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Framing the Future:

The Politicization of Artificial Intelligence in Swedish and American News Media.



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Abstract

This study examines the differences and similarities in the news media's portrayal of political topics related to artificial intelligence in the United States and Sweden. AI is increasingly politicized but is poorly understood from a political science perspective. By examining these two innovative and prosperous countries' media landscapes, it aims to further our understanding of the cross-national differences in media's portrayal of AI and broaden the research field by shedding light on the politicization of emerging technologies. Relating to the third aim, a deductive approach to frame theory is employed, structured around meta-frames and political frames. The salience and sentiments of the frames are evaluated by conducting a quantitative content analysis of eight Swedish and US newspapers. The findings suggest a mix of convergences and divergences. The countries' news reporting largely converged at the meta-level, displaying similar salience and sentiment distribution of the political frame relative to the other meta-frames. Swedish and US media diverged to a larger extent in the occurrence of political frames. Swedish media emphasize AI regulation, whereas US media focus more on fake news, deepfakes, and the geopolitical AI rivalry. Moreover, whereas US media tend to be positive about AI in national security issues, Swedish media portrays these issues negatively. It is concluded that as the technology advances, critical questions are raised, thus the necessity to understand the political discussion surrounding artificial intelligence.

Keywords: Artificial intelligence, politicization, the United States, Sweden, news media, frame theory.

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1 Background

1.1 Artificial intelligence

The fourth industrial revolution has reached a critical juncture with the advancement of artificial intelligence (AI). AI is rapidly transforming the world as the technology increasingly becomes embedded in everyday applications and activities such as healthcare, education, work, and banking. While there has been profound optimism over AI's potential benefits over the past decades, there are now increasing concerns about the possible risks and harms the technology might entail (Prieto-Gutierrez et al., 2023, p. 151). AI is not only a technological phenomenon, but also a socio-political one and the widespread adoption of AI coupled with these increasing concerns raises political questions (Lindgren & Holmström, 2020; Nguyen & Hekman, 2024). There are great political expectations on AI, from international institutions, the public, and the government that often conceptualize the technology as a strategic interest and priority (Chuan et al., 2019; Cools et al., 2024). This politicization is notable in the rapid advancement of AI policy initiatives. Canada was the first country to develop a national AI strategy in 2017, and today there are over 1,000 policy initiatives across 69 countries and institutions (OECD, n.d).

Moreover, the mass media plays a pivotal role in disseminating information about inquiries that the public has limited knowledge of, such as emerging technologies like AI. By making trends visible, emphasizing certain pieces of information, and disregarding others, the mass media shapes people's perceptions of AI (Nguyen & Hekman, 2024, p. 437). Studying this emerging political phenomenon through the lens of mass media can give us insights into public opinion and political and regulatory priorities, thus furthering our understanding of how countries conceptualize and respond to the technology's societal implications (Fast & Horvitz, 2017, p. 963).

1.2 AI in Sweden and the United States

AI policies reflect nations' priorities and visions for the technology, and its AI imaginaries are often influenced by cultural, political, and economic contexts (Bareis & Katzenbach, 2022, p. 856). Two countries are particularly interesting, Sweden and the United States.

Sweden is a small Nordic country that usually ranks among the most innovative countries in the world. Its current official AI strategy was launched in 2018 and stresses the need for innovation, norms, and international cooperation that ought to guide the ethical and sustainable use of AI (Government Offices of Sweden, 2018). The Swedish government is optimistic about AI and often highlights its potential to increase efficiency, competitiveness, and profits, which can contribute to maintaining and improving the welfare system and the public sector (Toll et al., 2020, p. 15). However, Sweden's AI Commission notes that Sweden is "falling behind" in AI development globally and relative to the EU (AI Commission, 2024, p. 11). Sweden dropped from 17th to 25th out of 83 countries from 2023 to 2024, which, according to the Commission, results from inadequate political leadership and a lack of strategic planning and coordination. There is currently a sense of urgency in the Swedish AI policy landscape. The AI report that ought to form the basis for a national AI strategy was published six months ahead of schedule, referencing the need to "catch up". Consisting of 75 proposals, the report is like its predecessors, optimistic about AI while stressing the need for inclusive, just, and ethical AI development and deployment (AI Commission, 2024). Moreover, much of Sweden's AI policy landscape is shaped by the European Union's approach to AI, which rests on the pillars of excellence and trust. The EU aims to strengthen Europe's potential to compete globally while also ensuring that AI is safe and trustworthy for its users, developers, and deployers. The EU is pioneering in AI governance, and its AI Act is the world's first comprehensive AI legislation (European Commission, 2025).

The United States is with its strong economy and technological dominance the world leader in AI development, and its first official AI strategy was signed in 2019. AI is believed to increase US prosperity, enhance US national and economic security, and improve the quality of life for its citizens (The White House, 2019). There is a strong bipartisan nationalist narrative within US AI policy. The technology is conceptualized as the embodiment of the free scientific American spirit in which the US is a productive, competitive, and curious

nation built by hardworking people (Bareis & Katzenbach, 2022, pp. 872-873). Currently, the US is involved in the so-called Technological Cold War with China, which involves the surge for technological supremacy, especially regarding AI (Tung et al., 2023, p. 1). With a nationalist narrative and explicit references to this technological rivalry, President Trump revoked former President Biden's executive order 'Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence' in 2025, holding that private and public sector regulation hinders the potential of AI to bring national benefits (The White House, 2025).

Sweden and the US are likely to experience various political changes related to AI, but they differ considerably in their strategic interests and conceptualizations of AI. This, coupled with their responsive and vibrant news media landscapes and traditions makes them interesting to study.

1.3. Research question and aims

The research question of this study is:

What are the differences and similarities in the news media's portrayal of political topics related to artificial intelligence in the United States and Sweden?

This study has three aims relating to the research question and the theoretical framework. First, it aims to further our understanding of the cross-national differences in media's portrayal of AI and thus highlight the countries' different political, cultural, and economic contexts. Second, as AI increasingly is understood as a political issue, the study aims to shed light on such inquiries, thereby broadening the research field. Third, and relating to the second, the study aims to develop a theoretical framework suitable for scholars interested in media framings of AI more generally, and the political framings more specifically. To achieve all the above, this study employs a quantitative content analysis of American and Swedish newspapers to understand the differences and similarities in the political media portrayals of artificial intelligence.

2 Literature Overview

This chapter delves into the existing literature on (1) social science research on AI, (2) political science research on AI, (3) the media and AI, and concludes with the identification of research gaps. Now, much of the existing literature notes the absent consensual definition of artificial intelligence (Cools et al., 2024; Duberry & Hamidi, 2021; Fast & Horvitz, 2017). For conceptual clarity, AI is defined as “the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings” (Britannica, 2025).

2.1 Social science research on AI

Despite social science scholars’ increased interest in the social production, distribution, and consumption of AI, the research agenda is still dominated by the technical domain. Liu (2021) noted that an increasing number of studies within the sociological literature take a cultural perspective (the social and cultural ramifications and embeddedness of AI) but concludes that most recent studies apply the technical perspective (the social implications of AI adoption and its applications) (p. 6). This resonates with Ligo et al. (2021) who found that most existing research falls within the technical domain, but that the gap between technical and social science AI research is narrowing due to the sharper growth of the latter (p. 4). Lindgren & Holmström (2020) similarly concluded that the research agenda is dominated by AI technologies as opposed to their social and cultural context (p. 2). This technological domination constitutes a so-called governance gap in which AI is approached narrowly and deterministically, causing it to be poorly understood as a societal phenomenon (Ligo et al., 2021; Lindgren & Holmström, 2020).

Given the relatively limited scope of the study, meta-analyses of the social science research tradition on AI provide the most unbiased reflection of the research field. Liu (2021) noted that AI’s impact on work and employment is well-researched but also mentioned military purposes and ethical concerns related to issues such as privacy, transparency, and social control (pp. 6-7). Ligo et al. (2021) identified economics and education (pp. 4-5). Prieto-Gutierrez et al. (2023) identified education, economics, law and legal reasoning, and ethics as distinct and dominant clusters in social science research (p. 149). Resonating with the above,

Taheri (2023) noted the following topics: the economy, work and labor market, ethical considerations, physical training and sports, healthcare, and education (pp. 1-2).

2.2 Political science research on AI

The national and academic political discussions around AI differ, and the latter tends to be more critical. Since this inquiry is narrower compared to the previous one, systematic meta-analyses are lacking. The following subchapter nevertheless sketches the contours of the political science research on AI, which is clustered into (1) governance and regulation, (2) political and democratic processes, and (3) international relations (IR).

The discussion around AI regulation and governance is a critical area of inquiry, and scholars often appoint governments the prime responsibility for acting on the potential dangers of AI. Noting risks such as job displacements, economic impacts, data privacy and biases, and accountability and transparency issues, Totlani (2023) argues for robust and dynamic regulations, policies, and strategies to ensure humanity's and civilization's wellbeing (p. 967). However, scholars note that effectively governing AI is difficult. First, due to its fluidity and rapid advancements, AI cannot be treated as other emerging technologies and must be governed independently of existing legal frameworks (Abdul Manap & Abdullah, 2020, pp. 183-185). Second, policymakers and public administrators must be aware of the risks when they promote AI-driven governance (Uzun et al., 2022, p. 437), however, they often portray the technology in an overly optimistic manner instead of acting as critical watchdogs (Bareis & Katzenbach, 2022; Toll et al., 2020). Third, effective governance requires the involvement of actors across multiple levels. AI developing and deploying organizations and industries, for example, must work proactively and ensure that AI systems are trustworthy and ethical (Curtis et al., 2023, p. 151). The international community also plays a role in developing guidelines and governance practices for ethical AI. However, AI in the international realm is often governed narrowly (Ulnicane, 2024, p. 70), and national priorities tend to overshadow common security and ethical concerns (Rebolledo, 2025, p. 43).

Another cluster of research focuses on AI's impact on democracy. AI-driven platforms and technologies can nurture public debate, connect people, and improve and optimize information flow (Schippers, 2020, p. 33). They are particularly useful for civil society that can use the technologies for fostering diffused political participation and enhancing public ownership over administration (Savaget et al., 2019, p. 378). However, there are several direct and indirect ways in which AI may harm democracy across the individual, the group, the institutional, and the systemic levels. Some concerns scholars raise include AI and deepfakes, AI-driven state surveillance and authoritarian behavior, people's opportunities to exercise self-rule, equality of rights among people, and election interferences. It is often argued that AI requires public and political oversight and regulation at the national and international levels (Jungherr, 2023; Schippers, 2020). Democratic processes and practices must therefore be strengthened by safeguarding democratic institutions and ensuring the protection of fundamental rights (Schippers, 2020, pp. 34-35).

Lastly, given its implications for global decision-making, diplomacy, geopolitics, global governance, and security, an increasing share of IR scholars are devoting attention to AI (Bode, 2024, p. 66). Although various perspectives of IR research on AI prevail, much research is influenced by realist and/or liberalist ways of thinking. Realists hold that AI is central to achieving technological superiority and supremacy, which ultimately causes competition and rivalry between great powers (Rebolledo, 2025, p. 10). Liberalist emphasizes the need for global governance and multilateral initiatives to foster technological cooperation (ibid., p. 14). Bode's (2024) readings of the IR field largely confirm this picture, as much AI research revolves around the balance of power and governance. The former involves issues such as the geopolitical competition between China and the US, and AI's impact on national security and strategic stability. The latter focuses on issues involving regional and international governance frameworks. Albeit to a lesser extent, Bode (2024) also notes the themes of disinformation and ethics. Disinformation involves research focusing on disinformation campaigns by foreign state and non-state actors and their influence on Western democracies and institutions. Overlapping with the governance theme and drawing on several disciplines such as philosophy, psychology, and political theory, the ethics theme is cornered with the ethical issues of AI (pp. 68-71).

