







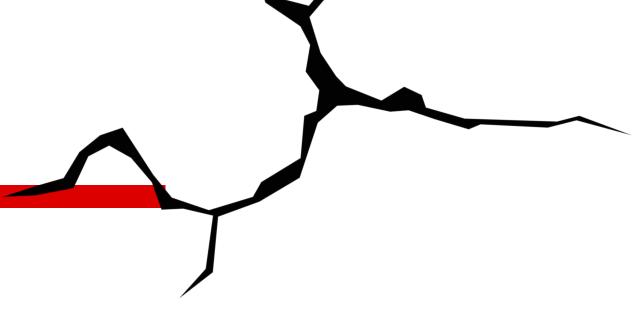


Shaping Economic Sustainability in Crisis: Linguistic and Visual Narratives in Polish Media Amid the Russian-Ukrainian Conflict

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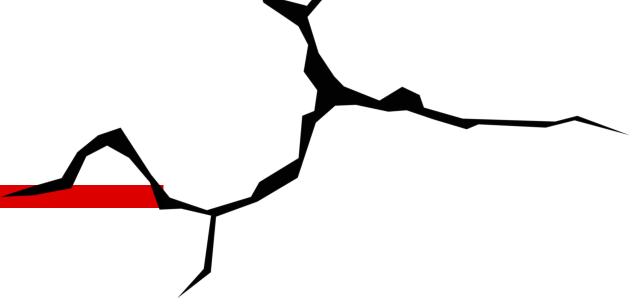
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Introduction



• The role of economic sustainability during wartime is to ensure that a nation or <u>region</u> can maintain essential economic functions, support its population, and prepare for long-term recovery despite the disruptions and pressures caused by armed conflict.

Research Design



• A mixed-methods approach combining quantitative content analysis and qualitative framing analysis was employed to examine how Polish business media framed the economic sustainability in the Russia-Ukraine conflict (Feb 2022 – Jun 2024).

Corpus Selection

- A corpus of 395 articles examining the economic and business sustainability of the Ukrainian-Russian conflict was compiled from four widely circulated Polish business magazines, spanning a 28-month period from February 2022 to June 2024.
- Articles were included if they focused on macro- or microeconomic themes (e.g. energy market, international trade, labour, inflation, etc.).
- Political, military, or humanitarian articles without direct economic relevance were excluded.



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Eraming and Coding Framework

- Based on Entman's (1993) four framing functions and Van Gorp's (2007) concept of "frame packages".
- Each headline was manually coded for:
 - 1. Economic sector/domain (e.g., energy, finance, labour, TSL, etc.).
- 2. Sentiment orientation (positive, negative, neutral, ambivalent), using a 4-point scale.

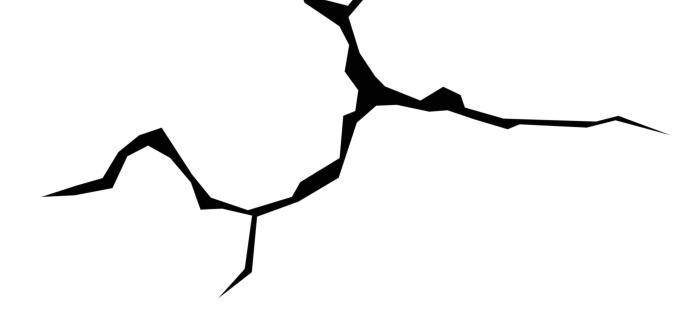
Manual Sentiment Analysis

- wing established affective framing
- Conducted by **two independent coders** following established affective framing guidelines.
- Intercoder reliability was assessed with **Cohen's Kappa = 0.87**.
- Discrepancies were resolved through contextual interpretation and discussion.

