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Media Coverage of European Funds and Public Sentiment: A Topic Modelling Approach

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ABSTRACT

We study the coverage of European funds by the mass media and the relationship between media sentiment and public sentiment. We analyze 31,570 media articles published across all European Union (EU) countries between January 1, 2020, and December 31, 2023 — a period significantly shaped by the COVID-19 pandemic and major EU funding initiatives — using the BERTopic modeling technique. We find that public discussions related to European funds can be categorized into 11 distinct topics, ranging from project developments in Central and Eastern Europe to employment and economic measures. Our results show that during the period studied, public sentiment towards European funds is generally stable yet negative, with notable fluctuations corresponding to specific events. Significant positive and negative peaks in sentiment are observed during periods associated with successful project implementations or corruption scandals. We also find significant geographical variation in media coverage and sentiment across EU member states. While Greece, Croatia, and Bulgaria exhibit high media coverage and more negative sentiment, Denmark, Ireland, and Portugal display more positive media sentiments. Our results suggest a negative relationship between media sentiment scores and the proportion of negative responses concerning the EU and the European Parliament (i.e., a proxy for Euroscepticism).

JEL Classification: c, odes, C80, D72

1 | Introduction

European funds have played a pivotal role in the economic, social, and territorial development of the European Union (EU) over the past decades. These funds, including the European Regional Development Fund (ERDF), the European Social Fund, and the Common Agricultural Policy (CAP), among others, aim to promote cohesion and reduce regional disparities by supporting investments in infrastructure, innovation, education, and employment. They have backed a diverse array of projects, from essential infrastructures to training and employment programs and have boosted innovation and business competitiveness (McCann and Ortega-Argilés 2013; Rodríguez-Pose and Garcilazo 2015). These funds have undoubtedly contributed to regional development

and economic growth (Crescenzi and Giua 2020; Fratesi and Wishlade 2017; Spilioti and Anastasiou 2024).

Nevertheless, despite their undeniable role as drivers of growth and equality, there is an intense debate regarding the extent to which European funds are associated with corruption. Some authors have shown that EU funds appear to have a positive impact on public corruption (De Angelis et al. 2020; Fazekas et al. 2013; Fazekas and King 2019). However, a more nuanced analysis indicates that this relationship does not hold for all countries and is conditional on the general corruption risk of a country (Fazekas and Tóth 2016). More importantly, corruption can decrease the effectiveness and absorption levels of European funds (Roman et al. 2023).

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In turn, the assignment, distribution, and control policies of European funds can significantly influence the sense of citizenship and the legitimacy of the EU (Hochrainer et al. 2010). This concern is particularly relevant in the context of the Next Generation EU (NGEU) program, an unprecedented fiscal package aimed at deeply transforming the entire European economy and society. Armingeon et al. (2022) prove that the allocation of NGEU resources is partially driven by Euroscepticism, such that countries with strong anti-EU sentiments receive larger NGEU grants per capita. In the same vein, Crescenzi et al. (2020) show that EU Structural Funds can mitigate Euroscepticism in the United Kingdom when coupled with improvements in local labor market conditions. This evidence contrasts with other literature that highlights the challenges the EU faces in using public funds to garner support (Turnbull-Dugarte et al. 2022).

Consequently, a question that arises is the relationship between European funds and citizens' sentiment. We address this question by studying the coverage of European funds in the European media and examining the relationship between media sentiment and public sentiment. We analyze more than 30,000 news articles published in the European media between January 1, 2020 and December 31, 2023. This time period is particularly relevant for several reasons. First, it encompasses the launch and initial implementation of Next Generation EU, the largest stimulus package ever financed by the EU in response to the COVID-19 pandemic. Second, it allows capturing the media coverage and public sentiment during critical phases of the funds' deployment: from the initial negotiations and approval in 2020, through the development of national recovery plans in 2021, to their implementation and first evaluations in 2022–2023. Furthermore, focusing on this recent period ensures an examination of current public discourse on EU funds in the context of contemporary challenges, such as the green and digital transitions—key priorities in the present funding framework. While extending the analysis to previous years could offer historical context, the chosen timeframe highlights the most recent and transformative period in EU funding policy, marked by new instruments, priorities, and implementation mechanisms.

Our main contribution lies in the application of the Bidirectional Encoder Representations from Transformers (BERTopic) method to study news coverage related to the use of EU funds. BERTopic is an innovative, step-by-step process that leverages pre-trained language models to represent documents. This approach enables the identification of key topics and the distribution of news across these topics. To the best of our knowledge, our paper is the first to apply the BERTopic method for analyzing news coverage on EU funds. In this way, we are able to identify the main themes discussed in the news about EU funds and to shed light on the public discourse and perception of citizens.

Our results show that during the period studied, public sentiment towards European funds was generally stable yet negative, with notable fluctuations corresponding to specific events. Significant positive and negative peaks in sentiment are observed during periods associated with successful project implementations and corruption scandals. We also find significant geographical variation in media coverage and sentiment across EU member states. While Greece, Croatia, and Bulgaria exhibit high media coverage and more negative sentiment, Denmark,

Ireland, and Portugal display more positive media sentiment. Our results suggest a negative relationship between media sentiment scores and the proportion of negative responses concerning the EU and the European Parliament (i.e., a proxy for Euroscepticism).

Taken together, our results underline that effective communication strategies and successful project implementations enhance public perceptions of EU initiatives. Given the relevance of visibility and positive sentiment towards EU funds for public support, our findings underscore the need of robust administrative frameworks and monitoring mechanisms to ensure the effective use and communication of EU funds.

The paper is structured as follows: In Section 2, we review the related literature. Section 3, “Data and Methodology,” describes the dataset used in our study, the variables included in our model, and the application of BERTopic for extracting, analysing, and categorizing news articles. Section 4 presents the results of our analysis. Finally, Section 5, “Discussions and Conclusions,” discusses the main findings, their implications, and the primary limitations of the study.

2 | Literature Review

European funds have played a relevant role in promoting economic, social, and territorial development and equality across EU. The literature has also shown how these funds have contributed to regional development and economic growth (Crescenzi and Giua 2020; Fratesi and Wishlade 2017; Spilioti and Anastasiou 2024). In this sense, EU Structural Funds have been essential in advancing research, education, and science in countries like Croatia (Kotarski 2016). Additionally, European Structural and Investment Funds (ESIFs) have triggered reforms in countries such as Hungary (Duman and Horvath 2011). EU funds like the ERDF and the European Agricultural Fund for Rural Development are vital for implementing strategies such as Green Infrastructure in spatial planning across Europe (Chiappinelli et al. 2021; Slätmo et al. 2019).

However, the effectiveness and perception of these funds are intricately linked to broader political and social dynamics within the EU, including the phenomenon of the so-called Euroscepticism. Euroscepticism, which denotes opposition or scepticism towards the EU and its integration processes, presents a significant challenge to the EU's cohesion efforts. Given the breadth of the concept, various indicators have been used to measure Euroscepticism, such as party positioning, public opinion surveys, political knowledge, and populist rhetoric (De Vries and Edwards 2009; Genovese and Schneider 2020; Meyer and Gattermann 2022; Olivas Osuna 2024).