2.3 The media and AI

Given the lack of studies focusing specifically on the media's portrayal of the political issues surrounding AI, this section presents previous research focusing on the media's general portrayal of AI. These are relatively scarce but can be divided into three clusters. First, studies covering specific issues such as the ethical concerns of AI (Ouchchy et al., 2020), or AI and romantic relationships (Liao et al., 2024). Second, studies focusing on individual countries such as the US (Chuan et al., 2019; Cools et al., 2024; Fast & Horvitz, 2017), Germany (Köstler & Ossewaarde, 2022), the Netherlands (Vergeer, 2020), Turkey (Sarisakaloğlu, 2021), and the UK (Brennen et al., 2018). Third, comparative studies, either by newspaper (Bunz & Braghieri, 2022; Nguyen & Hekman, 2024) or explicitly cross-national (Duberry & Hamidi, 2021; Ittefaq et al., 2025). Together, these inform us of the cross-national, cross-media, and temporal differences in media's portrayal of AI.

2.3.1 Sentiments

Comparing studies that examine the media's portrayal of AI in different country contexts reveals differences in overall sentiment. Despite covering different newspapers over different time periods, studies that focused on solely American newspapers unanimously found that the media's discussion about AI has generally been more optimistic than pessimistic (Chuan et al., 2019; Cools et al., 2024; Fast & Horvitz, 2017). Sarisakaloğlu (2021) who examined two major Turkish newspapers in 2019, found that the news coverage was predominantly positive about AI, as it more strongly emphasized the benefits of the technology (p. 20). However, Vergeer (2020) concluded that the sentiments in the Dutch press between 2000 and 2018 were neutral and found a balance between the reporting of AI's risks and benefits (p. 382). Similarly, Ouchchy et al. (2020) who examined English-language newspapers' portrayals of the ethical issues of AI found that news media have a realistic and balanced tone regarding the risks and benefits (p. 927).

Duberry & Hamidi (2021) and Ittefaq et al. (2025) confirm these cross-national sentiment differences. Duberry & Hamidi (2021) found in their cross-national comparison between French-language and English-language newspapers that AI in US newspapers was portrayed as more optimistic than pessimistic. In contrast, the European newspapers provided a more balanced view of the risks and benefits of AI (p. 758). Ittefaq et al. (2025) examined 12

newspapers across the global North and South and found that the majority (65.63%) of the sentiments were neutral. However, 24% of news headlines in the global North expressed negative sentiments, whereas the corresponding number for the global South was 14.5%. The positive sentiments between the two regions were similar at around 13% (p. 13).

There are also cross-media differences in sentiments. In their study on AI and healthcare, Bunz & Braghieri (2022) noted that 49% of the articles published in *The Wall Street Journal* framed AI positively, the corresponding numbers for *The Guardian* and *The Daily Telegraph* were 29% and 31%, respectively (p. 20). Similarly, Nguyen & Hekman (2024) found that *The New York Times* and *The Guardian* were slightly more negative about AI than *Wired*, and *Gizmodo* (p. 447). Vergeer (2020) noted that popular newspapers and national newspapers often portrayed AI negatively, whereas newspapers with religious or economic orientations were more positive than negative about AI (p. 382). However, Sarisakaloğlu (2021) did not find such cross-media differences between the two Turkish newspapers examined (p. 34).

There are also temporal dimensions to the sentiments of AI in news media, as the media appear to have become more critical over time. Fast & Horvitz (2017) noted that the news media since the 2010s has increasingly focused on the negative consequences of AI, such as the fear of loss of control, the negative impact on work, and ethical concerns (pp. 966-967). Nguyen & Hekman (2024, p. 449) and Ittefaq et al. (2025, p. 2) similarly concluded that the overall sentiment and risk references have changed during the past decade. This suggests that the initial optimism about the technology has been replaced by emerging pessimism and skepticism, especially as risks such as compromised privacy, job losses, and displacements have become a concern among the public.

2.3.2 Topics

Since the theoretical framework includes a lengthy discussion on the AI-related topics in the news media, this section does not delve into the specifics but rather elaborates on the cross-national, cross-media, and temporal differences.

Like the sentiments, there appear to be cross-national and cross-media differences. Ittefaq et al. (2025) found that media in the global South more often emphasized business, economy, and jobs than in the global North. This, while exhibiting minimal attention to more critical inquiries such as AI regulation, ethics, and data privacy, which the global North's newspapers paid more attention to. The global North also paid more attention to AI's implications for politics and elections, whereas the global South placed a larger emphasis on global and regional AI economic cooperation (p. 14). Vergeer (2020) found that popular newspapers more often covered the topic of singularity. Together with newspapers with a national and international orientation, they also published more articles about football and robots than other newspapers. Newspapers with an economic profile published more frequently about topics related to quantum computing, whereas religious-oriented newspapers published less about the topic (pp. 383-385). Brennen et al. (2018) noted that AI news in right-leaning newspapers more often emphasized issues related to economics and geopolitics, whereas left-leaning newspapers more often covered issues relating to the ethics of AI, such as discrimination, data privacy, and algorithmic bias (p. 1). Diverging from these, Sarisakaloğlu (2021) identified a convergence in the coverage of topics between the two Turkish newspapers (p. 34).

The topics and their associated risk and benefits also have a temporal dimension. Cools et al. (2024) found that between 2015 and 2020, topics related to science and sports have become more prominent, whereas work, education, and art have experienced an overall decline (p. 19). Chuan et al. (2019) noted that political issues related to AI increasingly have become prominent in the media, which they speculate is due to the growing impact the technology has on the people (p. 5). Vergeer (2020) found that quantum computing, AI in Asia, and singularity have increased in recent years (p. 382). Ittefaq et al. (2025) noted that issues relating to regulations, ethics, and data privacy received minimal attention until 2015 but that they since then have received significant attention (p.11).

2.4 Research gap and relevance

Two broad research gaps emerge from the existing literature, which this study aims to bridge. First, AI is poorly understood in social science (Ligo et al., 2021; Lindgren & Holmström, 2020) and is under-researched as a political phenomenon, which is worrying given the immense political expectations and the heightened politicization of the technology (Brennen et al., 2018; Köstler & Ossewaarde, 2022). Second, many calls have been made to further our understanding of AI and the media. There is little empirical research on how AI is covered in news media (Chuan et al., 2019; Nguyen & Hekman, 2024) and there is a significant lack of cross-national studies, especially on non-Anglo-Saxon countries and non-English-language media outlets (Cave et al., 2019; Duberry & Hamidi, 2021; Liao et al., 2024; Nguyen & Hekman, 2024). Investigating the differences and similarities in the news media's portrayal of the political topics of AI in the US and Sweden bridges these two general research gaps. It also directly responds to the call for more research on the political and policy-related media images of AI made by Köstler & Ossewaarde (2022, p. 250).

With this research gap in mind, the next chapter introduces the theoretical framework, which consists of two related frameworks, a meta-frame framework and a political frame framework. Since there is a competition between frames in media discourses (Köstler & Ossewaarde, 2022, p. 252), answering the research question involves two separate examinations. (1) the salience of the political frame relative to other dominant meta-frames, and (2) the salience of political frames relative to each other, hence the duality.

3 Theoretical Framework

Informed by the existing literature, this study employs a deductive approach to frame theory, and the chapter is outlined as follows. First, a distinction between agenda-setting theory and frame theory. Second, this study's conceptualization of frame theory. Third, the theoretical and empirical assessment of the deductive approach including, the deduced meta-frames and political frames. Fourth, limitations and clarifications.

3.1 Media effects theories

Studies on AI and the news media tend to adopt agenda-setting theory and/or frame theory, and the differences between these are among the most debated theoretical discussions within this scholarly realm (McCombs & Valenzuela, 2007, p. 47). Lack of attention to this debate often causes theoretical and conceptual confusion, yet many scholars disregard it. However, the evaluation is important given this study's aim to develop a theoretical framework deduced from previous literature (Scheufele & Tewksbury, 2007, pp. 17-19).

The comparison is complex due to the many understandings of the term *frame* and the somewhat fewer conceptualizations of agenda-setting theory (McCombs & Valenzuela, 2007, p. 47). Most generally, agenda-setting scholars argue for the profound correlation between the mass media's emphasis on certain issues and the relative importance that the mass audience attributes to it. Framing scholars hold that how an issue is characterized in mass media influences how it is conceptualized by the mass audience (Scheufele & Tewksbury, 2007, p. 11). The theories have several commonalities; both are concerned with how issues or objects are depicted, both focus on the prominence or salience of topics in media, and both emphasize the ways of thinking as opposed to the objects of thinking (Weaver, 2007, pp. 145-146). Given these similarities, McCombs et al. (1997) proposed an integration of the two theories in their second-level agenda-setting theory. In this, framing is conceptualized as the second level of agenda-setting, i.e., *how* mass media shape the public's perception. However, the theory is often criticized for the assumption that agenda-setting and frame theory share the same theoretical premises (Scheufele & Tewksbury, 2007, p. 15). Combining two already loosely defined theories may also cause oversimplifications. For these reasons, this study aligns with the dominant school of thought that regards them as related but distinct (Ardèvol-Abreu, 2015, pp. 426-427).

Frame theory is considered more appropriate. First, it goes further than agenda-setting theory and is often seen as an extension of it, thereby allowing for more in-depth theoretical and empirical discussions (Weaver, 2007, p. 146). Second, frame theory is more heterogeneous (ibid., p. 143), although potentially causing contradictions and uncertainties, it nonetheless allows for theoretical flexibility and adaptability (Ardèvol-Abreu, 2015, p. 425). Third, frame theory is more commonly used than agenda-setting theory (Weaver, 2007, p. 143), and aligning with the research tradition is seen as a strength, as the theoretical underpinnings of the deduced framework are more familiar to a broader audience.

3.2 Frame theory

Despite the heterogeneity of frame theory (Ardèvol-Abreu, 2015; Entman, 1993; Scheufele & Tewksbury, 2007; Weaver, 2007), scholars' conceptualizations of framing often do not differ considerably (Weaver, 2007). However, for theoretical clarity and transparency, this study's conceptualization of frame theory aligns with Entman's (1991 & 1993). Entman (1993) was among the first to point out the heterogeneity of the term *frame*, and his conceptualization is widely used in prior research. Moreover, Entman provides theoretical depth by explaining the construction of frames, how they are manifested in texts, and how they influence the receiving audience (pp. 51-52).

Entman (1993) holds that “to frame is to *select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described*” (emphasis in original). Accordingly, framing involves a process of selection and salience. Selection refers to the decision of what to include or exclude in a perceived reality. Salience is the decision of what aspects to emphasize and what to downplay or completely disregard. Factors such as noticeability, meaningfulness, memorability, placement, repetition, and cultural association all influence whether a piece of information becomes salient or not (Entman, 1993, pp. 53-54).

Entman identifies four framing functions (defining problems, diagnosing causes, making moral evaluations, and suggesting remedies) and four framing locations (the communicators, the text, the receiver, and the culture). It is through these functions across the locations that certain pieces of information become more or less salient, thus influencing the receiving

audience's attention, but Entman makes three important notions. First, frames have a common, not universal, effect on the receiving audience, implying that not everyone's perceived reality will be affected by frames. Second, frames are the most influential in issues where the public has little or no knowledge about the topic or alternatives (Entman, 1993, pp. 52-54). Third, frames are often hidden, making the public and scholars unaware of their presence; these can, however, be revealed through comparative studies (Entman, 1991, p. 6).

3.3 A deductive approach to frame theory

Most scholars concerned with the identification of frames in the news media either use the inductive or deductive approach. The former begins with a set of loosely defined preconceptions of frames with the purpose of revealing (*inducing*) frames from the material. The latter involves using predefined frames as content analytical tools to test the extent and occurrence of the frames in a given material. The possibility of finding and exploring new media frames is the main benefit of the inductive approach. However, it is also often labor-intensive, built on small sample sizes, and difficult to replicate. The deductive approach is more common as it is easier to perform, can be applied to larger samples, and is more easily replicable. The deductive approach is also suitable for comparative studies as differences in media framings between cultures can be more easily detected (Semetko & Valkenburg, 2000, pp. 93-95). This study's scope and research question thus call for the deductive approach.

