first, thematic dominance in bibliometric analysis, where the terms "social media" and "political communication" appear as the largest clusters (80 documents, silhouette 0.907), but still accompanied by the clusters "mass communication" (58 documents) and "traditional media" (19 documents); Second, the polarization of conceptual dimensions on the network map (**Figure 4**), where the blue cluster (digital media such as X/Facebook) and red (traditional media such as television)

are proven to complement each other in disseminating political information; and Third, temporal citation bursts, where the topic “new media” dominates the period 2004-2015, while “fake news” (2021-2024) and “social network analysis” (2022-2024) actually show the critical role of traditional media in verifying information. This finding is reinforced by the silhouette validation ( $> 0.8$ ) which confirms the stability of these clusters.

The theoretical implications of this study support the concept of a hybrid ecosystem in political communication, where digital media accelerate the dissemination of information, but on the other hand reinforce polarization through echo chambers. The results also show that political polarization generated by social media exacerbates the fragmentation of public opinion. From a practical perspective, this calls for politicians, policymakers, and media practitioners to be more cautious when using social media and to improve digital literacy to combat disinformation. Appropriate interventions can help maintain the quality of political discourse in the digital age.

This study has several limitations, including a limited focus on specific social media platforms and the use of data from scholarly publications, which may not fully reflect everyday political communication practices. In addition, there is a need for further analysis of how different forms of digital media affect political polarization. Therefore, future research should explore more deeply the dynamics of communication on other digital platforms and how interventions can be designed to address the challenges of polarization and disinformation in the digital space.

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