Longitudinal Analysis and Frame Consistency Check

- Tracked quarterly sentiment shifts across 2022, 2023, and early 2024.
- Analyzed correlations between major events (e.g., sanctions, refugee influx, energy crises) and changes in media sentiment.
- Cross-outlet consistency was assessed to ensure thematic coherence and detect potential bias or divergence across media sources

Methodological Limitations



- Reliance on headlines only, limiting contextual depth.
- Focus restricted to **Polish business media**—no international comparison.
- Potential for human coder bias, despite strong reliability metrics.
- Recommends future use of full-text analysis and hybrid manual-AI methods for increased accuracy.

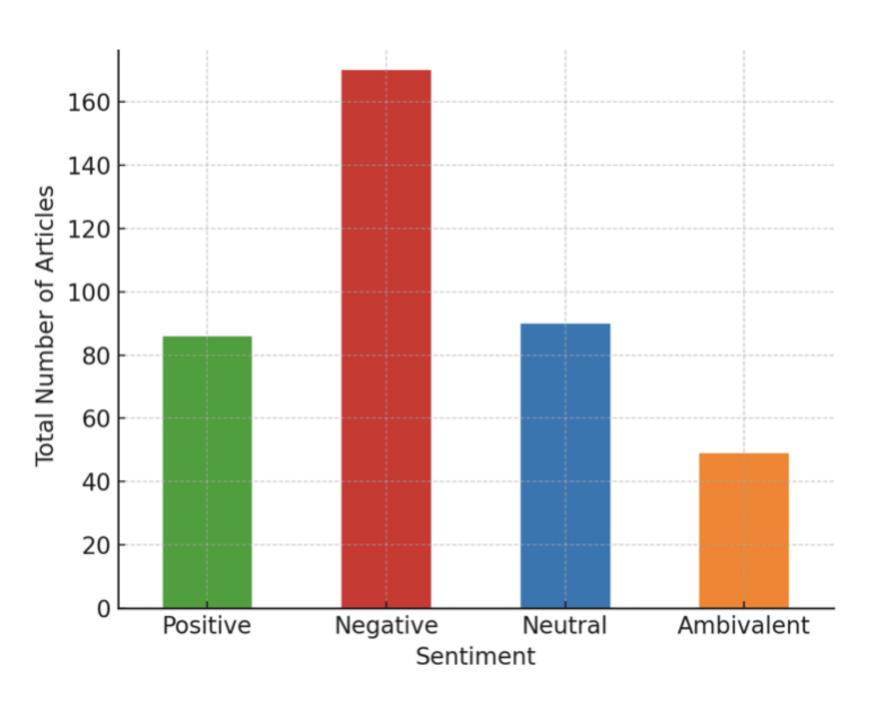
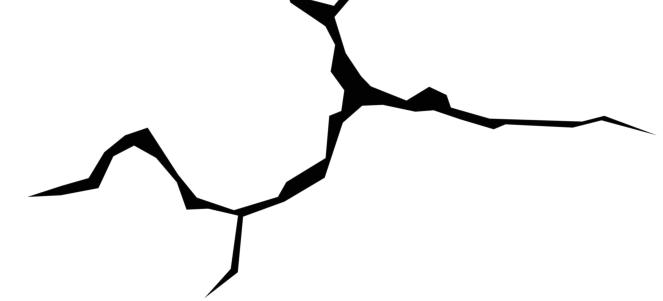