The framework deduces *strong* and *specific media frames* of AI. *Specific frames* can only be applied to specific topics or events (e.g., AI) as opposed to *generic frames* that can be used for different events, and temporal, and cultural spaces. *Media frames* are concerned with the macro-construct that media use to reduce the complexity of an issue and differ from *individual frames* that involve the examination of individual schemas. A frame's *strength* refers to its appeal to the individual and the public, and its ability to persuade the audience relative to other frames. The strength of the frame most generally depends on its frequency, accessibility, and relevance (Ardèvol-Abreu, 2015, pp. 431-432).

Following Ardèvol-Abreu's (2015) distinction between strong and weak frames and resonating with Entman's (1993) discussion on selection and salience, the selection of frames involves two considerations. First, and most importantly, the frequency of appearance in previous studies that induced or developed general media framings or schemas of AI

(Brennen et al., 2018; Chuan et al., 2019; Cools et al., 2024; Fast & Horvitz, 2017; Ittefaq et al., 2025; Nguyen & Hekman, 2024; Sarisakaloğlu, 2021; Vergeer, 2020). Second, the frame's alignment with the themes identified in the previous research on AI within the social and political sciences.

The limitations of this approach are delved into later, but there are theoretical and empirical differences that ought to be addressed. The ambiguity of the term *frame* is apparent in the existing literature, as there are essentially two theoretical and empirical understandings. Chuan et al. (2019) and Cools et al. (2024) make the distinction between *topics* (e.g., economics, politics, etc.) and *frames* (e.g., positive, neutral, negative), in which a frame is a sentiment of a topic. Whereas Ittefaq et al. (2025), Nguyen & Hekman (2024), and Sarisakaloğlu (2021), for example, make the distinction between *frames* (e.g., economics, politics, etc.) and *sentiments* (e.g., positive, neutral, negative). These studies are concerned with the same issues but use the term *frame* differently, and this study opts for the latter three's approach (i.e., frames and sentiments). Moreover, the scholars categorize the frames differently, further complicating the selection process. For example, Ittefaq et al. (2025) lump 'education & research' into a single frame, whereas (Chuan et al., 2019) treat 'science and technology' and 'education' as separate frames.

Finally, and as mentioned earlier, the examination of political framings involves two inquiries: the salience of the political frame relative to other dominant meta-frames and the salience of political frames relative to each other. The framework thus consists of two related levels, a meta-frame framework and a political frame framework.

3.3.1 Meta-frame framework

Business & Economy

Business & Economy relates to inquiries such as economic growth, the financial implications of AI, and market competitiveness. The frame was identified by Ittefaq et al. (2025), Cools et al. (2024), Nguyen & Hekman (2024), Chuan et al. (2019), Brennen et al. (2018), and Sarisakaloğlu (2021) and was among the most salient frames in four of these. Ittefaq et al. (2025) found that ‘business, economy and jobs’ was the most prevalent frame (37.4%). Some issues that specifically relate to the economy and business include ‘the impact on the stock market’ (28.2%) and ‘opportunities of digitalization and economic initiatives’ (24.2%) (p. 8). Similarly, Chuan et al. (2019) found ‘business and economy’ to be the most prominent frame (35.1%) among their nine identified frames (p. 3). Together with geopolitics, Brennen et al. (2018) found that economics was the most covered topic in UK newspapers (p. 5). Lastly, Sarisakaloğlu (2021) identified the frame ‘economic benefit’ as the second most prevalent frame (21.5%) (pp. 30-31). Business and economy are also among the most salient topics in the social science research on AI (Ligo et al., 2021; Prieto-Gutierrez et al., 2023; Taheri, 2023).

Education

Education involves issues such as learning processes, educational tools, and the education system. This frame was identified by Chuan et al. (2019), Fast & Horvitz (2017), Ittefaq et al. (2025), and Cools et al. (2024), and was the most prominent in two of these. Cools et al. (2024) found that ‘education’ together with ‘work’ were the most prominent frames (p. 13). Ittefaq et al. (2025) concluded that ‘AI transformations in education and research’ was the second most frequent frame (17.7%). Some of the frequent topics that specifically related to education within this frame were ‘education and research opportunities’ (22.8%), and ‘challenges of evaluation at schools’ (18.9%). Fast & Horvitz (2017) and Chuan et al. (2019) also identified the education frame, and the inquiry is well-researched within the social science literature on AI (Ligo et al., 2021; Prieto-Gutierrez et al., 2023; Taheri, 2023).

Work

This frame relates to issues such as the labor market, workplace dynamics, and employment opportunities and risks related to AI, to name a few. The frame was identified by Ittefaq et al. (2025), Cools et al. (2024), Fast & Horvitz (2017), and Brennen et al. (2018) and was among the most salient frames in two of these studies. As mentioned, Ittefaq et al. (2025) found that ‘business, economy and jobs’ was the most frequent frame over time. Some of the topics that directly related to work were ‘the potential impact on human jobs in the future’ (22.4%), and ‘impact on human jobs and skill development’ (23.3%) (p.8). Cools et al. (2024) found that work had been the most prevalent topic over time (p.3). Although not explicitly identifying the frame ‘work’, Sarisakaloglu (2021) identified the frames ‘AI as assistant/supporter’ and ‘elimination of human error’ both of which relate to AI and the human workforce (pp. 31-32). AI’s implications on work and employment have also been a frequently covered topic in the social science literature on AI (Liu, 2021; Taheri, 2023), while loss of employment is an increasing concern among the public (Chuan et al., 2019; Fast & Horvitz, 2017).

Science & Technology

Science & Technology relate to technological breakthroughs, research and development, and technological capabilities. It was identified by Chuan et al. (2019), Cools et al. (2024), Ittefaq et al. (2025), and Nguyen & Hekman (2024) and was the most salient in two of these. Nguyen & Hekman (2024) lumped together ‘AI & research’, ‘AI & healthcare’, and ‘AI & technology development’ into the meta-frame ‘AI & research/science’ and found that this meta-frame was the second most prevalent (p. 444). Chuan et al. (2019) found that ‘science and technology’ was the second most prevalent frame (23.6%). Although not explicitly referring to a science and technology frame, Vergeer (2020) identified many technology-related frames, such as ‘chatbots app’, ‘quantum computing’, and ‘smart assistant’ (p. 379). Moreover, as noted in the literature review, technical aspects constitute most of the existing social science research on AI (Ligo et al., 2021; Lindgren & Holmström, 2020; Liu, 2021).

3.3.2 Political frame framework

Politics was identified by Brennen et al. (2018), Ittefaq et al. (2025), Cools et al. (2024), Chuan et al. (2019), and Nguyen & Hekman (2024). *Politics* is a meta-frame but is not treated as the others, as it consists of seven political sub-frames that together constitute the political frame framework. Like the meta-frame framework, the selection process of the political frames consists of the examination of previous studies that induced or developed general media framings or schemas of AI, coupled and cross-examined with the existing literature on AI within social and political science.

Governance

Governance is one of four frames that Nguyen & Hekman (2024) placed in their ‘AI & politics’ meta-frame, and they described it as news content that covers governmental and political interventions and debates over AI regulation (p. 443). Ittefaq et al. (2025) identified the frame ‘regulation, ethics, and data privacy’, and approximately 30% of the topics within this frame related to judicial issues and AI regulation (p. 9). Cools et al. (2024) identified “law”, “policy”, and “legislature” as keywords within their frame ‘politics’ (p.11). Fast & Horvitz (2017) identified the frame ‘loss of control’ which involves the concern that humans might lose control over AI systems (p. 964). Moreover, much of the political science debate on AI centers on the topics of AI regulation, both from a national and international perspective (Abdul Manap & Abdullah, 2020; Bode, 2024; Jungherr, 2023; Schippers, 2020; Totlani, 2023; Uzun et al., 2022).

Democratic Processes

Democratic Processes relate to issues such as democratic institutions, elections, civic engagement, and decision-making. Ittefaq et al. (2025) identified the frame ‘AI in politics, elections, and public opinion’ which directly corresponds to the above description of this frame (p. 9). Cools et al. (2024) identified the keywords “government”, “debate”, “campaign”, and “election” under their frame ‘politics’ (p.11). Fast and Horvitz (2017) identified ‘decision making’, although this more generally concerns how AI systems can enhance our decisions, it also refers to political decision-making (p. 964). The prominence of this frame also aligns with the previous political science research on AI, specifically on whether AI harms or enhances democracy (Jungherr, 2023; Savaget et al., 2019; Schippers, 2020).

National Security

This frame captures discussions related to national security, sovereignty, and national strategic interests. Nguyen & Hekman (2024) placed the frame ‘AI & weapons’, which covers militaristic uses of automation in novel defense systems, in their ‘AI & politics’ meta-frame (p. 443-444). Cools et al. (2024), Fast & Horvitz (2017), and Vergeer (2020) also all identified a military frame. Ittefaq et al. (2025) identified the frame ‘AI in national security and global partnership’ in which media reporting on trade and security challenges was frequent (p. 8). This study conceptualizes military inquiries within the broader scope of *National Security* as the frame also includes issues such as infrastructure protection, national interests, and intelligence, thereby capturing the full breadth of the US’s and Sweden’s AI strategies and policies (AI Commission, 2024; The White House, 2025).

Public Discourse & Information Disorder

This frame is concerned with issues such as the public discourse surrounding AI, the automation of the digital public sphere, the rise of bots in social media platforms, fake news, and deepfakes. Under the same name, Nguyen & Hekman (2024) placed this frame within the ‘AI & politics’ meta-frame (p.443). Cools et al. (2024) discussed deepfakes under their political frame (p. 12) and Vergeer (2020) found that ‘tech giants fake news’ was the second most frequent frame in the Dutch press (p. 379). Resonating with the above, Ittefaq et al. (2025) identified the frame ‘AI disruptions in media and creative industries’, which is partly concerned with public discourses in social media and mentions issues such as deepfakes (p. 8-9). These concerns resonate with the academic debate around AI in which deepfakes and fake news, among others, are conceptualized as threats to democracy (Schippers, 2020).

International Partnership

International Partnership involves discussions about AI in cross-national contexts such as collaborations, diplomatic relations, and global governance. Ittefaq et al. (2025) identified the frame ‘AI in national security and global partnership’ in which inquiries relating to cooperation with China, global economic strategic cooperation, and opportunities for regional cooperation were covered by the news media (p. 8). This frame was the least frequent in prior studies inducing media frames of AI. However, it is considered relevant as IR scholars increasingly focus on AI international partnership and cooperation (Bode, 2024; Rebolledo, 2025; Ulnicane, 2024). International partnership is also a clear strategic interest in Sweden’s AI policies and priorities, further justifying its inclusion (AI Commission, 2024).

International Competition

Lastly, *International Competition* captures the global rivalries and power struggles over AI. Under the ‘AI & politics’ meta-frame, Nguyen & Hekman (2024) identified the frame ‘China, international politics and AI competition’, which addresses the AI rivalry between the US and China and the Technological Cold War (p. 443). Brennen et al. (2018) also noted that geopolitical competition over AI development was a predominant topic in UK media (p.5). Like *International Partnership*, this frame is relatively infrequent in past media studies of AI. However, given IR scholars’ increasing interest in the balance of power (Bode, 2024), and Sweden’s and the US’s focus on AI international competition and competitiveness, the frame is considered relevant. Sweden stresses the need to “catch up” in AI development relative to other EU and non-EU-states (AI Commission, 2024). While the US is deeply involved in the Technological Cold War with China thus affecting its national political priorities and objectives (The White House, 2025; Tung et al., 2023).

