

MEDIA VISIBILITY OF THE MAIN RISKS TO BULGARIA'S DEVELOPMENT

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Abstract: This study examines the extent and nature of media visibility of the main risks affecting the socio-economic development of Bulgaria. Using the Media Visibility Index (MVI) as an analytical tool, the study assesses how often and with what intensity risk-related topics are covered in the national and regional media. Data from 2024–2025 were analyzed using quantitative and qualitative approaches supported by artificial intelligence processing using ChatGPT-5. The findings show that while Bulgarian media cover most of the significant risks – such as cybersecurity threats, corruption, inflation and political instability – coverage remains largely descriptive rather than analytical. Furthermore, topics such as innovation, aging infrastructure and environmental sustainability are underrepresented. The study highlights the need to improve media independence, strengthen analytical journalism and promote media literacy as key factors for strengthening the democratic capacity of the public sphere. The results of the study can be used to compare media coverage of risks with their presentation in national strategic development documents and the preventive measures outlined therein, as well as to assess the adequate position of the media on the significant problems facing society.

Keywords: Bulgaria, media visibility, risk analysis, Media Visibility Index (MVI)

Field: Social Sciences

1. INTRODUCTION

The existence and functioning of any organization—whether business, public, or non-governmental—is inevitably accompanied by risks that may hinder its normal development. This fully applies to states as well, which constitute the political form of social organization with defined territory and established institutions of executive power. These risks are both officially and unofficially discussed within society and are the focus of attention for politicians and public administration, who set specific goals to achieve and have an interest in ensuring that these goals are not compromised by the occurrence of risk events.

Risks faced by the state are often the subject of discussion in the media, whose role is to inform the public and facilitate social communication among its components. Unlike state authorities, which are expected to anticipate risks—that is, to play a preventive role—the media usually report risk events after they have occurred.

In 2025, Bulgarian media have reflected a wide spectrum of societal issues, with dominant themes including the state of the media environment, economic challenges, social inequality, and political instability. Content analysis of the media thus far reveals deeply rooted problems and new challenges confronting the country.

When discussing risks, one must keep in mind the basic definition of risk, which includes three essential elements: risk is negative, probabilistic, and future-oriented. Since the external environment—including political, economic, and social dimensions—as well as internal processes have become increasingly dynamic, perceptions of potential risks affecting the country have also changed rapidly. Hence, regular analyses and assessments of risks are necessary. One of the main information sources for such analyses is media publications, which reflect social processes and public opinions concerning risk events that have already occurred or might occur in the future.

2. MATERIALS AND METHODS

To analyze the main media publications related to the risks specific to Bulgaria, we consulted the artificial intelligence chatbot ChatGPT 5, asking which risks had been most frequently covered during the year. The resulting list was as follows:

- **Economic slowdown and macro-uncertainty** — weak external demand, high energy costs; businesses rank this as the primary risk (Allianz, 2025).
- **Inflation, price increases, and consumer environment** — notable surges in food prices and pressure on households.
- **Regulatory and tax uncertainty.**
- **Access to financing and high interest rates.**

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- **Corruption and the shadow economy** — a business environment exposed to risks from the informal sector and non-transparent practices.
- **Debt pressure and public finances.**
- **Accession to the Eurozone / economic and price convergence** — potential short-term tensions.
- **Energy and infrastructure vulnerability** — transition from coal, high costs, and risk of supply disruptions.
- **Ageing infrastructure and declining service quality** — transport, healthcare, and utilities in need of modernization.
- **Cybersecurity and digital threats** — data leaks and attacks on companies or institutions (Tanev, 2024).
- **Technological backwardness and low digitalization.**
- **Dependence on imported raw materials and energy.**
- **Insufficient innovation activity.**
- **Problems with transport logistics and connectivity.**
- **Climate change and environmental risks** — forest fires, droughts, lack of infrastructural adaptation (BGGlobal, 2025; European Environment Agency, 2025).
- **Air and water pollution.**
- **Waste management and lack of recycling.**
- **Natural disasters and insufficient preparedness.**
- **Loss of biodiversity and forest fires.**
- **Demographic crisis and labour shortage** — ageing population, mass emigration, insufficient retention of skilled workers (On Air Bulgaria, 2025).
- **Social inequality and poverty.**
- **Healthcare system and access to services.**
- **Education and the labour market.**
- **Migration pressure and integration** (Ministry of Interior, 2025).
- **Mental health and public stress.**
- **Political fragmentation and governance instability** — low legitimacy of the political elite, tension surrounding the model of governance (Mihaylova, 2024; Veliko Tarnovo Municipal Radio, 2024).
- **Corruption pressure on institutions.**
- **Legislative and regulatory changes / legal uncertainty** — ranked among the main risks by business (Allianz, 2025).
- **Media environment, freedom of speech, and pluralism** — strong media pressure, concentration of ownership, and risks to independence (International Press Institute, 2024).
- **Security and public order.**
- **Geopolitical uncertainty** (Stoyanova, 2025).
- **Hybrid threats and disinformation.**