Despite the positive impacts of the European funds, Euroscepticism has intensified in response to economic and political events, such as the financial crisis and Brexit, which have heightened public scrutiny and criticism of the EU's actions and financial allocations (Kolpinskaya and Fox 2019; Serricchio et al. 2013; Startin and Krouwel 2013). The relationship between ideology and Euroscepticism shows that both left- and right-wing ideologies can correlate with eurosceptic tendencies,

further complicating the political landscape within which EU funds operate (Moland 2024).

This eurosceptic wave can be seen as another crisis that the EU has had to address. The significance of European funds has grown in recent years due to crises such as the 2008 financial crisis and the COVID-19 pandemic, which required substantial economic support to ensure stability and growth across member states. The COVID-19 pandemic introduced unprecedented challenges, leading the EU to implement extensive financial measures to support recovery, such as the NGEU program, which underscores the critical role of European funds in fostering resilience and sustainable growth (European Commission 2021, 2023; European Council 2020; Guillaumon et al. 2021).

In turn, the effective utilization of European funds extends beyond financial management since it plays an important role in fostering European integration and shaping citizens' perceptions of the EU's legitimacy. Efficient management and monitoring of EU funds contribute not only to maximize their impact but also to uphold the credibility of EU institutions in the eyes of its citizens (Blanco-Alcántara et al. 2022; Walter 2017). This process involves establishing robust administrative frameworks to ensure that funds are allocated in alignment with EU policies and objectives, while monitoring mechanisms provide transparency and accountability, thereby mitigating risks of mismanagement, corruption, and inefficiency (Bauhr and Charron 2020). The literature has shown that corruption is a significant concern regarding the reliability of financial policies within the European framework (Alonso et al. 2024; Baumgärtler et al. 2024; Elvira-Lorilla et al. 2024).

In fact, citizens' sense of belonging to the EU is closely related to how EU funds are utilized and the transparency surrounding their allocation. Borz et al. (2022) and Hooghe and Marks (2018) emphasize the connection between effective fund utilization and citizens' perceptions of European integration and EU legitimacy. As shown by Dellmuth and Chalmers (2018), effective communication strategies shape the public perceptions of EU initiatives and fund usage.

The visibility and scale of EU fund utilization significantly impact public perceptions of EU solidarity and the value of European integration (Tselios and Rodríguez-Pose 2020). Ferrera et al. (2021) suggest that the strategic communication of EU-funded projects can influence how citizens perceive EU solidarity efforts and contribute to fostering a sense of belonging to the European community. The European Commission's communication initiatives, such as the "EU in my region" campaign, aim to enhance the visibility of EU-funded projects and engage citizens directly, thereby strengthening the connection between citizens and EU initiatives (European Commission 2022).

Nevertheless, in spite of the importance of public perceptions regarding EU funds, understanding and interpreting these perceptions pose significant challenges. Factors such as response biases, sampling issues, lack of depth, and context, as well as cognitive biases, complicate the measurement and interpretation of public sentiment (Baekgaard et al. 2019; Börzel and Risse 2018; Hobolt and de Vries 2016).

To overcome these challenges, public sentiment has been addressed by assessing news articles and media reports, which offer valuable insights into how EU funds are perceived across different member states and regions (Desmet et al. 2015). By scrutinizing the frequency, tone, and content of media coverage related to EU-funded projects, researchers can discern predominant trends in public sentiment (Clement 2015; Marquart et al. 2019). This approach not only allows for the identification of the prevailing sentiments but also enables an examination of how different facets of EU funding are described or critiqued in public discourse (Lloyd and Marconi 2014).

Recent advancements in natural language processing and machine learning offer promising alternatives in this field (Devlin et al. 2018; Sun et al. 2019). Latent Dirichlet Allocation (LDA), one of the most popular techniques, assumes that documents are produced from a mixture of topics, where each topic is characterized by a distribution over words (Blei et al. 2003). However, LDA requires that the optimal number of topics be known a priori, presenting a critical obstacle to the effective application of the model. This issue underscores the necessity for systematic research aimed at identifying the most suitable number of topics and fine-tuning other model parameters (Zhao et al. 2015).

In this context, BERTopic emerges as an innovative approach for analyzing sentiment and trends in news (Grootendorst 2022). BERTopic combines the deep linguistic understanding capabilities of BERT with the thematic discernment of traditional topic modeling techniques, improving the ability to seek semantic relationships between words (Devlin et al. 2018). Unlike the traditional topic modeling techniques such as LDA, BERTopic incorporates contextual information, enabling the identification of coherent topics and their evolution over time (Hutama and Suhartono 2022). This contextualized representation allows BERTopic to capture the complexities inherent in news articles, resulting in a particularly effective tool for understanding the dynamic nature and topics surrounding EU funds.

When combined with topic modelling techniques, which traditionally analyse the distribution of topics within documents, BERTopic not only categorizes news content with greater accuracy but also uncovers the thematic structures underpinning the corpus (Blei 2012; Huang et al. 2023; Jeon et al. 2023). BERTopic has proved utility across a wide spectrum of fields, demonstrating its versatility and effectiveness in extracting meaningful insights from text data. Notably, it has made significant contributions to the medical field, specifically in neurosurgery, by facilitating the analysis of scholarly articles, thereby proving value in medical research and analysis (Karabacak and Margetis 2023). Additionally, research conducted by Abd-Elaal et al. (2020) has highlighted BERTopic's capability in social media environments, particularly in identifying and categorizing extremist content, showcasing its application in enhancing online security and community safety.

In the field of social media analytics, comparisons with other topic modeling techniques have underscored BERTopic's superior ability to deal with complex Twitter datasets into discernible themes (Egger and Yu 2022). In the financial sector, it has been used to investigate how news related to climate change affects

the stock markets, offering insights into the intersection of environmental issues and financial performance (Fedorova and Iasakova 2024). Additionally, Chen et al. (2023) have stressed the application in financial analysis by studying the influence of financial news on financial markets.

3 | Data and Methodology

3.1 | Data Collection

We use the Global Data on Events, Location, and Tone (GDELT) dataset to obtain news related to European Funds around Europe. GDELT is freely accessible to the public, offering an open platform that supports big data analytics on global news coverage. The GDELT characteristics enhance democratic access to global news data, enabling researchers, policymakers, and the public to explore and analyse news trends on an unprecedented scale (Kwak and An 2014).

This widely covering dataset is designed to catalogue and analyze the world's broadcast, printed, and web news in over 100 languages, providing real-time insights into societal, economic, and political trends and events. One of the most meaningful characteristics includes the real-time translation and coverage of non-English news from various sources across the world, making it an invaluable resource for global news analysis (Leetaru and Schrodtt 2013). This feature is particularly beneficial for our purpose of extracting news about European funds from media regardless of the language of publication. At the same time, GDELT also uses sophisticated text analysis algorithms (based on more than 40 refined sentiment dictionaries) for understanding the sentiment of each of the extracted news. Interestingly, GDELT maps the locations mentioned in news reports and constructs networks of people, organizations, and countries involved in the news stories too.