3.4 Clarifications and limitations

As mentioned, the theoretical and empirical divergences in previous inductive media frame studies complicate the selection process and pose the risk of oversimplifications and arbitrary categorizations of frames. Apart from this, three other limitations are apparent: (1) information loss, (2) overlapping frames, and (3) cultural biases. The two former are related, as the selection process of frames in deductive frameworks constitutes a balancing act affected by the specificity/scope of the inquiry. Entman’s (1993) notion that frames often are hidden implies that those not predefined cannot be detected, causing a loss of information (Ardèvol-Abreu, 2015, p. 433). However, having too many or too similar frames can cause overlaps, making the frames indistinguishable (Nguyen & Hekman, 2024, pp. 443-444).

Information loss is a more relevant concern than overlapping frames among the meta-frames. There will almost certainly be information loss as only four (other than *Politics*) meta-frames are included, but this is not considered a limitation as it is not directly related to the research question. This study examines political frames and their overall salience relative to each other and to other *dominant* frames. Many frames appeared only once or twice in the studies that induced or developed general media framings or schemas of AI, thus the clear distinction between dominant and non-dominant meta-frames. Although information loss at the meta-level is not considered a limitation, a sixth meta-frame *Other Meta-frame*, is included. It

quantifies the information loss and thus contributes to the overall usefulness of the theoretical framework.

Information loss is assumed to be small within the political-frame framework. First, the rigorous cross-examination of prior media studies and previous AI research within social and political science demonstrates the relevance of the identified frames. Second, the political frames capture legislative issues, decision-making, public discourse, security studies, and IR, thus providing a comprehensive coverage of the field of political science. Although assumed small, a seventh frame, *Other Political Frame*, is included to quantify the potential information loss.

However, given the more niche inquiry of the political-frame framework, a more likely limitation is overlapping frames, and two potential overlaps are identified. First, *Public Discourse & Information Disorder* and *Democratic Processes*. The former concerns issues such as deepfakes and fake news, whereas the latter addresses democratic processes. However, recall that Schippers (2020) sees deepfakes as a threat to democracy, thus a potential overlap. Second, *International Partnership* and *International Competition* are similar, and the distinction between these might be fuzzy. Although these two potential overlaps exist, the four frames are considered distinct and individually relevant. This difficulty is mitigated by manually assessing news articles instead of using computer assistance which is elaborated on further in the methodology chapter.

Finally, Entman's (1991, p. 11) notion of the cultural embeddedness of frames has traction in the previous literature as both Duberry & Hamidi (2021) and Ittefaq et al. (2025) identified cross-national differences in the media's framing of AI, both in topics and sentiments. None of the studies that induced or developed general media framings or schemas of AI examined Swedish or even Nordic newspapers, causing potential biases to the theoretical framework. As alluded to, this limitation is mitigated by cross comparing the frames with the existing literature. Academia is generally considered internationally harmonized, and the frames included resonate well with the topics that have been covered in social and political science research on AI.

To summarize, this study uses a deductive approach to frame theory and is organized around meta-frames and political frames. It is informed by inductive studies on media and AI and supplemented by the existing research on AI within social and political science. The deduced meta-frames are *Business & Economy*, *Education*, *Work*, *Science & Technology*, *Other Meta-frame*, and *Politics*. The frames within *Politics* are *Governance*, *Democratic Processes*, *National Security*, *Public Discourse & Information Disorder*, *International Partnership*, *International Competition*, and *Other Political Frame*. The salience and sentiments of these are examined by conducting a quantitative content analysis elaborated on in the next section.

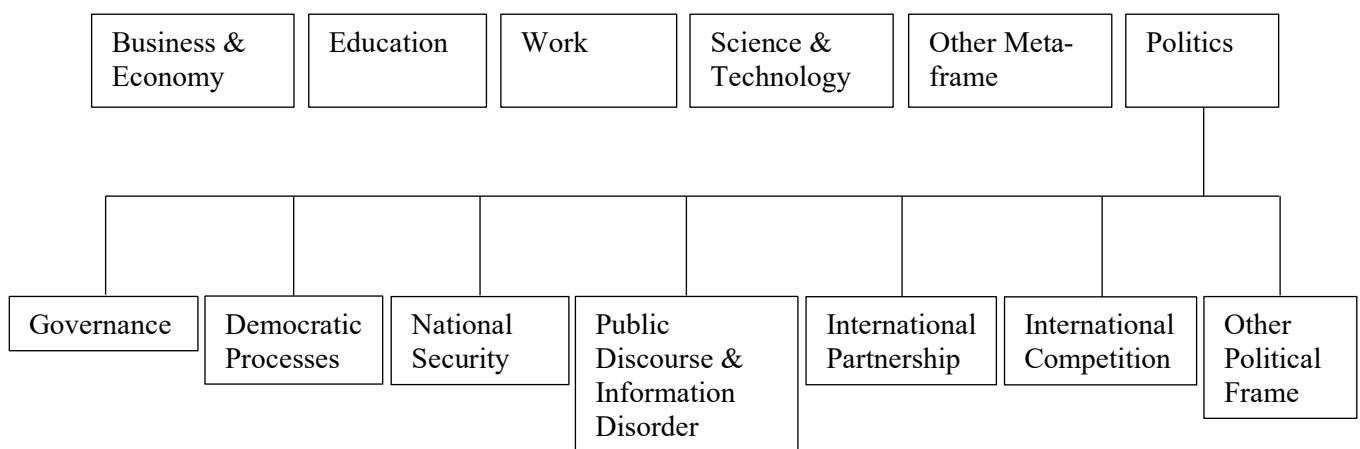


Figure 1. Overview of theoretical framework.

4 Methodology

Guided by the research question and the theoretical framework, this study employs a quantitative content analysis. The following section is outlined as follows: (1) a presentation of the methodological choices, (2) operationalization, (3) sampling, (4) data collection, (5) data analysis, and (6) limitations.

4.1 Quantitative content analysis

Understanding the methodological choices requires a brief note on the author's epistemological position, which is critical realism. Although sharing the same ontological foundation with positivism (foundationalism), critical realism is often described as a middle ground between positivism and interpretivism. Critical realists, like positivists, hold that the world exists independently of our knowledge of it and that social phenomena have causal powers. However, diverging from positivists, critical realists argue that not all social phenomena (and the relationships between these) are directly observable. As such, critical realists see the utility of both quantitative and qualitative research (Marsh et al., 2018, pp. 193-194). However, while acknowledging the virtue of qualitative research, this study solely employs a quantitative methodology due to its relatively limited scope. The research question calls for an evaluation of the frequencies of frames and their sentiments in the respective countries rather than interpreting the meaning of news articles, i.e., favoring quantitative research over qualitative (Bryman, 2016, p. 163).

The study employs content analysis, which is firmly rooted in the quantitative research tradition. It is an approach to document and text analysis that seeks to quantify content based on predetermined categories in a systematic and replicable way (Bryman, 2016, p. 285). The bearing of the method lies in its alignment with the theoretical framework, the empirical foundation of the research inquiry, and the aim of the study. The purpose of the deductive approach to frame theory is to use predefined frames as content analytical tools to assess the extent and occurrence of frames (Semetko & Valkenburg, 2000, pp. 93-95). Moreover, the method is commonly associated with studies examining media outputs (Bryman, 2016, p. 303). It is incorporated in almost all studies investigating media and AI, making it a good fit with the existing literature. Finally, recall the study's aim to develop a theoretical framework

for political framings of AI. Quantitative content analysis is a transparent method making replications and follow-up studies feasible thereby supporting this aim (ibid., p. 303).

4.2 Operationalization

A coding manual outlining the possible categories for each coded dimension was developed (Bryman, 2016, p. 293). The six dimensions coded are publication year, country, newspaper, type of article, frame, and sentiment, all of which take categorical variables (see Appendix 1). Publication year refers to the year the article was published (2009-2025 (see 4.3)), the country is either Sweden or the US, and the newspapers are *Aftonbladet*, *Expressen*, *Svenska Dagbladet*, *Dagens Nyheter*, *The New York Times*, *The New York Post*, *The Washington Post*, and *USA Today* (see 4.3). The type of article concerns whether it is a news article, a feature article, an opinion piece, or an interview. Frames (*Business & Economy*, *Education*, *Work*, *Science & Technology*, *Other Meta-frame*, *Governance*, *Democratic Processes*, *National Security*, *Public Discourse & Information Disorder*, *International Partnership*, *International Competition*, and *Other Political Frame*) were derived from the theoretical framework. Sentiment refers to whether the article generally displays a positive, neutral, negative, or no tone about AI.

Inspired by Semetko & Valkenburg (2000), a coding guide consisting of a set of questions was developed and used to systematically categorize and assign each article a meta-frame or political frame (see Appendix 2). A common pitfall when devising coding schemas is discrete dimensions, i.e., conceptual or empirical overlaps between dimensions and/or categories (Bryman, 2016, p. 294). This shortcoming resonates with the potential risk of overlapping frames as discussed in the theory chapter. Although not entirely exhaustive, these coding questions provide an overview of each frame's anticipated topics, thereby ensuring reliability in the coding procedures.

A coding guide for sentiments was also developed and used to determine the article's overall tone (see Appendix 3). Positive, negative, neutral, and none are the categories for the sentiment dimension, which is measured by adjectives, connotations, and images. A positive sentiment is indicated by adjectives such as 'innovation', 'efficient', or 'adaptive'. A negative sentiment is alluded to by adjectives such as 'dystopian', 'intrusive', or 'unethical'.

Articles with an even mix of these are “neutral”, and articles that do not express clear sentiments are categorized as “none”.

4.3 Sampling

This study only considers newspapers, and sampling choices are informed by their reach, while also ensuring basic comparability between the countries. Reach is ambiguous as it can be measured either by digital visibility/web visitors or by print circulation. Comparability is more complex due to the cross-media differences in the media’s portrayal of AI. Informed by the literature overview, factors such as political orientation (Brennen et al., 2018), national versus economic focus (Vergeer, 2020), and levels of sensationalism (Semetko & Valkenburg, 2000) influence both the topic reported and sentiments expressed in AI news reporting.

Full comparability between Swedish and American newspapers is not possible due to their different political and media landscapes and cultures. However, acknowledging these cross-media differences, the following newspapers are considered: *Aftonbladet*, *Expressen*, *Svenska Dagbladet (SvD)*, *Dagens Nyheter (DN)*, *The New York Times (NYT)*, *The New York Post (NYP)*, *The Washington Post (WP)*, and *USA Today*. The four former are among the five largest national newspapers (both by digital visibility and print circulation) in Sweden and have different political orientations and media profiles. *Aftonbladet* and *Expressen* are both sensationalist evening newspapers; the former is independently social democratic and the latter independently liberal. *SvD* and *DN* are more serious morning newspapers, *SvD* is independently conservative, and *DN* is independently liberal (Larsson, 2024). *NYT*, *NYP*, *WP*, and *USA Today* are all national newspapers and are the second to fifth largest in the US by print circulation (Statista, 2024), and first to fourth largest by web visitors (Agility PR Solutions, 2025). Ensuring basic comparability, *The Wall Street Journal*, which is the largest newspaper by print and sixth by web visitors, is not included as it has an economic orientation rather than a national orientation like the others. *NYT*, *WP*, and *USA Today* are all left-leaning and non-sensationalist newspapers, whereas *NYP* is sensationalist and right-leaning (AllSides, n.d). Although most of the Swedish newspapers are right-leaning, whereas the opposite prevails among the US newspapers, this sample allows for comparisons. The newspapers have the broadest reach in their respective countries and collectively represent a

broad ideological spectrum, encompassing both sensationalist and non-sensationalist newspapers.

Beyond cross-media differences, the literature also highlights the temporal dimension of the news media's coverage of AI. However, inspired by Chuan et al. (2019), who were informed by Fast & Horvitz (2017), this study only samples articles post-2009 as news media coverage on AI increased dramatically since then. This study is not concerned with the temporal fluctuations in AI news reporting, and the demarcation allows for more recent empirical investigations.

4.4 Data collection

The data from the Swedish newspapers was collected by searching for “artificiell intelligens” in Retriever Medicarkivet. Data from *The New York Times*, *The Washington Post*, and *USA Today* were collected by searching for “Artificial intelligence” in Global Newsstream Collection. Data for *The New York Post* was collected by searching for “Artificial intelligence” in their news archives. These searches were filtered by year (2009-2025).