Figure 1. Overall Sentiment Distribution of Headlines



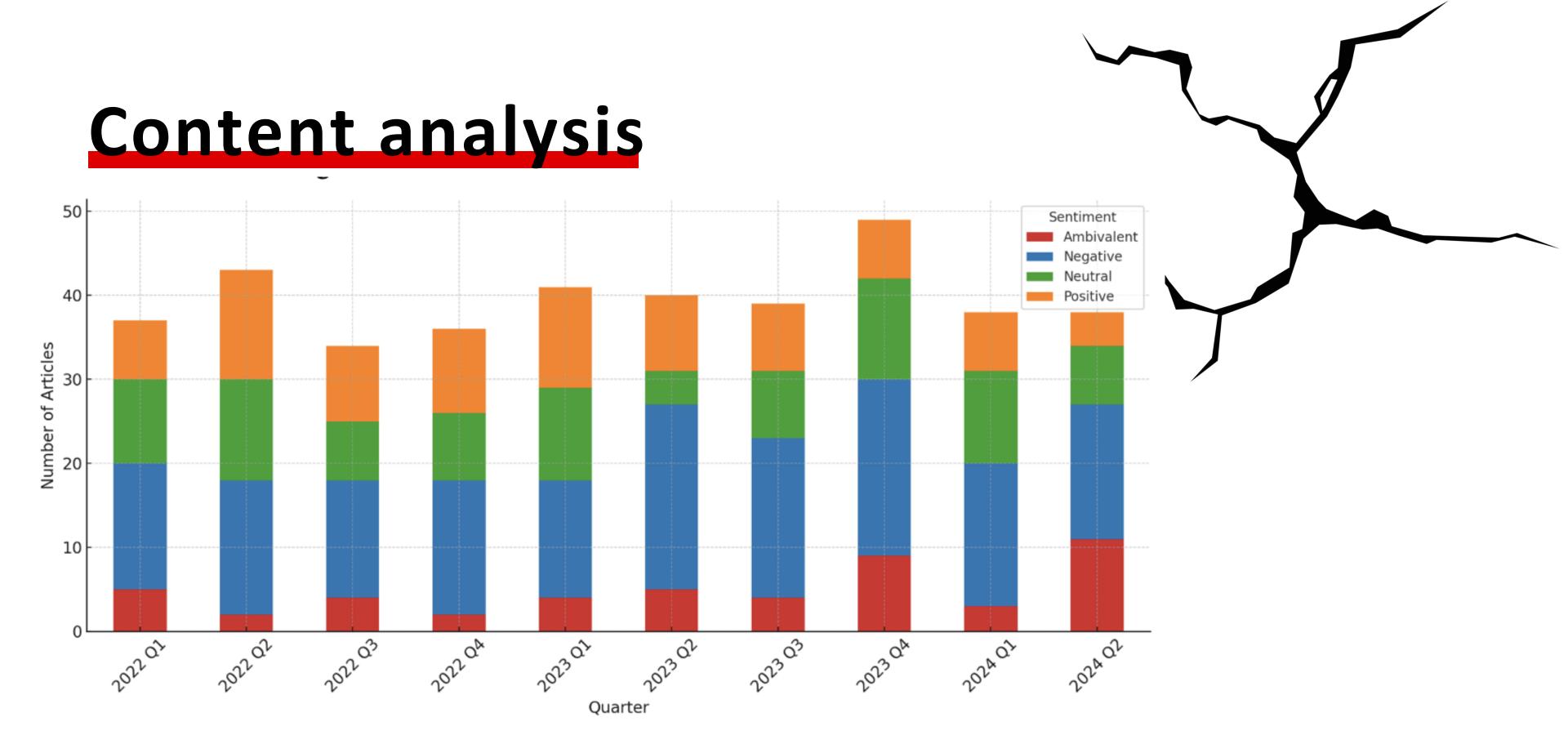
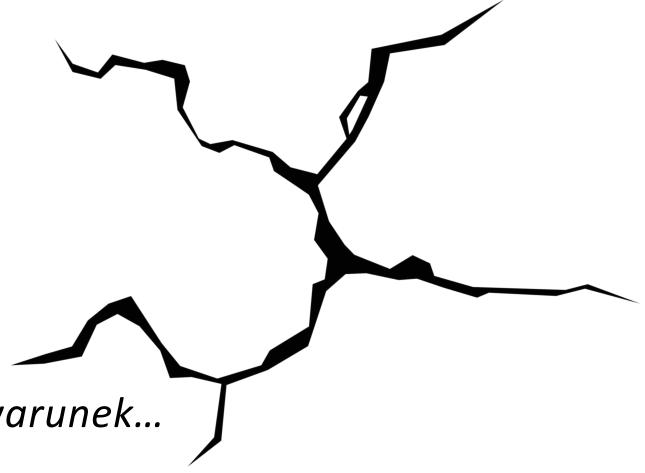