We extract news from the GDELT dataset using a comprehensive search strategy that integrates both general and specific terms related to European funding. This approach is necessary due to the complex and interconnected nature of EU funds as well as the diverse ways they are referenced in media coverage. To capture broad discussions about European funding, we include general terms like "European funds" and "EU regional development." In addition, we incorporate the names of specific programs, such as "NextGenerationEU," "EU Cohesion Fund," "European Regional Development Fund" (ERDF), "European Social Fund" (ESF), "Horizon Europe," "Common Agricultural Policy" (CAP) funds, "EU recovery fund," "Structural and Investment Funds," "EU climate funds," and "Innovation and Technology Funds EU." This multi-term strategy ensures that we account for news articles referencing multiple funding mechanisms simultaneously or using varying terminology, thereby capturing relevant coverage across different regions of the EU.

The sample covers the period from January 1, 2020 to December 31, 2023. We focus on this timeframe as it represents a transformative period in the history of EU funding, highlighted by the launch and implementation of Next Generation EU, the largest stimulus package ever financed by the EU. This period enables us to analyze media coverage and public sentiment during the

critical phases of this unprecedented funding instrument, from its approval to its initial implementation. A total of 31,570 news articles were collected, averaging 21 news articles per day over the 1460-day period. The distribution of news articles across EU countries is detailed in Table 1.

An initial screening of the data reveals significant variations in media coverage across countries. As shown in Panel A of Table 1, Greece stands out as the most prolific nation, with 8210 articles, which accounts for 26% of the total coverage. This substantial share underscores the active media attention in Greece towards European funding, likely reflecting the country's economic context and the crucial role of EU funds in its recovery and development strategies. Croatia and Bulgaria, in spite of not being largely populated countries, follow closely, with 15.12% and 11.25% of the total articles, respectively, indicating a strong media focus on European funds within these nations. This attention may stem from their recent EU membership status, such that EU funding plays a vital role in infrastructure, social cohesion, and economic development investments.

French and Romanian media also exhibit significant interest, with 9.73% and 7.85% of the articles, respectively, suggesting that European funds are a relevant topic in their national media landscapes. This interest could be attributed to their involvement in various EU-funded projects, particularly in agriculture (CAP funds), research and innovation (Horizon Europe), and regional development (ERDF and Cohesion Fund). Conversely, countries like Sweden, Finland, and Denmark show lower coverage. Panel B reports consistent results regarding the proportion of news articles relative to the population of each country¹. Croatia, Greece, and Bulgaria are again the countries with the highest coverage per capita, whereas the Scandinavian countries are among those with the lowest number of articles per inhabitant.

4 | Methodology

BERTopic is a sequential process involving four key steps summarized in Figure 1. First, documents must be converted into numerical representations using sentence transformers to create embeddings that capture the essence of the text (Grootendorst 2022). This initial step involves embedding documents using pre-trained language models like paraphrase-multilingual-MiniLM-L12-v2, which facilitates handling texts in multiple languages by considering similar words as similar, irrespective of the original language. This sentence transformer model converts sentences and paragraphs into a 384-dimensional dense vector space, effectively capturing semantic similarities among documents.

After document embedding, the subsequent steps involve dimensionality reduction and clustering of the embeddings. BERTopic typically recommends using Uniform Manifold Approximation and Projection (UMAP) for dimensionality reduction (McInnes et al. 2018; Scarpino et al. 2022). UMAP, a manifold learning algorithm, is renowned for its effectiveness in preserving the essential topological structure of data, making it suitable for clustering tasks. Studies have shown UMAP to outperform other dimensionality reduction methods, such as t-SNE, in terms of clustering quality (Allaoui et al. 2020).

TABLE 1 | Annual distribution of extracted news articles related to European Funds (2020–2023).

Country source	Total news	%	Country source	Total news	%
<i>Panel A</i>					
Greece	8210	26.00%	Malta	221	0.70%
Croatia	4774	15.12%	Luxembourg	179	0.56%
Bulgaria	3553	11.25%	Netherlands	179	0.56%
France	3073	9.73%	Portugal	170	0.53%
Romania	2477	7.84%	Lithuania	156	0.49%
Spain	2077	6.57%	Latvia	143	0.45%
Slovak Republic	1112	3.52%	Hungary	74	0.23%
Czech Republic	1079	3.41%	Ireland	73	0.23%
Italy	1029	3.25%	Austria	64	0.20%
Belgium	708	2.24%	Slovenia	26	0.08%
Poland	701	2.22%	Sweden	20	0.06%
Germany	612	1.93%	Finland	11	0.03%
Cyprus	609	1.92%	Denmark	3	0.01%
Estonia	237	0.75%			
			Total	31,570	100%
<i>Panel B</i>					
		1239.0	Spain		42.9
Croatia		792.5	Poland		19.1
Greece		552.6	Italy		17.5
Bulgaria		483.3	Portugal		16.1
Cyprus		399.6	Ireland		13.9
Malta		268.0	Slovenia		12.3
Luxembourg		204.9	Netherlands		10.0
Slovak Republic		173.5	Hungary		7.7
Estonia		130.0	Germany		7.2
Romania		99.3	Austria		7.0
Czech Republic		76.0	Finland		2.0
Latvia		59.9	Sweden		1.9
Belgium		54.3	Denmark		0.5
Lithuania		45.1			
France			Total		70.3

Note: Panel A table presents the distribution of news articles mentioning European funds, extracted from the GDELT dataset. The percentages indicate the proportion of articles relative to the total dataset. Panel B provides the number of news articles per million of inhabitants.

The third step involves clustering the documents. In the context of BERTopic, the choice of clustering algorithm is crucial for the topic modeling process. One recommended algorithm is Hierarchical Density-Based Spatial Clustering of Applications with Noise (HDBSCAN), a density-based clustering technique known for its ability to identify clusters of various shapes and detect outliers (Campello et al. 2013). Each cluster identified by

HDBSCAN is assigned a topic, contributing to the coherent organization of documents into meaningful groups.

For topic word representations, BERTopic utilizes the class-based term frequency-inverse document frequency (c-TF-IDF) weighting scheme. This method is an adaptation of the traditional TF-IDF scheme: while the latter measures term representativeness

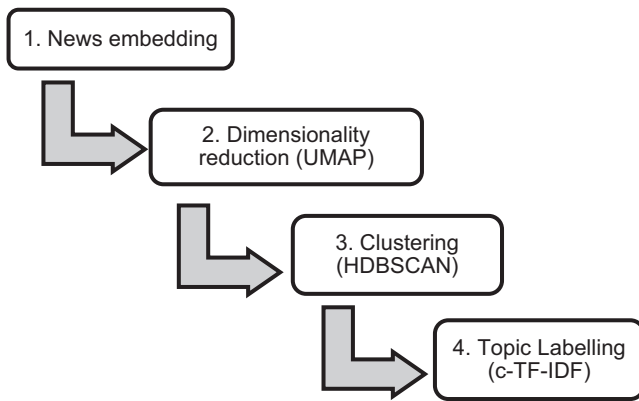


FIGURE 1 | Sequential Stages of the BERTopic algorithm. The BERTopic algorithm involves four main stages: (1) news embedding converts text data into vector representations using transformer-based models. (2) Dimensionality reduction (UMAP) reduces the complexity of high-dimensional data to enable clustering. (3) Clustering (HDBSCAN) organizes similar text data into coherent topics. (4) Topic labeling applies the c-TF-IDF method to assign interpretable labels to the identified clusters.