Table 1. Total search results for each newspaper.

Newspaper	Search results
Aftonbladet	741
Expressen	250
Svenska Dagbladet	1598
Dagens Nyheter	1014
The New York Times	668
The New York Post	816
The Washington Post	1091
USA Today	294

Despite the different number of search results, the annual distribution of the news articles across all newspapers remained similar. There were two spikes with higher publication frequencies, 2016-2018 and 2023-2025, with most of the news articles published in the latter interval. Up until 2016 news reporting on AI remained relatively low, there was also a decline between 2019 and 2022. The figure below provides an overview of the general annual distribution of news articles across the eight newspapers.

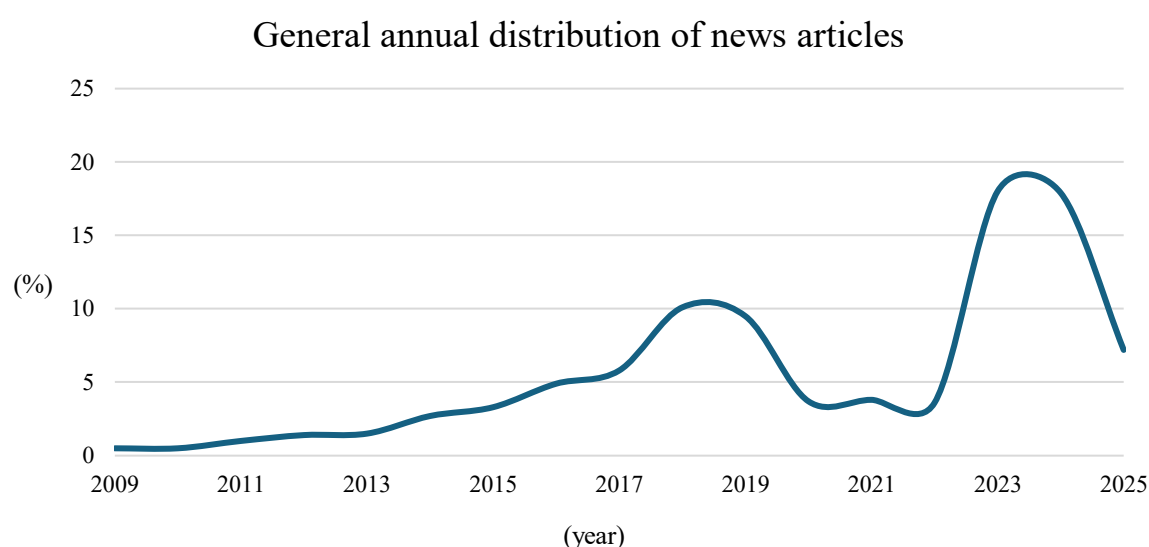


Figure 2. General annual distribution of news articles across all newspapers (percentage/year).

Due to the limited scope, only a portion of the articles that fit the sample criteria were evaluated. The selection was random, but with five exceptions. First, articles that only mentioned artificial intelligence once or in passing were excluded as these often dealt with other topics outside this study's scope. Second, book or movie reviews of pieces that contained the term 'artificial intelligence' were excluded. Third, only articles longer than 120 words were relevant. Fourth, the literature overview informed us on the temporal dimensions regarding topics and sentiments in AI news reporting, ensuring resemblance with the annual distribution presented above was therefore crucial. Lastly, there was a deliberate swap of country every 30th article to ensure reliability.

Guided by the coding manual, the news articles that fit the sample criteria were reviewed and processed with the corresponding category assigned in the coding schedule (see below). Informed by Entman (1991) about the various ways a frame may manifest, both text and visual images were analyzed to determine frame and sentiment. 'Year', 'country', 'newspaper', and 'type of article' are purely descriptive variables. 'Frame' was determined using the coding guide for frame categorization. Only one frame was assigned per article, and

where none of the meta-frames nor political frames corresponded to the article, either *Other Meta-frame* or *Other Political Frame* was assigned. Sentiments were determined by the coding guide for sentiment categorization.

‘Other frame’ and ‘comment’ are both informal categories only used when applicable, thus their exclusion from the coding manual, but inclusion in the coding schedule. The former represents an effort to capture the information loss. The previous literature guided the identification of other frames, as Chuan et al. (2019), Cools et al. (2024), Fast & Horvitz (2017), Ittefaq et al. (2025), Nguyen & Hekman (2024), Vergeer (2020), Brennen et al. (2018), and Sarisakaloğlu (2021) all identified frames not captured in this study’s theoretical framework. ‘Comment’ was used for articles that were either relevant for guiding the discussion or notably difficult to categorize in terms of sentiment and/or frame.

Year	Country	Newspaper	Article type	Frame	Sentiment	Other frame	Comment

Figure 3. Coding schedule for the quantitative content analysis.

Each article’s frame and sentiment were determined manually. Although computer-assisted content analyses can reduce the risk of inter- or intra-rater reliability and handle a larger body of text material more quickly, they cannot understand nuances in texts, especially pictures. They also tend to devote too little attention to interpretation and meaning (Bryman, 2016, p. 290). Most of the previous research uses computer-assisted analyses. However, these mainly investigate meta-frames, i.e., where there is less risk of overlaps compared to more niche inquiries such as the one in this study. Despite allowing for a larger sample, the limitation of overlapping frames in the theoretical framework requires attention to detail and understanding nuances, making computer-assisted analyses inappropriate.

Apart from this, manually determining the frames and sentiments also carries bearing as it provides a qualitative element to the study, which has been called for by scholars within the research inquiry. Nguyen & Hekman (2024) noted that their findings would have been strengthened by an additional qualitative investigation (p. 449), and Duberry & Hamidi (2021) similarly called for more qualitative inquiries (p. 772). Although these scholars call for mixed methods research designs, this study is strictly quantitative due to scope

limitations. However, incorporating qualitative insights opens the research field and provides nuances and depth to the quantitative findings. This, while aligning with the epistemological position adopted in the study. These qualitative insights were noted in the coding schedule's comment section.

Data collection lasted from 10/03/2025 to 02/04/2025 and each article was analyzed according to these procedures. A color-coding system was used to distinguish articles based on clarity. Articles that were unambiguous in sentiments and/or frame were color-coded green whereas those that were difficult to interpret were colored red. At the end of the data collection period, the 47 articles marked in red were once again processed.

4.5 Data analysis

The coding schedule was exported to IBM SPSS Statistics version 30 30.0.0.0 (172). Descriptive statistics for the meta-frames and political frames, and sentiment distribution were derived for each country. Due to scope limitations, the statistical tests that directly responded to the research question were prioritized. Cross-country comparisons were therefore subject to more extensive statistical analysis than within-country or within-frame variations. Apart from the research question, the type of variables also determines the choice of statistical tests. Since the main variables of interest (country, frame, and sentiment) all take categorical variables, chi-square goodness of fit, chi-square test of independence, Cramér's V, Fisher's exact test, and Fisher-Freeman-Halton exact test were used.

Chi-square goodness of fit is a type of Pearson's chi-square test that tests whether the observed distribution of a categorical variable differs from one's expectations (Turney, 2023a). It was used to test whether the sentiment distribution within each frame was skewed towards any sentiment. The sentiment distribution for each frame was therefore set against a uniform distribution (25% positive, 25% negative, 25% neutral, and 25% none). The chi-square goodness of fit carries four assumptions that must be satisfied. First, the data analyzed must consist of one categorical variable. Second, independence of observations, meaning there is no relationship between the cases. Third, mutually exclusive categories, which implies that one article cannot be assigned two sentiments, for example. Lastly, the expected frequency of each category of the variable of interest must be at least five (Davis, n.d). Given the small n-numbers for some political frames, the final assumption was breached at times,

but no alternative tests were conducted. First, chi-square goodness of fit is not used for examining country-level differences and is therefore not directly related to the research question. Second, some political frames had so few observations ($n < 10$) that most standard tests become unreliable. However, the descriptive statistics are nonetheless deemed interesting and relevant.

The four remaining statistical tests were used more extensively as they directly responded to the research question. The chi-square test of independence is a non-parametric hypothesis test used to determine whether two categorical variables are related (Turney, 2023b). It was used to determine whether the occurrences of specific frames were related to country, and whether the sentiments of frames were related to country. Note that the chi-square test of independence carries the same assumptions as the goodness of fit, except that it requires two categorical variables instead of one (Davis, n.d).

Cramér's V was used to determine the effect size (ES) of the chi-square test of independence i.e., measuring how strongly the two categorical variables are associated. $ES \leq 0.2$ means that the result is weak, $0.2 < ES \leq 0.6$ indicates a moderate effect size and $ES > 0.6$ suggests that the categories are strongly associated (IBM Cognos Analytics, 2025).

Fisher's exact test was used alongside the chi-square test of independence. Like the chi-square test of independence, it is used to assess whether two categorical variables are associated but is useful for smaller sample sizes. Fisher's exact test carries three main assumptions; (1) the data must be categorical, (2) independence of variables, and (3) the table must have fixed row and column totals. The expected frequencies in cells can be less than 5, thus diverging from the chi-square test of independence's assumptions. However, the test is typically used for 2x2 contingency tables and is inappropriate for larger tables. Fisher's exact test was therefore only used to determine whether country was associated with frame as both variables could be converted into binary (SPSS Analysis, n.d).

Lastly, the Fisher-Freeman-Halton exact test is an extension of Fisher's exact test and was used for contingency tables larger than 2x2. It was used to assess whether there was an association between country and sentiment for each frame as the contingency tables were 2x4 (VassarStats, n.d).

The descriptive statistics and results from the statistical tests formed the basis of the empirical analysis. These findings were coupled with some qualitative insights collected during that data collection and insights from the previous literature.

4.6 Limitations

Before delving into the results, three main limitations ought to be addressed. First, like many other quantitative methodologies, quantitative content analysis is poor at understanding reasons, causes, and motivations. Quantitative research is often criticized for lacking nuances and scholars sometimes conduct additional qualitative data collection exercises to mitigate this limitation (Bryman, 2016, p. 305). Aligning with the critical realist school of thought, the utility of qualitative investigations is acknowledged but a mixed methods design is, as previously mentioned, not viable. Manually analyzing the news articles is nonetheless assumed to provide some qualitative insights, thereby providing context and nuances to the research inquiry. Second, only one frame is assigned per article despite there being elements of several frames in some. This limitation is inevitable but was partly mitigated by manually analyzing each article, ensuring thorough coding procedures. Moreover, a comment was made on some of the articles that contained multiple frames which later served as a point of departure for the assessment of the theoretical framework. Third, apart from discrete dimensions as already elaborated on, intra-rater reliability, i.e., inconsistent coding over time, is another pitfall when conducting quantitative content analyses (Bryman, 2016, p. 298). The data collection period lasted approximately three weeks, contributing to the risk of inconsistent coding. This was mitigated by swapping US and Swedish news media every 30 articles, as well as color coding the articles and returning to those that were unclear or difficult to code.

To summarize, this study employs a quantitative content analysis of eight newspapers between 2009 and 2025 in Sweden and the US. The next section delves into the distribution of frames and sentiments for the respective countries.

5 Results

The following chapter presents the distribution of meta-frames, political frames, and sentiments across Swedish and American news media. Recall that the theoretical framework consists of the following meta-frames: *Business & Economy*, *Education*, *Work*, *Science & Technology*, *Politics*, and *Other Meta-frame*. As well as *Governance*, *Democratic Processes*, *National Security*, *Public Discourse & Information Disorder*, *International Partnership*, *International Competition*, and *Other Political Frame*, constituting the political frame framework and forming the basis of *Politics*.