The large number of identified risks implies the need for their assessment and ranking according to the widely used risk-matrix method, based on probability of occurrence and impact intensity. This enables the positioning of each risk within a two-dimensional matrix, according to these criteria.

Another instrument used in the present study is the Media Visibility Index (MVI), designed to measure the frequency with which a particular risk appears in media publications. The MVI is a metric frequently applied in public relations, marketing, and communication research to quantify how—and to what extent—a given organization, individual, topic, problem, or event is represented in the media. Consequently, MVI computation has become a popular tool for measuring mention frequency across media content. It also allows for the comparison of visibility among different electoral committees during parliamentary campaigns (Klepka, 2022).

Rajeshwari Matori, in a 2025 article, examined research visibility and proposed approaches and tools to enhance the accessibility and prominence of academic works (Matoli, 2025). Similarly, R. T. Fitzgerald and A. Radmanesh, in their review *Social Media and Research Visibility*, discussed how social media platforms influence the visibility of academic publications (Fitzgerald, 2025).

Five Italian authors, in their article *Revealing the Secret Power: How Algorithms Can Influence Content Visibility on Twitter/X*, explored the impact of algorithms on social-media content visibility and proposed a quantitative approach to measuring it (Galeazzi et al., 2025).

Familiarity with MVI methodology enables its adaptation for studies examining the media visibility of problems and risks affecting organizations or entire states, with modifications that exclude positive publications.

Although no universal standard exists, MVI is generally calculated as a combination of quantitative and qualitative factors. The basic formula is as follows:

$$MVI = (W1Q + W2A + W3S + W4T) / N$$

where:

- **MVI** – Media Visibility Index;
- **Q (Quantity)** – number of publications, mentions, or broadcasts;
- **A (Audience Reach)** – total size of the audience (readers, viewers, listeners, impressions);
- **S (Sentiment)** – tone of publications (positive / neutral / negative), usually on a scale from -1 to +1;
- **T (Tier / Importance)** – media weight (e.g., a national TV channel carries greater weight than a local blog);
- **W₁–W₄** – weights assigned to each parameter according to analytical priorities (e.g., 0.4 for Q, 0.3 for A, etc.);
- **N** – normalizing coefficient (e.g., maximum possible score), yielding an index scaled from 0 to 100.

Calculation algorithm:

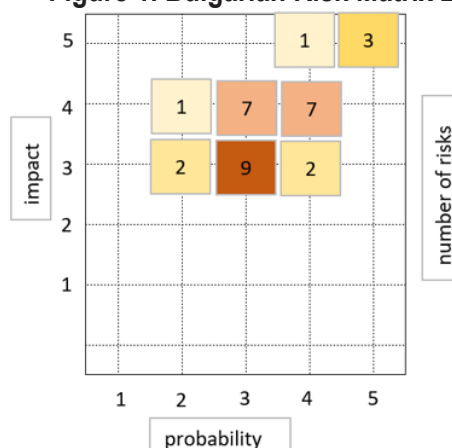
1. Collect all publications for a given period (e.g., one month).
2. Evaluate tone for each publication:
 - o Positive → +1
 - o Neutral → 0
 - o Negative → -1
3. Determine audience reach (from media data or estimated impressions).
4. Assign media weight:
 - o National → 3 points
 - o Regional → 2 points
 - o Online blog → 1 point
5. Compute a combined score per publication:

$$\text{Score} = \text{Tone} \times \text{Reach} \times \text{Weight}$$
6. Sum all scores and normalize (e.g., base 100) to obtain the final index:
 - o **100 points** → excellent visibility (high frequency, broad reach, positive tone)
 - o **50 points** → medium visibility
 - o **0 points** → no significant media activity or negative balance.