in individual documents, the former applies to topics, which are clusters of documents. Grootendorst (2022) explains that the importance of a word $W_{t,c}$ is calculated as the product of the term frequency tf_t , which is the frequency of the term t in class c and the inverse class frequency. The inverse class frequency is defined as the logarithm of the $(1 + A / t_f)$, where t_f is the frequency of the term across all classes and A represents the average number of words per class (with 1 added to ensure only positive values are produced):

$$W_{t,c} = tf_c \times \log\left(1 + \frac{A}{t_f}\right)$$

Dimensionality reduction is performed using UMAP with the default settings: 15 nearest neighbours (each document is compared with its 15 most similar articles to determine its thematic position), five components, and cosine similarity as the metric (measuring the similarity between two documents based on the angle between their word vectors; smaller angles indicate greater similarity). A fixed random seed is applied to ensure the reproducibility of the final model. Clustering is conducted using HDBSCAN with Euclidean distance as the metric. Euclidean distance, which measures the straight-line distance between two documents in the vector space created by their words, facilitates the grouping of articles that are closely aligned in content and meaning. For HDBSCAN, the minimum cluster size and the minimum number of samples vary across different models, as these parameters influence topic interpretability and the number of outliers.

The final step, involving the use of c-TF-IDF for topic labeling, is adapted because this method is significantly impacted when dealing with multiple languages; identical words in different languages are considered distinct entities, complicating cluster interpretation. To address this issue, a manual review and labeling process is used, selecting and categorizing the most representative news articles from each cluster according to overarching themes. This approach aligns with established practices in topic modeling and text analysis literature. In fact, Blei et al. (2003) and Grimmer

and Stewart (2013) highlight the critical role of human interpretation in validating and labeling topic models, especially in multilingual contexts where automated methods may struggle to capture semantic equivalences across languages.

5 | Empirical Results

5.1 | Topic Description

The analysis results in the identification of 11 distinct topics, each one shedding light on various aspects of the EU and the utilization of European funds. The topics, along with their corresponding labels, are summarized in Table 2, showcasing the distribution of news articles across these different topic areas from 2020 to 2023.

The table provides a comprehensive breakdown of the topics, their content focus, the number of news articles (N) associated with each topic, and the percentage of news coverage they represent. The topics range from Project Developments in Central and Eastern Europe to Employment and Economic Measures, with varying levels of media coverage and significance within the analyzed dataset.

We would like to note that the total count of news articles in Table 2 may differ from the total indicated in Table 1 due to the categorization of certain articles as outliers by BERTopic. These outliers, excluded from the analysis, generally fall into the following categories: (1) extremely brief news pieces, such as single-paragraph announcements of fund allocations without context or analysis; (2) articles that mention EU funds only tangentially (e.g., a local business conference where EU funding is mentioned in passing); (3) articles about other types of funds unrelated to EU funding programs (e.g., pension funds, investment funds, or hedge funds), captured due to the inclusion of the term ‘funds’ in our search; (4) duplicate articles with minimal variations in content; and (5) articles with inconsistent or mixed content spanning unrelated topics (e.g., an article starting with EU funds but focusing mainly on local political issues). For instance, an article titled ‘Investment Funds Performance in Q2’ that briefly mentions EU funds in comparison to other financial instruments would be classified as an outlier, as its primary focus is on private investment vehicles rather than EU funding programs. This filtering process ensures that the analysis concentrates on substantive news coverage that meaningfully contributes to public discourse on EU funds.

Through its structured approach, BERTopic aids in uncovering the diverse facets of the European socio-economic landscape, enabling a nuanced understanding of the region's dynamics. Each topic encapsulates a distinct thematic area, offering insights into key developments and trends within the EU. For instance, topics like “Project Developments in Central and Eastern Europe” delve into infrastructure projects and political dynamics in the region, while “Management and Use of European Funds” focuses on economic trends and investment patterns. “Finance and European Economy” highlights specific policy decisions and their economic implications, whereas “Politics and Relations in the European Union” scrutinizes internal conflicts and diplomatic relations within the EU.

TABLE 2 | Distribution of news articles related to European Funds by topic (2020–2023).

Topic ID	Topic description (label)	Number of articles	Percentage
1	Project Developments in Central and Eastern Europe	5351	25.51%
2	Management and Use of European Funds	5130	24.46%
3	Finance and European Economy	3254	15.51%
4	Politics and Relations in the European Union	1916	9.14%
5	Energy and Environment in Europe	1246	5.94%
6	Education and Young Leadership in Europe	845	4.03%
7	Railway Transport and Infrastructure in Europe	812	3.87%
8	Politics and Relations of Bulgaria with the European Union	670	3.19%
9	Agriculture, Food Security and Rural Development	655	3.12%
10	Maritime and Environmental Infrastructure	580	2.77%
11	Employment and Economic Measures	515	2.46%

Note: The table shows the distribution of news articles related to European funds, categorized into topics through BERTopic analysis. The percentages indicate the proportion of articles within each topic relative to the total number of articles extracted for the 2020–2023 period.

Other topics such as “Energy and Environment in Europe” underscore the importance of sustainability initiatives, “Education and Young Leadership in Europe” emphasizes educational challenges and talent development, and “Railway Transport and Infrastructure” covers advancements in transportation projects. Additionally, there are some other topics such as “Politics and Relations of Bulgaria with the European Union”, “Agriculture, Food Security, and Rural Development”, and “Maritime and Environmental Infrastructure” that shed light on specific regional dynamics and sectoral developments. The least frequent topic is “Employment and Economic Measures”, which provides insights into labour market interventions, economic recovery strategies post-pandemic, and efforts to support businesses and workers.

As an initial assessment of the utilization of European funds between January 2020 and December 2023, Figure 2 shows the

evolution of the importance of the 11 topics over time. The distribution across these topics is expressed as a percentage of the total news volume for each topic, providing some insights into their varying significance over time. As shown in Table 2, the topics “Management and Use of European Funds” and “Project Developments in Central and Eastern Europe” are the predominant topics consistently over time.

A closer look at the evolution of the topics reveals some interesting patterns. For instance, the topic “Employment and Economic Measures” experienced a peak in March and June 2020, likely due to the immediate economic response to the COVID-19 pandemic. “Energy and Environment in Europe” maintains a stable presence in the news, underscoring the ongoing importance of environmental issues and energy sustainability in the European discourse. The “Finance and European Economy” topic dominated the early months of the pandemic, highlighting the economic challenges and responses within Europe during this period. “Management and Use of European Funds”, a critical area of interest, peaked in April 2020 and again in August 2021, reflecting significant periods of fund allocation and management discussions.

“Politics and Relations in the European Union” and, specifically, the “Politics and Relations of Bulgaria with the European Union” show the dynamic nature of political discussions and relationships within the EU, with notable spikes in news coverage at various points, highlighting periods of intensified political activity or changes. For example, the peak observed around the end of the first semester of 2022 displays the existing tensions of the EU with Hungary and Poland regarding the use and management of European funds, primarily due to concerns about the rule of law and corruption.

Overall, the analysis of the news in media from 2020 to 2023 reveals how the coverage and impact of European Funds have evolved in the media. The subsequent sections will describe how the use of funds is understood and perceived by the media across the EU, offering further insights into public and media perspectives on these critical financial instruments.