Guided by the theoretical framework, this chapter serves as a point of departure for the subsequent discussion, where statistical tests and qualitative insights, combined with the previous literature, are employed to compare the countries' media portrayals of the political topics related to AI. Some clarifications and demarcations are necessary before delving into the results of the quantitative content analysis. First, this section presents an overview of the data and does not go into detail or elaborate on specific data points, as this is reserved for the discussion. Second, since this study is conducted within the field of political science, the chapter and the subsequent discussion only examine country-level differences and do not go into differences between specific newspapers or article types. Third, n-numbers for all frames are provided, but all figures are presented as percentages.

5.1 Sweden

326 articles were analyzed across *Aftonbladet* (84), *Expressen* (81), *Svenska Dagbladet* (80), and *Dagens Nyheter* (81), with each outlet contributing between 24.5% and 25.5% of the total Swedish sample. Due to differences in the number of search results, the share of articles analyzed from each outlet varied.

Table 2. The number of articles analyzed for each newspaper, their proportion (%) of the Swedish sample, and their proportion (%) relative to the total search results for each newspaper.

Newspaper	Number of articles	Percent of Swedish sample	Percent of newspaper's search results
Aftonbladet	84	25.8	11.3
Expressen	81	24.8	32.4
Svenska Dagbladet	80	24.5	5.0
Dagens Nyheter	81	24.8	8.0

The annual distribution of news articles resembles Figure 2, showing two distinct peaks. 19.6% of articles in the Swedish sample were published between 2018 and 2019, and 35.3% were published between 2023 and 2024. 21.1% were published before 2018, and 23.7% between 2020 and 2022. 9.8% of articles were published during 2025, entailing a certain disproportion since only a quarter of the year had passed during the data collection.

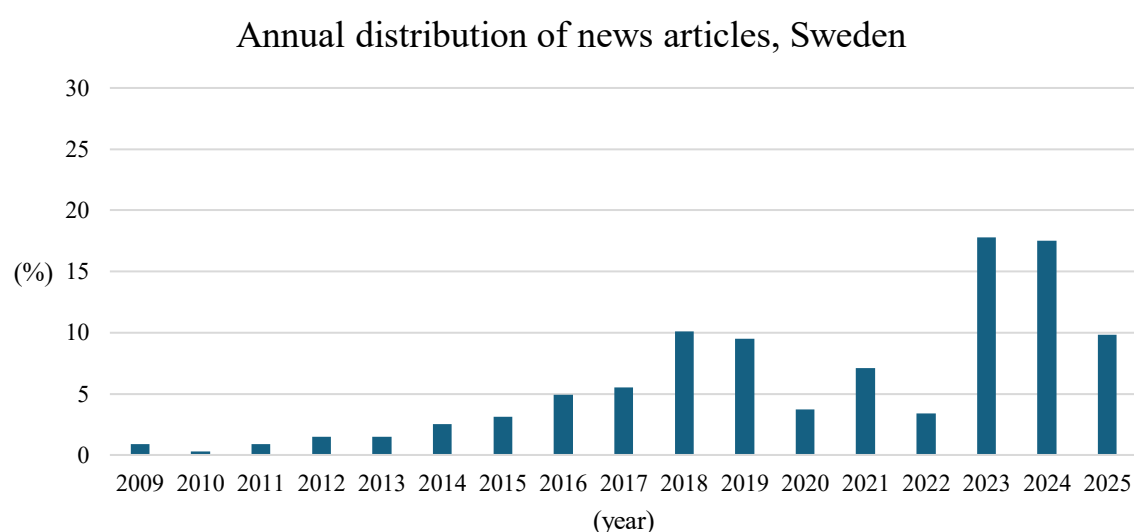


Figure 4. Annual distribution of news articles in the Swedish sample (percentage/year).

5.1.1 Meta-frames

This section presents the distribution of meta-frames and sentiments in Sweden, emphasizing the political meta-frame relative to the other meta-frames. *Politics* (26.1%, n=85) was the most frequent meta-frame, followed by *Other Meta-frame* (21.8%, n=71), *Business &*

Economy (20.6%, n=67), and *Science & Technology* (16.9%, n=55). The frames with the least occurrences were *Work* (8.0%, n=26) and *Education* (6.7%, n=22).

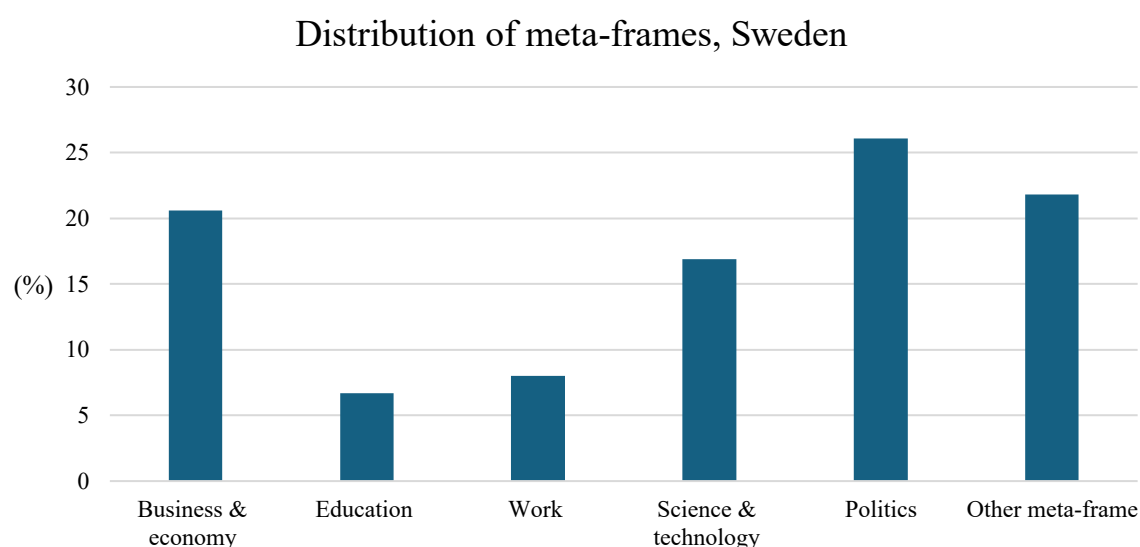


Figure 5. Distribution of meta-frames in the Swedish sample (percentage/frame).

The early discussion around AI (2009-2013) was dominated by *Science & Technology* and *Other Meta-frame*, but the discussion thereafter diversified gradually, and it was not until 2018 that all meta-frames appeared during the same year. *Politics* first appeared in 2013 and was together with *Business & Economy*, the last meta-frame to appear in the Swedish sample. However, despite its later arrival, it dominated the late AI news reporting and was the most occurring frame in 2022 (36.4%), 2023 (44.8%), and 2024 (36.8%).

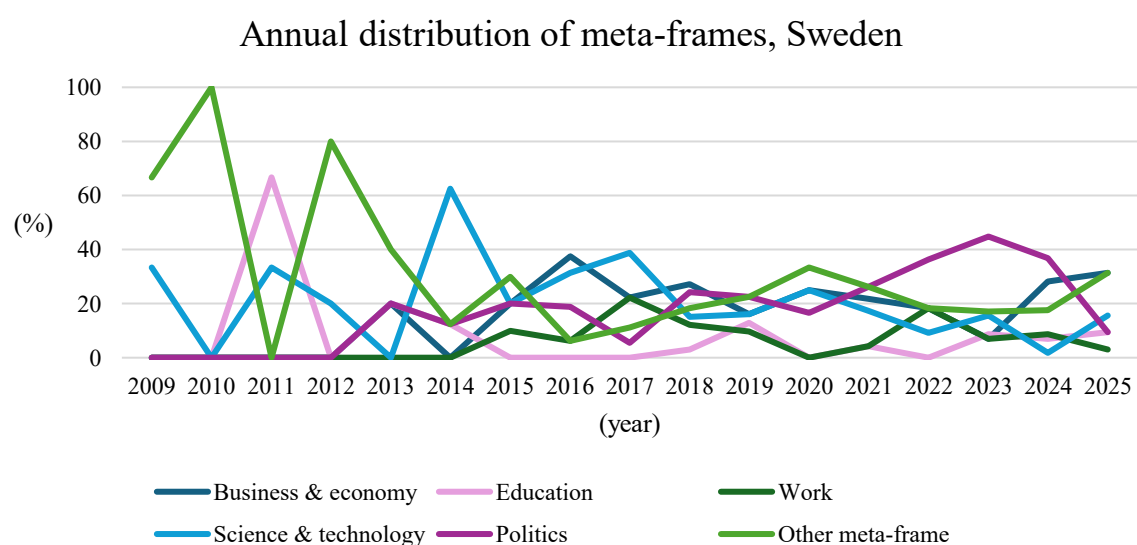


Figure 6. Annual distribution of meta-frames in the Swedish sample (percentage/year).

Overall, most articles expressed positive sentiments about AI (38.7%), followed by negative (29.4%), neutral (18.7%), and none (13.2%). However, the sentiment distribution within each frame differed considerably. The majority of articles within *Business & Economy* (53.7%) expressed positive sentiments about AI. Similarly, most articles within *Education* (40.9%) and *Science & Technology* (45.5%) expressed positive sentiments, but these had a more balanced sentiment distribution with more articles expressing negative and neutral sentiments. Most articles within *Work* expressed neutral sentiments (46.2%) but were closely followed by negative sentiments (38.5%). *Other Meta-frame* had an equal share of articles expressing positive and negative sentiments (35.2%). Lastly, most articles within *Politics* expressed negative sentiments about AI (43.5%) and this was the only meta-frame where negative sentiments were the most common. 32.9% of articles within *Politics* expressed positive sentiments, followed by neutral (12.9%) and none (10.6%).

Chi-square goodness of fit tests for each meta-frame were conducted to evaluate whether the distribution of sentiments were evenly distributed. The tests showed statistically significant differences between observed and expected sentiment frequencies for all meta-frames except for *Education* ($p=0.28$). Thus, confirming that sentiments were skewed in most meta-frames.

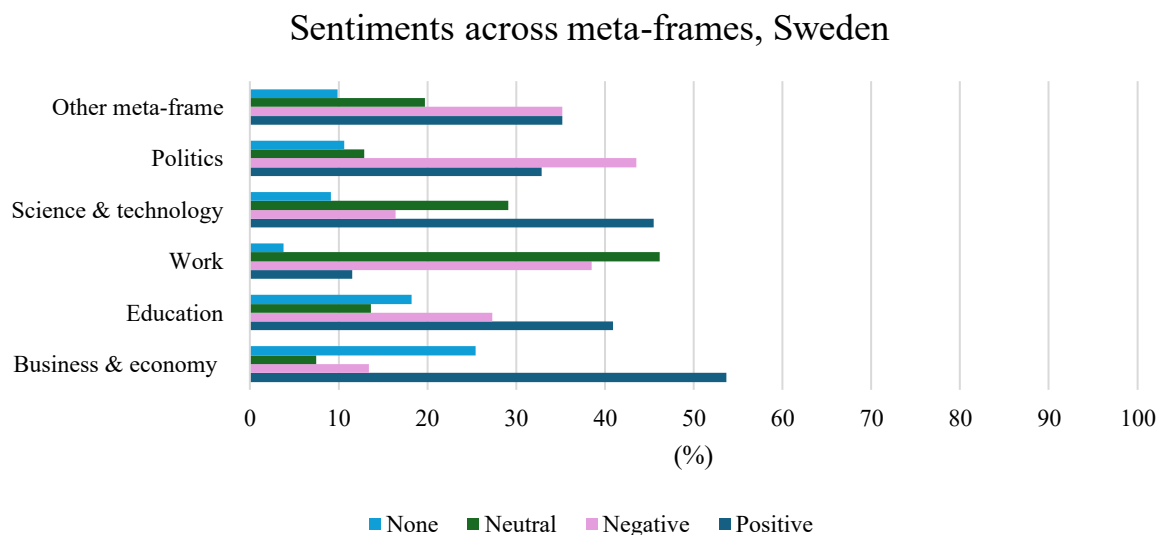


Figure 7. Sentiment distribution across meta-frames in the Swedish sample (sentiment/percentage).