Figure 2. Sentiment Distribution of Headlines by Quarter (Q1 2022 - Q2 2024)

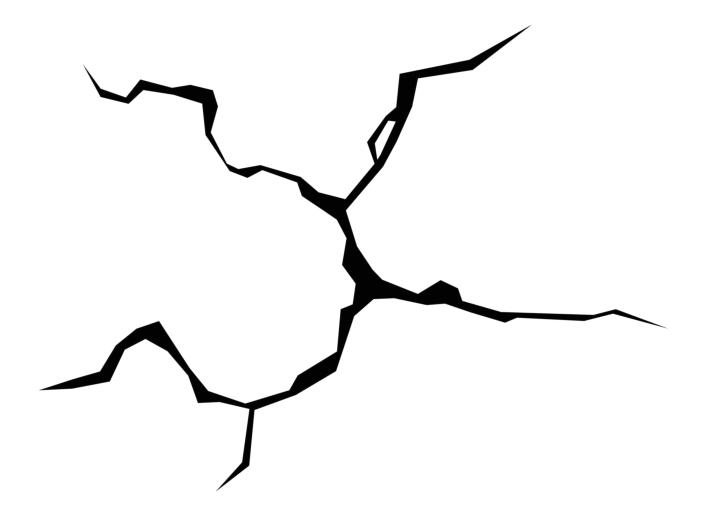
Examples of Sentiments



- Zniesione cło na żywność z Ukrainy. Polscy rolnicy stawiają warunek...

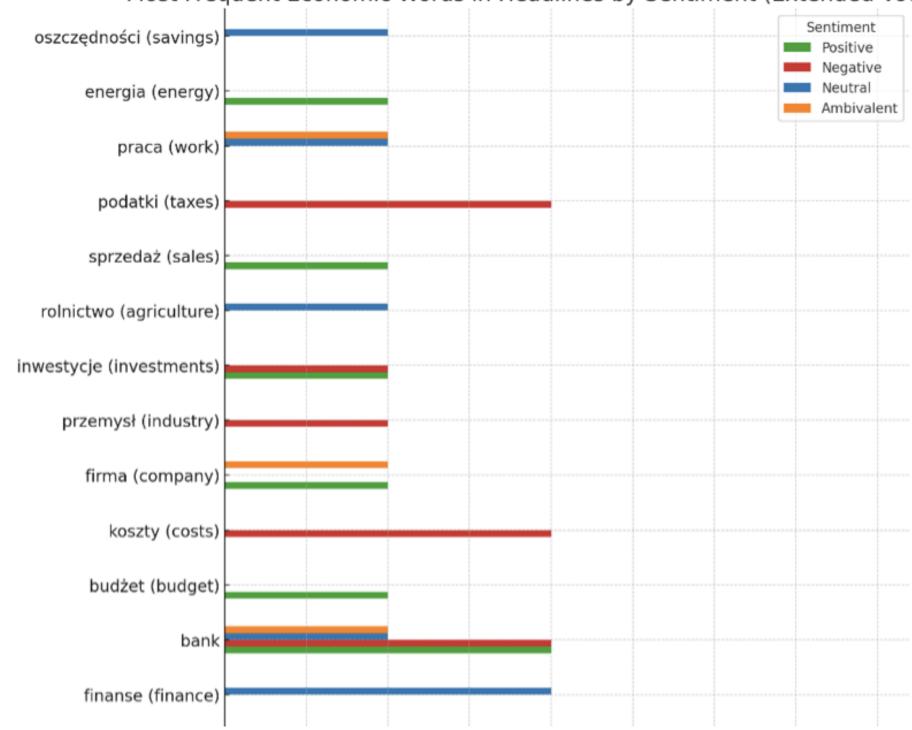
 (Food duty lifted from Ukraine. Polish farmers set a condition...)
- Deweloperzy wracają do budowy. Czy inwestycje przetrwają?
 (Developers are returning to construction. Will investments survive?)
- Polska pomaga, ale coraz trudniej o miejsca i wsparcie finansowe.
 (Poland helps, but finding places and financial support is increasingly difficult.)