5.2 | Media Sentiment Regarding the Utilization of European Funds

In this section, we conduct sentiment analysis on the extracted news articles. The sentiment of each article is derived from the GDEL, which utilizes natural language processing techniques to assess the sentiment conveyed in the text. By analyzing linguistic features, context, and tone, GDEL generates a sentiment score that can be positive or negative. In the Appendix A, we report the most positive and negative news articles for each topic analyzed. Despite some headlines not directly indicating a connection to European Funds, GDEL proves valuable in uncovering such associations. An example is the headline “Shelters for Violence Victims Inaccessible to Women with Disabilities,” where the article’s body reveals references to the utilization of European Funds for shelter accessibility during the “16 Days of Activism against Gender-Based Violence” campaign.

Figure 3 visually represents the trends in the number of news articles and their average associated sentiments over the specified

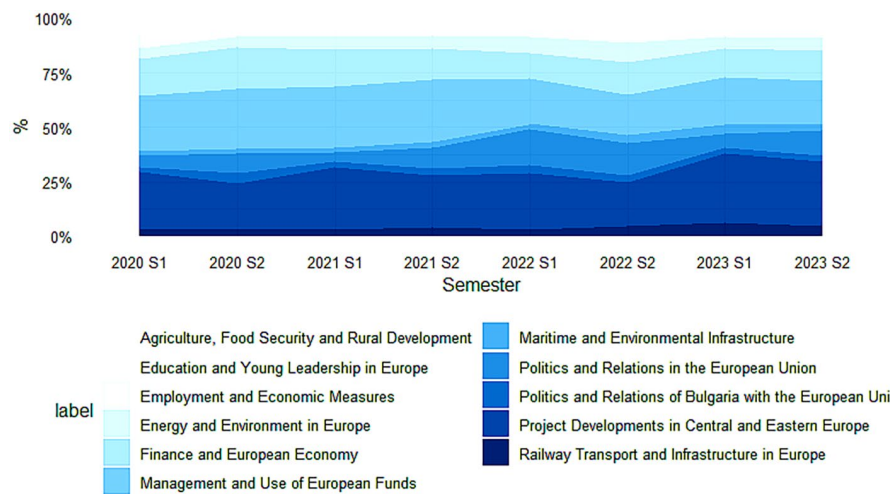


FIGURE 2 | Trends in Media Coverage of European Policy Topics (2020–2023). The figure presents the percentage distribution of media coverage by semester for various European policy topics from 2020 to 2023. Topics were identified through BERTopic analysis of news articles. Each color represents a distinct topic, and the area corresponds to the relative proportion of media coverage. The percentages sum to 100% for each semester. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/ber.12808)]

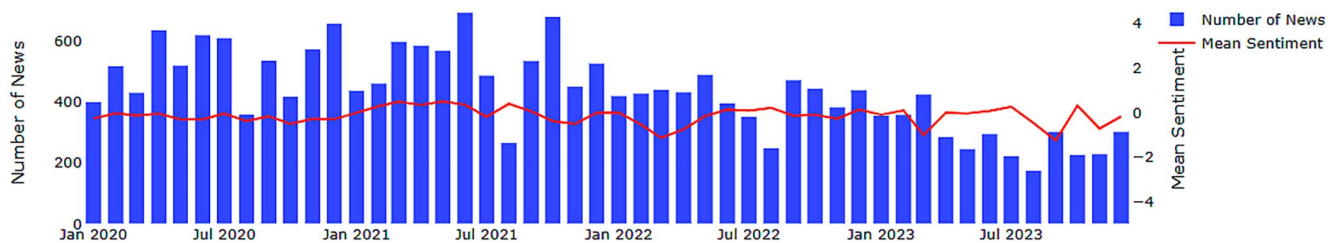


FIGURE 3 | Trends in media coverage volume and public sentiment over time (2020–2023). This figure displays the monthly number of news articles (blue bars, left y-axis) and the corresponding average sentiment score (red line, right y-axis) from January 2020 to December 2023. Sentiment scores range from -4 (very negative) to $+4$ (very positive) and were calculated using GDELT and BERTopic sentiment analysis tools. The trend illustrates fluctuations in both media coverage volume and public sentiment over time. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/ber.12808)]

period. The data generally reflect a stable yet negative sentiment, particularly evident when the mean sentiment line dips below zero. However, certain dates exhibit more pronounced negative and positive peaks. For instance, a notable negative peak in September 2023 stemmed from criticisms of the Greek government's response to the storm “Daniel” and its handling of disaster relief, including the perceived mismanagement of European funds. Conversely, positive sentiment surged in May 2021, driven by green innovations funded by the European Commission under the Green Pact, supporting initiatives like circular construction solutions and biodegradable packaging production.

The sentiment analysis often correlates negative news with corruption or fraud cases, as observed in March 2022. Instances include fraud accusations against former political figures and investigations into the mismanagement of EU funds. Figure 4 offers a comparative sentiment analysis across the previously identified 11 key EU policy topics. The evidence of Figure 1, which complements the findings from Table 3 and Figure 3, shows a spectrum of sentiments ranging from negative in political areas to highly positive in the energy, environment, and education sectors.

In Figure 5, we translate the average sentiment regarding the utilization of European funds into a map. The figure highlights

the notable differences in media perceptions across countries. The map categorizes countries based on their media sentiment: green indicates positive sentiment, red signifies negative sentiment, orange and yellow represent neutral to mildly positive or negative sentiments, respectively, and grey areas denote countries not being part of the EU.

Countries such as Denmark, Ireland, Italy, Malta, Portugal, and Romania exhibit a positive media sentiment towards European funds, suggesting a narrative aligned with effective fund utilization and perceived benefits from EU financial support. This positivity in media sentiment may reflect successful project implementations and a general public consensus that these funds are contributing to tangible improvements in national infrastructures and economies. On the other hand, nations like Hungary, Bulgaria, Poland, the Czech Republic, and Germany display predominantly negative media sentiment, often associated with scandals related to fraud, corruption, or controversial uses of European funds. This wide range of international differences in the public perception and media coverage of European funds calls for further attention. In turn, in the next section, we present the results of using BERTopic for topic extraction and combining with sentiment analysis.