5.1.2 Political frames

Focusing on the political meta-frame, this section investigates the political frames' distribution and sentiments relative to each other.

Governance was the most frequent political frame in the Swedish sample, accounting for 8.0% of all frames and 30.6% of the political frames (n=26). This was followed by *National Security* (6.1%, 23.5%, n=20), *Public Discourse & Information Disorder* (4.9%, 18.8%, n=16), *International Competition* (3.7%, 14.1%, n=12), *International Partnership* (1.8%, 7.1%, n=6) and lastly *Democratic Processes* (1.5%, 5.9%, n=5). No articles were assigned *Other Political Frame*.

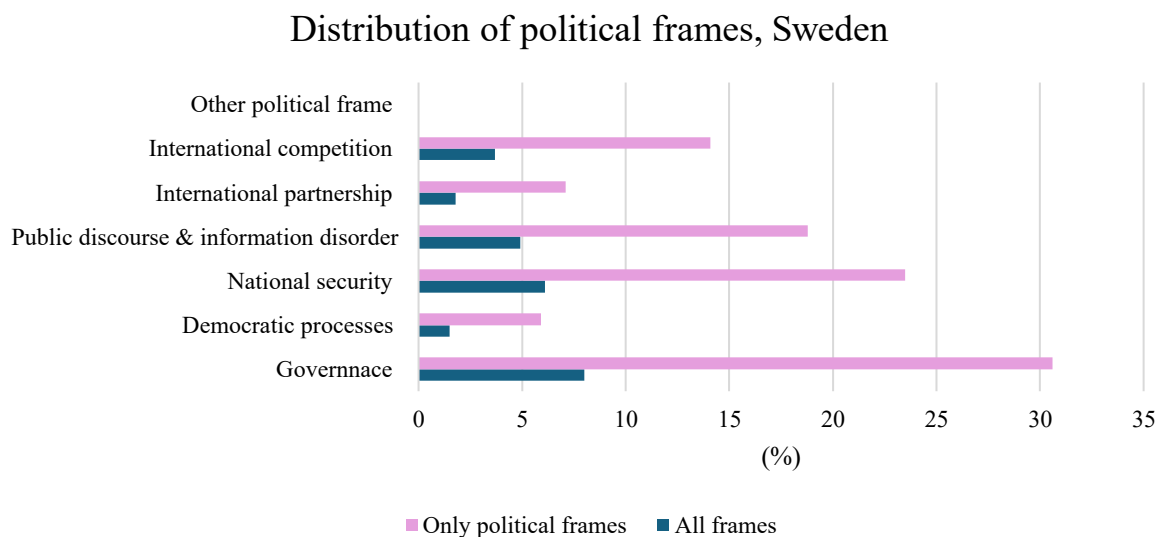


Figure 8. Distribution of political frames relative to all frames and political frames in the Swedish sample (frame/percentage).

National Security was the first political frame to appear in 2013 and dominated the early political discussion about AI. The political discussion around AI took off in 2017 when political topics diversified while gaining salience in Swedish news reporting relative to other meta-frames. The later political discussion (2020-2024) was dominated by governance issues, with the frame accounting for 18.2% of the total sample in 2018 and 19.0% in 2023.

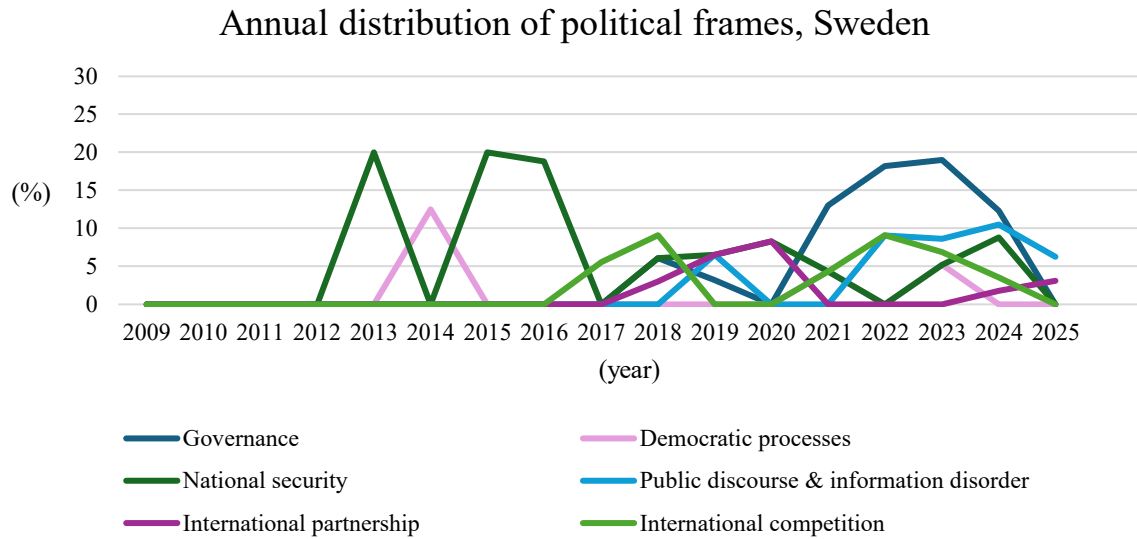


Figure 9. Annual distribution of political frames by full Swedish sample (n=326) (percentage/year).

The distribution of sentiments varied within each political frame. Within *Governance* 19.2% of articles expressed positive sentiments, 38.5% negative, 30.8% neutral, and 11.5% expressed no sentiment. Within *National Security* 20% were positive, 70% negative, 5% neutral, and 5% expressed no sentiment. Within *Public Discourse & Information Disorder* 12.5% were positive, 75% negative, 6.25% neutral, and 6.25% expressed no sentiment. Within *International Competition* 66.7% were positive, 8.3% negative, and 25% expressed no sentiment. Within *Democratic Processes* 60% were positive, 20% neutral and 20% expressed no sentiment, and 100% of articles within *International Partnership* expressed positive sentiments.

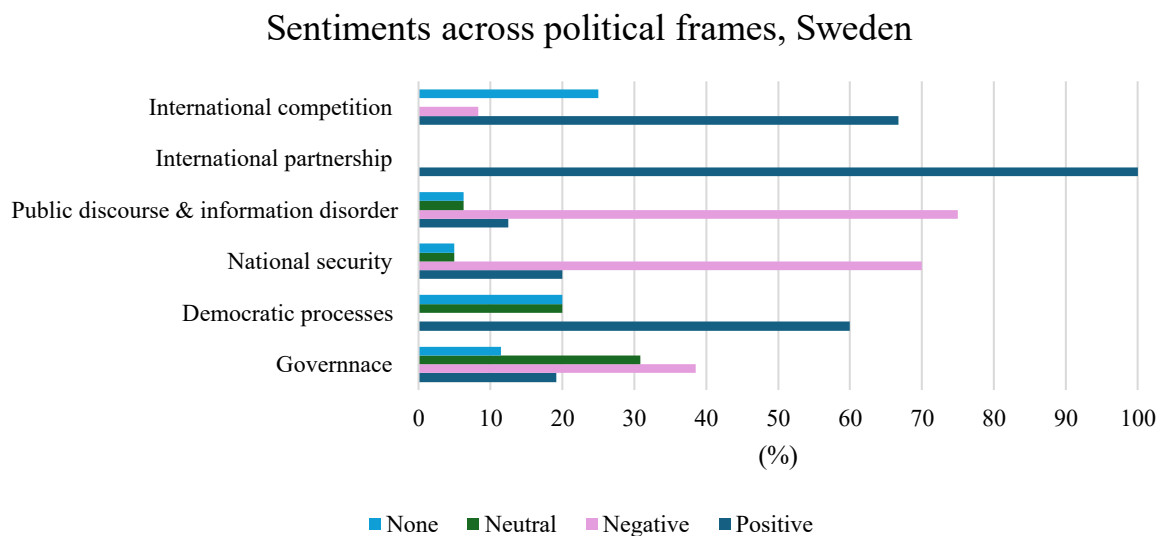


Figure 10. Sentiment distribution across political frames in the Swedish sample (sentiment/percentage).

The chi-square goodness of fit for each frame revealed that only *National Security* displayed a valid test and was statistically significant. Implying that this frame was the only political frame in the Swedish sample where sentiments were skewed towards a specific sentiment and where no assumptions were violated. *Public Discourse & Information Disorder* and *International Competition* were statistically significant, but the tests were invalid due to assumption violations (low n-numbers). *Governance* displayed a valid test but was not statistically significant. *Democratic Processes* was neither statistically significant nor met the assumptions of the test. The test could not be performed for *International Partnership* as 100% of the observations expressed the same sentiment.

Table 3. Chi-square goodness of fit for the political frames' sentiment distribution in the Swedish sample. Statistical significance is marked with an asterisk (*).

Frame	Asymp. Sig	Assumptions met
Governance	0.216	Yes
Democratic Processes	0.449	No (3 cells (100%) have expected frequencies less than 5. The minimum expected cell frequency is 1.7)
National Security	<0.001*	Yes
Public Discourse & Information Disorder	<0.001*	No (4 cells (100%) have expected frequencies less than 5. The minimum expected cell frequency is 4.0)
International Partnership	-	No (variable is constant chi-square test cannot be performed)
International Competition	0.039*	No (3 cells (100%) have expected frequencies less than 5. The minimum expected cell frequency is 4.0)

5.2 The United States

Like the previous subchapter, the following sections present the distribution of meta-frames, political frames, and sentiments across American news media. 326 articles were analyzed across *The New York Times* (79), *The New York Post* (86), *The Washington Post* (81), and *USA Today* (80) with each outlet contributing between 24.2% and 26.4% to the total American sample. Due to differences in the number of search results, the share of articles analyzed from each outlet varied.

Table 4. The number of articles analyzed for each newspaper, their proportion (%) of the US sample, and their proportion (%) relative to the total search results for each newspaper.

Newspaper	Number of articles	Percent of US sample	Percent of newspaper's search results
The New York Times	79	24.2	11.8
The New York Post	86	26.4	10.5
The Washington Post	81	24.8	7.4
USA Today	80	24.5	27.2

The annual distribution of news articles resembles Figure 2, showing two distinct peaks. 23.9% of the American articles were published between 2016 and 2018, and 39.5% between 2023 and 2024. 12.8% of articles were published before 2016, and 15.1% of articles were published between 2019 and 2022. Lastly, 8.6% of articles were published in 2025, entailing a certain disproportion since only a quarter of the year had passed during the data collection.

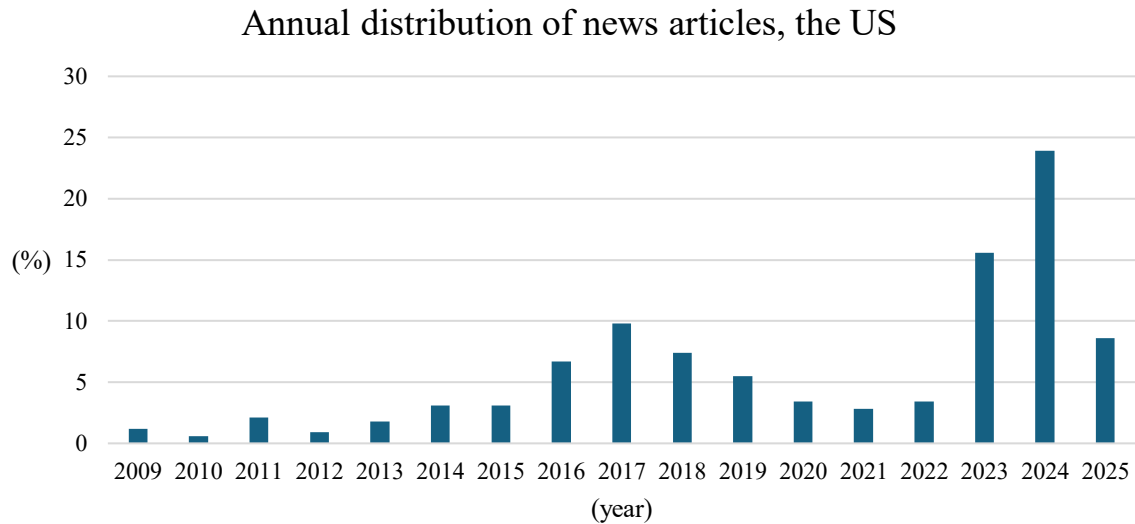


Figure 11. Annual distribution of news articles in the US sample (percentage/year).