3. RESULTS

Based on the evaluation conducted through ChatGPT-5, the identified risks were scored according to probability of occurrence (on a 1-to-5 scale) and impact strength (also 1-to-5). The resulting risks were grouped into eight categories, as illustrated in the Risk Matrix below. The numbers in the cells indicate the count of risks falling within the respective scale of probability and impact, while darker zones reflect a higher concentration of risks.

Figure 1. Bulgarian Risk Matrix 2025



Source: Author's own calculations

Group analysis

- **Highest risk (5/5):** economic slowdown, demographic collapse, corruption.
- **High probability (4):** inflation, energy, political instability, climate change.
- **Medium risk (3):** infrastructure, education, migration, judiciary system.
- **Emerging risks:** mental health, hybrid threats, biodiversity.

The collected data, derived from current publications and reports, made it possible to compute an approximate "Media Visibility Index" (MVI) for 2024 and 2025. This index ranks the risks according to how frequently and intensively they appeared in Bulgarian media during the two years.

The calculations—again performed with the assistance of ChatGPT-5—are presented in the following table.

The data indicate that the average MVI across the 32 identified risks was 48 in 2024 and 56 in 2025, suggesting that these topics were covered more frequently in 2025 than in the previous year. Overall media attention to risks increased by approximately eight points, primarily due to intensified coverage of issues such as Eurozone accession, energy, climate-related events, media freedom, and political instability.

The methodology for calculating the MVI (as presented in Section 2) accounts for both positive and negative as well as neutral publications. However, since media reports concerning current problems or potential risks are rarely positive or neutral in nature, the formula was modified for the purposes of this study by excluding positive and neutral publications. Additionally, major national media outlets—BNR, BNT, bTV, and Nova TV—were assigned a weight of 2, while all other media outlets were assigned a weight of 1.

Thus, the formula for the Adjusted Media Visibility Index ($MVI_{a,k}$) was defined as follows:

$MVI_{a,k} = 2 \times (\text{negative publications from BNR, BNT, bTV, NovaTV}) + 1 \times (\text{negative publications from other media})$

Out of the 32 risks, the Top 10 most significant risks according to the adjusted index are presented in the next table.

Table 1. Media Visibility Index (MVI) of the identified risks, 2024–2025 and the Top 10 risks ranked by Adjusted Media Visibility Index, 2025

№	Risk	2024	2025	Rank	Risk	MVI
1	Corruption and shadow economy	80	80	1	Cybersecurity and digital threats	80
2	Eurozone / economic and price convergence	50	80	2	Economic slowdown and macro-uncertainty	80
3	Energy and infrastructure vulnerability	50	80	3	Inflation, prices, and consumer environment	60
4	Climate change and environmental risks	50	80	4	Corruption and shadow economy	60
5	Natural disasters and preparedness	50	80	5	Healthcare system and access to services	40
6	Biodiversity and forest fires	50	80	6	Climate change and environmental risks	40
7	Political fragmentation and instability	80	80	7	Energy and infrastructure vulnerability	30
8	Corruption pressure on institutions	80	80	8	Transport logistics and connectivity issues	30
9	Media environment and freedom of speech	50	80	9	Air and water pollution	30
10	Economic slowdown and macro-uncertainty	50	50	10	Migration pressure and integration	30
11	Inflation, prices, and consumption	80	50			
12	Regulatory and tax uncertainty	50	50			
13	Access to financing and high interest rates	50	50			
14	Debt pressure and public finances	20	50			
15	Cybersecurity and digital threats	50	50			
16	Dependence on imported raw materials/energy	50	50			
17	Air and water pollution	50	50			
18	Demographic crisis and labour shortage	50	50			
19	Social inequality and poverty	50	50			
20	Healthcare system and access	50	50			
21	Education and labour market	50	50			
22	Legislative/regulatory changes	50	50			
23	Security and public order	50	50			
24	Geopolitical uncertainty	50	50			
25	Hybrid threats and disinformation	50	50			
26	Ageing infrastructure and services	20	20			
27	Technological backwardness, digitalization	20	20			
28	Insufficient innovation activity	20	20			
29	Transport logistics and connectivity	20	20			
30	Waste and recycling	20	20			
31	Migration pressure and integration	20	20			
32	Mental health and public stress	20	20			

Source: Author's own calculations based on media data provided by ChatGPT-5.