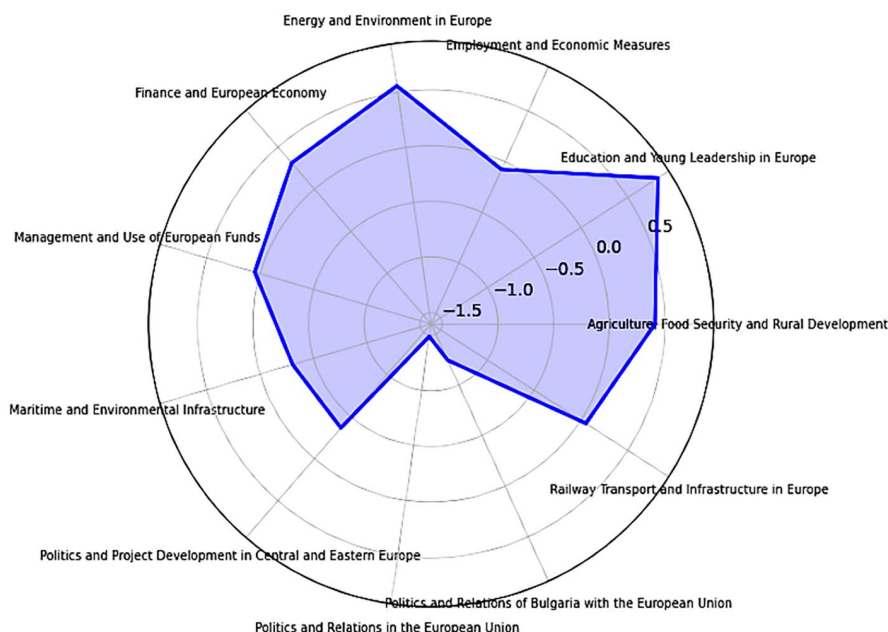


FIGURE 4 | Comparative Sentiment Scores Across Key EU Policy Topics (2020–2023). This radar chart illustrates the average sentiment scores for news articles discussing key European Union policy topics, analyzed using GDELT and BERTopic sentiment tools from 2020 to 2023. Sentiment scores range from -4 (very negative) to $+4$ (very positive). Topics closer to the center indicate more negative sentiment, while those farther from the center reflect more positive sentiment. This chart provides a comparative view of how sentiment varies across different policy areas. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

TABLE 3 | Correlations between news sentiment and public perception of the EU and European Parliament by topic.

Topic	Obs	D78	QA3
Topic 1: Project Development and Politics in Central and Eastern Europe	1047	-0.4479^{***}	-0.5298^{***}
Topic 2: Management and Use of European Funds	707	-0.1429^*	-0.2256^*
Topic 3: Finance and European Economy	449	-0.4395^{***}	-0.4598^{***}
Topic 4: Politics and Relations in the European Union	294	0.0208	-0.0174
Topic 5: Energy and Environment in Europe	194	-0.4846^{***}	-0.3914^*
Topic 6: Education and Young Leadership in Europe	124	-0.2870	-0.5909^{***}
Topic 7: Railway Transport and Infrastructure in Europe	182	-0.3250^*	-0.3031^*
Topic 8: Politics and Relations of Bulgaria with the European Union	90	0.0800	-0.1383
Topic 9: Agriculture, Food Security and Rural Development	120	-0.3701	-0.3673
Topic 10: Maritime and Environmental Infrastructure	117	0.4331	0.2012
Topic 11: Employment and Economic Measures	47	0.3380	0.2283
All	3371	-0.4271^{***}	-0.5390^{***}

Note: This table presents the correlation between sentiment scores derived from news articles and public perception metrics from the Eurobarometer survey conducted in September 2023. Question D78 refers to the general perception of the EU, while QA3 pertains to the perception of the European Parliament. A negative correlation indicates that a higher sentiment score in news is associated with a lower proportion of negative public responses. Significance levels are indicated as follows:

$^{***}p < 0.01$, $^{**}p < 0.05$, $^*p < 0.1$.

5.3 | Media Sentiment and Public Perception of EU Institutions

Based on the BERTopic and GDELT sentiment scores, we study the relationship between the overall sentiment score by topics and the responses from the Eurobarometer survey conducted in September 2023, preceding the 2024 European Elections². More specifically, we aim to check whether there is any connection

between public sentiment (or Euroscepticism, as reflected in the Eurobarometer survey) and media sentiment captured through the BERTopic and GDELT sentiment scores. We focus on the sentiment scores in relation to two key questions from the Eurobarometer survey³: respondents' general perception of the EU (D78) and their perception of the European Parliament (QA3)⁴. These questions are chosen because they measure the effectiveness and perception of EU-funded initiatives.

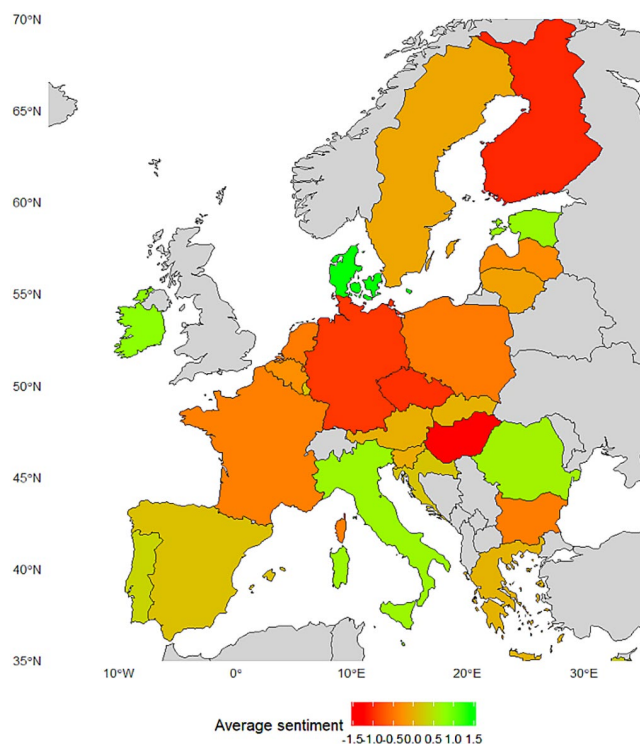


FIGURE 5 | Average media sentiment on the utilization of European Funds by country (2020–2023). This map illustrates the average sentiment scores of media articles discussing the utilization of European funds by country, analyzed using GDELT and BERTopic sentiment analysis tools from 2020 to 2023. Sentiment scores range from -4 (very negative) to $+4$ (very positive). Countries marked in red indicate more negative sentiment, while those in green reflect more positive sentiment. Gray represents countries not included in the analysis. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

The general perception addressed in question D78 provides insights into overall attitudes towards the EU as an entity, which can influence how EU initiatives, such as funding programs, are received by the public. Positive or negative sentiments in this area are likely to reflect broader trends in public opinion that impact the success and credibility of EU policies and programs. Similarly, the perception of the European Parliament (QA3) is an important indicator of public trust and support for EU legislative bodies, which play a significant role in the allocation and oversight of EU funds. Understanding the sentiment towards the European Parliament helps in assessing the public's confidence in the mechanisms that govern EU funds, thereby providing a clearer picture of the potential impact of media sentiment on public trust and engagement with EU initiatives.

Keeping this purpose in mind, we first analyze the correlation between the percentage of negative respondents for each country in 2023 and the average sentiment score 1 year before the study. The results are shown in Table 3. Overall, we find a significant and negative aggregated correlation between sentiment and the negative responses to D78 (-0.4271) and QA3 (-0.539). These findings suggest that, across all topics, higher media sentiment scores are generally correlated with a lower proportion of negative public responses regarding the EU and the European Parliament (i.e., a proxy for Euroscepticism). However, these

correlations reflect relationships, not causality. Therefore, we cannot assert whether positive media coverage improves public attitudes toward the EU and its institutions or whether media coverage merely reflects existing public sentiment about the EU in a given country.