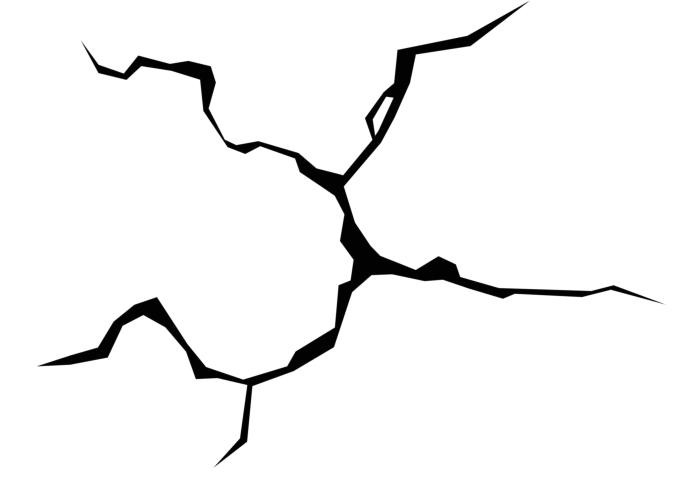
Examples of Sentiments



- Mimo wojny Ukraina wraca do produkcji stali.
- (Despite the war, Ukraine returns to steel production.)
- Ukraińscy rolnicy rozpoczęli zasiewy mimo wojny.
- (Ukrainian farmers have begun sowing crops despite the war.)
- Ukraina zalegalizowała kryptowaluty.
- (Ukraine legalized cryptocurrencies).

Most Frequent Economic Words in Headlines by Sentiment (Extended Vocabulary)





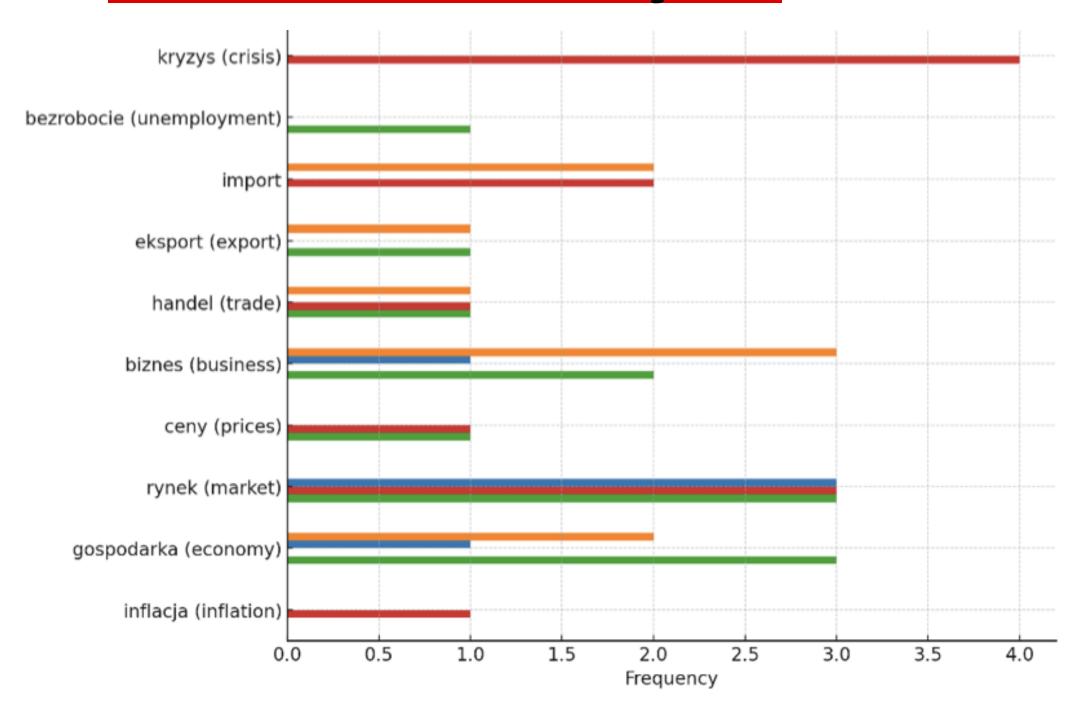
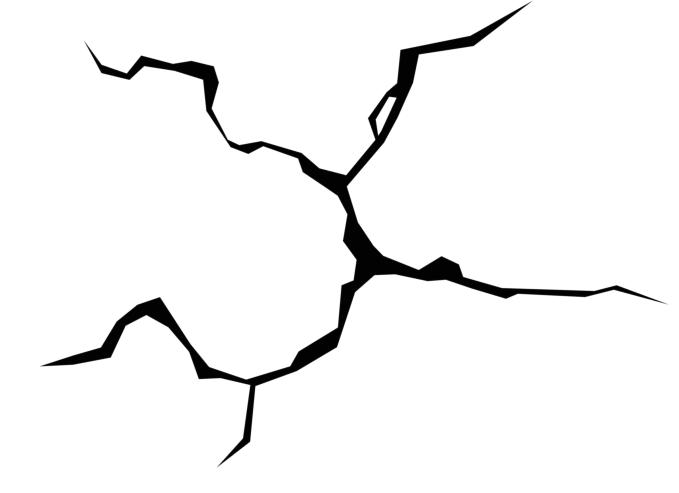