4. DISCUSSIONS

It can be concluded that the Bulgarian media have reflected the major risks that occurred throughout the year, yet mainly in an informative rather than analytical manner. Indeed, the primary function of the media is to inform rather than to conduct scientific analysis. Nevertheless, one should not forget that the media are often referred to as the “fourth estate”, possessing the capacity to reinforce or challenge the authority of administrative and bureaucratic power.

According to Reporters Without Borders (RSF), in its World Press Freedom Index 2025, Bulgaria ranks 70th among 180 countries, marking a decline from the previous year (Toncheva, 2025). The analysis emphasizes that press freedom in Bulgaria remains unstable, and the country continues to occupy one of the lowest positions within the European Union.

Bulgaria's performance is also unsatisfactory regarding the Media Literacy Index, as presented in the 2023 report of the Open Society Institute – Sofia. The report places Bulgaria in the fourth (penultimate) cluster, together with Serbia, Moldova, Montenegro, Romania, and Turkey. The top-performing countries are the Scandinavian states, along with Canada and Switzerland, while Bosnia and Herzegovina, Albania, North Macedonia, Kosovo, and Georgia occupy the last positions.

The index is based on indicators of media freedom (2), education (4), trust (1), and e-participation (1). As the authors note, according to the adopted methodology, “The Media Literacy Index still prioritizes education over regulation, yet regulation appears to be an inseparable part of the solution to challenges related to disinformation, since educational approaches take time and can only work when combined with other measures.” (Lesenski, 2023).

In other words, education is a crucial factor in distinguishing truth from falsehood. However, when low levels of education coincide with a lack of media freedom, the situation becomes genuinely alarming. The combination of these two deficits creates fertile ground for manipulation, disinformation, and diminished civic capacity to critically assess information.

5. CONCLUSIONS

Despite certain nuances in the identification of risks discussed in the Bulgarian media, these risks tend to concentrate around several core thematic areas. For instance, issues related to cybersecurity and digital threats, economic slowdown, inflation, corruption, problems in the healthcare system, climate change, air and water pollution, and migration pressure represent persistent and recurring topics within media coverage.

Conversely, the media have devoted considerably less attention to risks such as debt pressure and public finances—topics typically discussed only during the adoption of new budgets—ageing infrastructure and service quality (including transport, healthcare, and utilities requiring modernization), and dependence on imported raw materials and energy, which are mentioned mainly in connection with international developments rather than as elements of a long-term national strategy. Similarly, insufficient innovation activity and technological lag, waste management and lack of recycling, as well as natural disasters, are discussed primarily after crises occur, rather than in the context of prevention and preparedness.

Social inequality and poverty, the linkage between education and the labour market, and the media environment, freedom of speech, and pluralism also receive limited analytical coverage. In these cases, media pressure, ownership concentration, and the threat to editorial independence are frequently present but insufficiently explored.

The underlying reason for the avoidance of such themes may lie in the risk of political or ethnic misinterpretation, or the potential for certain publications to be perceived as “politically incorrect,” thereby exposing journalists or media outlets to undesirable consequences from those in power. As a result, many social problems are addressed only after the occurrence of negative events, rather than through proactive prevention and policy critique.

This reactive pattern leads to the public impression that the damages and casualties resulting from natural disasters are solely caused by natural factors rather than by poor engineering decisions; that the numerous victims of road accidents are the fault of drivers alone, not of inadequate road infrastructure; and that the economic losses stemming from certain European Commission decisions are seldom analyzed in depth. Likewise, little attention is paid to evaluating the actual impact of EU-funded projects aimed at the social inclusion of marginalized groups.

The media often prefer to cover corruption cases only after court rulings are issued rather than by giving voice to affected individuals. This results in a clear discrepancy between the presumption of corruption and the existence of proven corruption.

Organizations such as Transparency International, which measure the Corruption Perception Index (CPI), report worsening levels for Bulgaria (Transparency International, 2025). Yet, despite these indicators, there remain few or no convicted individuals, and consequently, limited media commentary on accountability and enforcement.

In summary, while Bulgarian media succeed in reflecting major national risks, their coverage remains episodic and reactive, with insufficient analytical depth or focus on long-term structural solutions. Strengthening media independence, fostering public trust, and improving civic education are therefore key prerequisites for enhancing the media's capacity to function as a genuine guardian of democratic accountability.

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