Given the limited number of news articles for some topics, it is difficult to draw definitive conclusions for each specific topic. However, Table 3 reveals general trends. For instance, topics like “Project Development and Politics in Central and Eastern Europe”, “Finance and European Economy”, and “Energy and Environment in Europe” exhibit strong negative correlations with both D78 and QA3, indicating that positive media sentiment in these areas is linked to fewer negative public perceptions. Conversely, topics such as “Maritime and Environmental Infrastructure” and “Employment and Economic Measures” show positive but statistically insignificant correlations, likely due to the low number of observations.

To complement the correlation analysis, we conduct regression analyses to more robustly examine the relationship between media sentiment and public perception. The results are presented in Table 4, which aggregates the regressions for all topics. The findings reinforce the trends observed in the correlation analysis: higher media sentiment is significantly associated with fewer negative responses to D78 and QA3. Specifically, for D78, the coefficient for sentiment is -3.1360 (p -value < 0.1), and for QA3, the coefficient is -4.4662 (p -value < 0.05). These results suggest that improved media sentiment can reduce Euroscepticism and negative perceptions of the European Parliament. The intercepts (16.2278 for D78 and 17.0309 for QA3, both p -value < 0.01) suggest a baseline level of negative perceptions in the absence of media influence, highlighting the critical role of media in shaping public attitudes. These values indicate the influence of unmodeled factors, such as local economic conditions (e.g., unemployment and inequality), national political contexts (e.g., the presence of populist or anti-EU parties), and cultural perceptions like fears of losing sovereignty. While positive media sentiment helps reduce negativity, these deeper structural issues continue to impact public attitudes. The R-squared values (0.1484 for D78 and 0.261 for QA3) indicate that, while media sentiment is a significant predictor, other factors also contribute to influencing public perceptions.

In conclusion, while the correlations in Table 3 provide an initial understanding of the relationship between media sentiment and public perception, the regressions in Table 4 offer a more in-depth and statistically robust analysis. Together, they emphasize the significance of media sentiment in shaping public attitudes toward the EU and its institutions, particularly regarding topics related to finance, energy, and political development.

6 | Discussion and Conclusions

The launch of the NGEU program has implied a billionaire Recovery and Resilience Facility to provide grants and loans to support reforms and investments in the EU Member States. As explained by European authorities, NGEU is not only

TABLE 4 | Aggregate regression results of public perception of the EU and European Parliament on sentiment in news.

	D78: general perception of the EU	QA3: perception of the European parliament
Sentiment	−3.1360* (1.355)	−4.4662** (1.4247)
Constant	16.2278*** (0.9196)	17.0309*** −0.9668
R ²	0.1484	0.261

Note: Coefficients (standard errors) of the aggregate regression of public perception metrics from the Eurobarometer survey (questions D78 and QA3) with sentiment scores extracted from news articles. A negative correlation indicates that a higher sentiment score in news articles is associated with a lower proportion of negative public responses. Significance levels are indicated as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

a recovery plan but also an attempt to transform the whole European economy and society. Thus, it is expected to have far-reaching implications in the life and sentiments of the European population.

Consistent with this view of the NGEU program, we examine the public perception of the use of European funds. Our underlying aim is to enhance the transparency, accountability, and overall legitimacy of EU funding mechanisms. Since this legitimacy is closely tied to the extent to which European citizens perceive funds and financial facilities as effective tools for supporting the Union, this study offers an analysis of the events and circumstances that influence sentiment toward European funds.

We analyse 31,570 media articles published in all the countries of the EU between January 1, 2020 and December 31, 2023. To deal with such an impressive amount of information, we apply an advanced topic modeling technique called BERTopic. We first find that public discussions related to European funds can be categorized into 11 distinct topics, ranging from project developments in Central and Eastern Europe to employment and economic measures.

On a descriptive basis, we run two analyses: a longitudinal and a geographical one. In terms of time evolution, we find that during the period studied, the public sentiment towards European funds is generally stable yet negative, with notable fluctuations corresponding to specific events. Significant negative peaks in sentiment are observed during periods associated with corruption scandals or perceived mismanagement of funds, highlighting the critical role of transparency and accountability in shaping public trust in EU initiatives. Conversely, positive sentiment surges are associated with successful project implementations and initiatives aligned with public interests, such as green innovations under the Green Pact.

Geographically, we also find significant variations in media coverage and sentiment across EU member states. Countries like Greece, Croatia, and Bulgaria exhibit high media coverage and more negative sentiment, likely reflecting ongoing challenges in

fund management and political dynamics. In contrast, nations such as Denmark, Ireland, and Portugal display more positive media sentiments, suggesting better-perceived effectiveness and benefits of EU funds. These findings indicate that the perception and utilization of European funds are context-specific, influenced by the unique socio-political landscapes of each member state.

Our explanatory analysis shows a correlation between media sentiment and public sentiment. We find a negative relationship between media sentiment scores and the proportion of negative answers concerning the EU and the European Parliament (i.e., a proxy for Euroscepticism). This result suggests that effective communication strategies and successful project implementations enhance public perceptions of EU initiatives. The visibility and positive portrayal of EU-funded projects in the media contribute to fostering a sense of belonging to the European community. To some extent, more positive media sentiment towards European funds could translate into a greater perceived legitimacy of EU governance. Given the relevance of visibility and positive sentiment towards EU funds for public support, our findings underscore the need for robust administrative frameworks and monitoring mechanisms to ensure the effective use and communication of EU funds.

Our findings offer valuable insights for European authorities and public administrations. We identify a generally stable yet negative public sentiment toward European funds. Therefore, it is crucial for authorities to acknowledge this sentiment and develop a communication strategy that emphasizes the positive and impactful role of European funds in fostering cohesion and economic development. Furthermore, given the significant association between corruption scandals and negative sentiment peaks, new policies aimed at enhancing accountability in the use of funds should be implemented. Another important implication of our research lies in the context-specific perception of fund utilization. Accordingly, communication strategies should be tailored to the unique circumstances of each country.

Our paper has some limitations that could serve as the basis for future research. We deliberately focus on the specific timeframe of 2020–2023. Although this period allows us to study the role of European funds in response to the COVID-19 pandemic, it may be too short to capture long-term trends and shifts in public perception of European funds. Additionally, the exclusion of non-European media may result in incomplete coverage of news. Finally, while we identify a relationship between media tone and public sentiment, a more in-depth study of the direction of causality would be valuable for a deeper understanding of the characteristics of European funds that can enhance public approval and legitimacy of the NGEU funds.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The authors have nothing to report.

Endnotes

¹ The population has been measured at the end of 2023.

² <https://europa.eu/eurobarometer/surveys/detail/3152> (accessed in January, 2025).

³ Eurobarometer is the polling instrument used by the European Commission, the European Parliament and other EU institutions and agencies to monitor regularly the state of public opinion in Europe on issues related to the EU as well as attitudes on subjects of political or social nature. We utilize this survey because it is endorsed by European institutions, and focuses on public opinion regarding the EU, including political and social issues rather than values or cultural matters.

⁴ The exact wording of these questions is as follows: “In general, does the EU conjure up for you a very positive, fairly positive, neutral, fairly negative or very negative image?” (D78) and “In general, do you have a very positive, fairly positive, neutral or very negative image of the European Parliament?” (QA3).