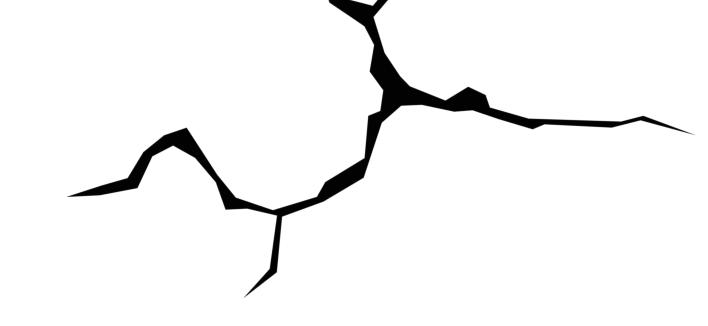
Figure 3. Top economic content words in headlines by sentiment





sector	dominant sentiment(s)	narrative focus
finance	negative → neutral	shock, inflation, recovery support
food	ambivalent/negative	trade conflict, farmers' protests
arms	neutral/positive	defense aid, NATO
energy	negative → ambivalent	crisis → transition to independence
TSL	ambivalent/negative	logistical strain, political complications

Table 1. Summary of Sentiment Patterns Across Sectors.



sentiment	headlines	full texts
	average word count	
positive	11.74	723.53
negative	12.24	536.43
neutral	9.35	426.82
ambivalent	12.4	743.73

Table 2. Average word count in headlines and full texts

Concluding remarks

- , focusing on specific sectors and
- 1. Journalism shaped public economic understanding amid geopolitical tension, focusing on specific sectors and narratives, such as the energy/grain/immigration crisis, disrupted supply chains, and inflation.
- 2. Shifting Sentiment Over Time:
- Early 2022: dominated by negative frames (disruption, inflation);
- Mid 2023: rise in neutral and ambivalent tones;
- Late 2023: negativity resurged (grain/imports, TSL protests).
- 3. Ambivalence is a strategic tool for capturing contradictions and moral complexity, and it is pervasive in sensitive topics (e.g., agriculture and energy).
- 4. Language and Length Patterns:
- Ambivalent & positive headlines = longer, richer language;
- Negative headlines = short, urgent, and fact-driven.
- 5. Methodological Insights:

Manual sentiment analysis uncovered subtle hints that AI overlooked, highlighting the importance of editorial nuance and strategic framing.

Contact





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