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Appendix A

GDELT Tone Score: Most Positive and Negative News Articles by Topic

Topic label	Headlines and news links (translated to English)	Country origin	Date	Score tone
Agriculture, Food Security and Rural Development	Hundreds of Workers Exploited in Agriculture Discovered (https://www.maremanews.it/index.php/cronaca/103368-livor-no-scoperti-centinaia-di-lavoratori-sfruttati-in-agricoltura)	Italy	04/05/2022	-77,778
Education and Young Leadership in Europe	EU Fury Over Demolition of School in the West Bank (https://www.riknews.com.cy/article/2023/12/6/orge-tes-ee-gia-katedaphise-skholeiou-sten-dutike-okhthe)	Cyprus	06/12/2023	-92,593
Employment and Economic Measures	Shelters for Violence Victims Inaccessible to Women with Disabilities (https://vijesti.hrt.hr/hrvatska/sklonista-za-zrtve-nasilja-nepri-stupacna-zenama-s-invaliditetom-10460568)	Croatia	24/11/2022	-86,957
Energy and Environment in Europe	Green Management and Environment to Enter the Election Agenda (https://www.newsbomb.gr/bomber/apopseis/story/1432110/prasi-ni-diaxeirisi-kai-perivallon-na-boun-stin-atzenta-ton-eklogon)	Greece	29/05/2023	-11,4437
Finance and European Economy	Controversial Businessman Who Planned to Build a Cannabis Processing Plant Accused of Fraud and Money Laundering (https://www.vecernji.hr/vijesti/kontroverzni-biznismen-koji-je-planirao-graditi-tvornicu-za-preradu-kanabisa-osumnjicen-za-prijevaru-i-pranje-novca-1617497)	Croatia	15/09/2022	-11,0345
Management and Use of European Funds	United States Alert on Countries at Risk Including 5 European Countries (https://www.zazoom.it/2021-12-07/covid-allerta-usa-su-paesi-a-rischio-anche-5-europei/9962432/)	Italy	07/12/2021	-11,5702
Maritime and Environmental Infrastructure	Petsas to Tsipras: The Mistake is Not Knowing That There are Maritime Borders (https://www.protothema.gr/politics/article/964836/apadisi-steli-ou-petsa-se-alexi-tsipra-gia-ti-gafa-olkis/)	Greece	15/01/2020	-83,333
Project Developments in Central and Eastern Europe	Everything You Need to Know About the Scandal Shaking Croatia: Preserving Chairs, Spoken Lies, Announcements of Dismissals... (https://www.jutarnji.hr/vijesti/hrvatska/sve-sto-morate-znati-o-skandalu-koji-trese-hrvatsku-cuvanje-fotelja-izgovorene-lazi-najav-e-smjena-15126878)	Croatia	30/11/2021	-12,0879
Politics and Relations in the European Union	Warsaw Will Oppose Any EU Action Aimed at Depriving Hungary of European Funds (https://www.rtf.be/article/varsovie-s-opposera-a-toute-demarche-de-l-ue-visant-a-priver-la-hongrie-de-fonds-europeens-11069361)	Belgium	19/09/2022	-11,5789
Politics and Relations of Bulgaria with the European Union	State Department Points Out Bulgaria's Old Weaknesses (https://news.bg/politics/darzhavniyat-departament-posochi-stari-te-slabosti-na-balgariya.html)	Bulgaria	20/03/2023	-11,9266
Railway Transport and Infrastructure in Europe	In Response to Reports of Bribery in the Construction of the Most Expensive Railway Station, Railway Responds with Dismissals (https://www.poslovni.hr/svijet/na-prijave-o-mitu-u-gradnji-najsk-upljeg-kolodvora-zeljeznica-odgovorila-otkazima-4314281)	Croatia	27/11/2021	-68,615
Topic Label	Headlines (Translated to English)	Country Origin	Date	Score tone
Agriculture, Food Security and Rural Development	Time Spent in the Wild Leads to Increased Income and Reduced Health Costs (https://www.dnevnik.bg/zelen/2022/08/30/4384955_vremeto_sred_divata_priroda_vodi_do_poveche_prihodi_i/)	Bulgaria	30/08/2022	7309
Education and Young Leadership in Europe	Medimurje Foundation Dr. Vinko Žganec Rewards Outstanding Students, Graduates, and Postgraduates (https://regionalni.com/medimurska-zaklada-dr-vinko-zganec-nagraduje-izvrsne-ucenike-studente-i-poslijediplomante/)	Croatia	03/10/2023	77,895

APPENDIX A | (Continued)

Topic Label	Headlines (Translated to English)	Country Origin	Date	Score tone
Employment and Economic Measures	From Them We Should Learn: Education Reform Increased Their Work Skills by 15%, and Salaries by 6% (https://www.rtl.hr/vijesti-hr/novosti/svijet/3632281/od-njih-bismo-trebali-uciti-reforma-obrazovanja-povecala-im-je-radne-vjestine-za-15-a-place-za-6-posto/)	Croatia	19/01/2020	60,714
Energy and Environment in Europe	Mobility: The Importance of Bicycles for Sustainable and Smart Mobility (https://www.lesoir.be/446239/article/2022-06-03/mobilite-limpor-tance-du-velo-pour-une-mobilite-durable-et-intelligente)	Belgium	03/06/2022	77,206
Finance and European Economy	Parliamentary Budget Committee Approves Two Ratifications (https://bnr.bg/post/101682730/budjetnata-komisija-v-parlamentna-odobri-dve-ratifikacii)	Bulgaria	27/07/2022	92,593
Management and Use of European Funds	More money for protecting citizens, supporting the economy, local development, and attracting European funds (https://www.finanznachrichten.de/nachrichten-2021-12/54688938-mbwl-international-wins-european-pensions-technology-provider-of-the-year-award-008.htm)	Romania	24/08/2022	95,238
Maritime and Environmental Infrastructure	Completion of the Eastern Shore Expansion in Split, Worth 42.6 Million Kuna (https://www.tportal.hr/vijesti/clanak/u-splitu-zavr-sena-dogradnja-istocne-obale-vrijedna-42-6-milijuna-kuna-20220707)	Croatia	07/07/2022	69,231
Project Developments in Central and Eastern Europe	Opolanin Ambassador of the European Vocational Skills Week Education (https://www.pulshr.pl/edukacja/opolanin-ambasadorem-europejskiego-tygodnia-umiejetnosci-zawodowych,75914.html)	Poland	25/08/2020	10,5263
Politics and Relations in the European Union	Slovakia Must Utilize the Potential of the Danube Strategy (https://www.teraz.sk/ekonomika/v-remisova-slovensko-musi-vyuzit/502162-clanok.html)	Slovak Republic	22/10/2020	10,303
Politics and Relations of Bulgaria with the European Union	Bulgaria Continues Cooperation with EBRD on European Projects (https://www.banker.bg/upravljenje-i-biznes/read/bulgariia-produ-ljava-sutrudnichestvoto-s-ebvr-po-evroproekti)	Bulgaria	27/05/2022	84,967
Railway Transport and Infrastructure in Europe	250 Million Kuna Invested in Zadar's Port Infrastructure (https://www.zadarskilist.hr/clanci/18032021/u-zadarsku-lucku-infrastrukturu-ulaze-se-250-milijuna-kuna)	Croatia	18/03/2021	6314