5.2.1 Meta-frames

This section presents the distribution of meta-frames and sentiments in the US, emphasizing the political meta-frame relative to the other meta-frames. *Politics* was the most frequent meta-frame (27.3%, n=89), followed by *Science & Technology* (22.4%, n=73), *Other Meta-frame* (19.0%, n=62), and *Business & Economy* (16.9%, n=55). *Work* (10.1%, n=33) and *Education* (4.3%, n=14) were the two least frequent frames in US media.

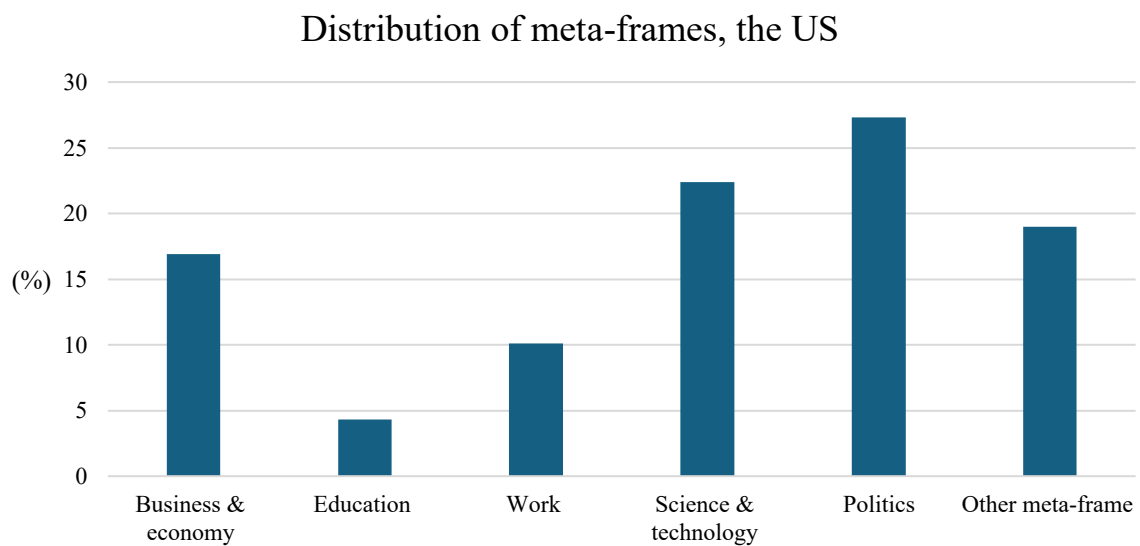


Figure 12. Distribution of meta-frames in the US sample (percentage/frame).

The annual distribution of meta-frames was relatively stable, but two frames stand out. First, *Science & Technology* dominated the early discussion about AI. With the exceptions of 2010, 2013, and 2014, *Science & Technology* was the most frequent frame each year until 2018. Second, *Politics* first appeared in 2015 and was therefore the last meta-frame to appear. However, it quickly surpassed the other meta-frames and was the most frequent in 2019 (38.9%), 2020 (26.4%), 2021 (55.6%), 2022 (36.4%), 2024 (37.2%), and 2025 (39.3%).

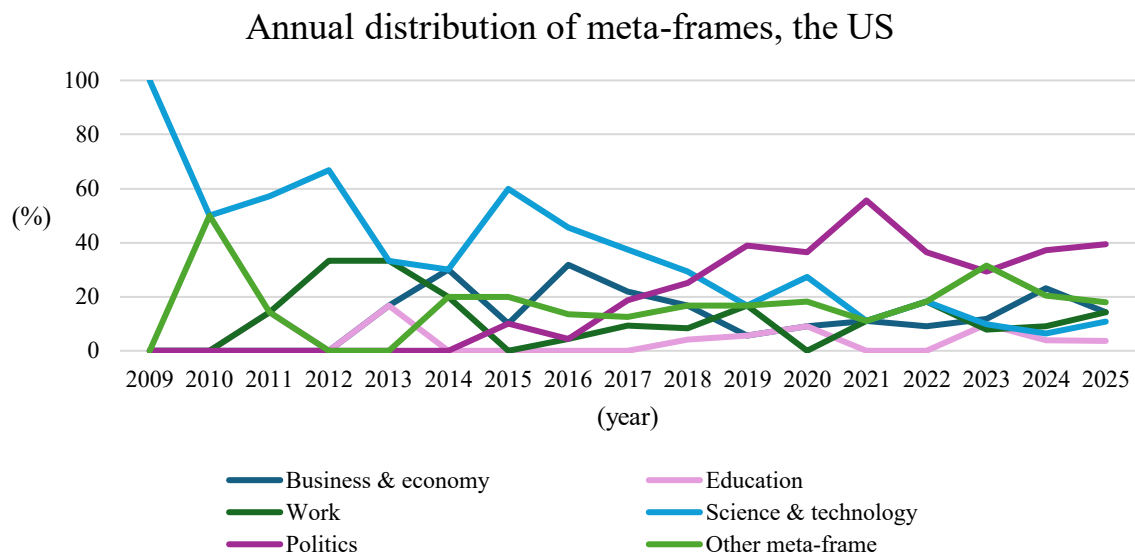


Figure 13. Annual distribution of meta-frames in the US sample (percentage/year).

The majority of American news articles expressed positive sentiments about AI (50.9%), followed by negative (25.8%), neutral (19.6%), and none (3.7%). However, like the Swedish sample, the sentiment distribution between the meta-frames varied. The majority of articles within *Business & Economy* (80%), *Science & Technology* (56.2%), and *Other Meta-frame* (53.2%) expressed positive sentiments about AI. Most articles within *Education* expressed neutral sentiments (42.9%), and *Work* was the most evenly distributed frame in which 30.3% of articles were positive, 33.3% negative, and 36.4% neutral. *Politics* was the only meta-frame where negative sentiments about AI were the most frequent (42.7%). This was followed by positive (38.2%), neutral (13.5%), and none (5.6%).

Chi-square goodness of fit tests for each meta-frame were conducted to evaluate whether the distribution of sentiments were evenly distributed. The tests were valid and statistically significant for *Business & Economy*, *Science & Technology*, *Other Meta-frame*, and *Politics*, meaning that these frames were skewed towards these particular sentiments. Neither *Work* ($p=0.91$) nor *Education* ($p=0.29$) showed statistical significance, but whereas the former's test was valid, the latter's was invalid due to low expected cell counts.

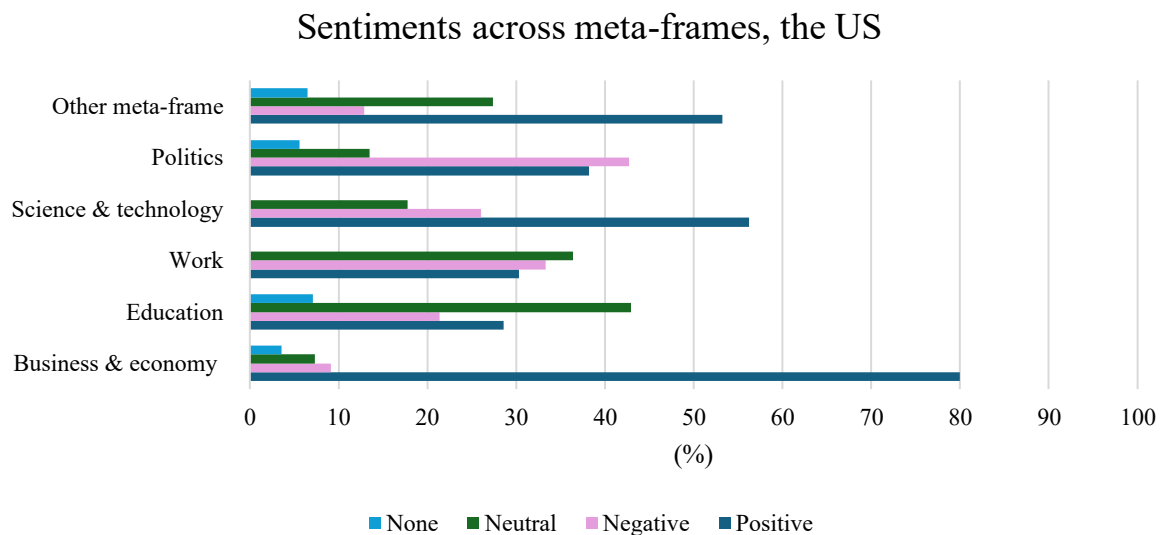


Figure 14. Sentiment distribution across meta-frames in the US sample (sentiment/percentage).

5.2.2 Political frames

The following section investigates the distribution and sentiments of the political frames relative to each other. *Public Discourse & Information Disorder* was the most frequent political frame, accounting for 8.9% of all frames and 32.6% of the political frames ($n=29$). This was followed by *International Competition* (6.7%, 24.7%, $n=22$) and *National Security* (5.5%, 20.2%, $n=18$). *Governance* (3.4%, 12.4%, $n=11$), *Democratic Processes* (1.5%, 5.6%, $n=5$), and *International Partnership* (1.2%, 4.5%, $n=4$) were the three least frequent frames, and *Other Political Frame* did not appear.

Distribution of political frames, the US

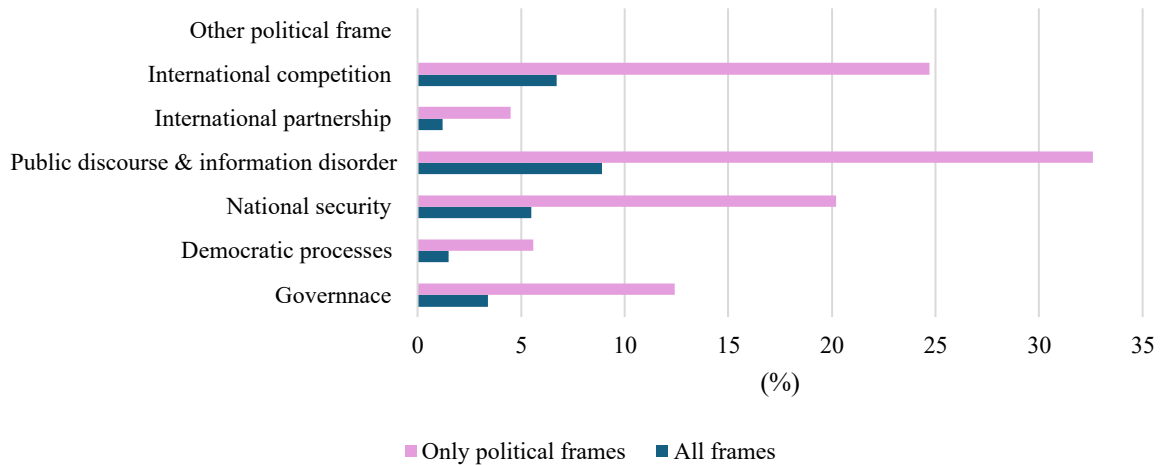


Figure 15. Distribution of political frames relative to all meta-frames and political frames in the US sample (frame/percentage).

As suggested in Figure 13, the political discussion around AI did not start until 2015 when discussions about international AI competition took place. *Governance* was the last political frame to appear in US media in 2019 but accounted for about 9% of the total frame distribution during 2020, 2022, and 2023, respectively. The two most frequent political frames, *Public Discourse & Information Disorder* and *International Competition*, follow two distinct patterns. Whereas the former experienced a steady increase throughout the years, the latter occurred more unevenly, with peaks in 2019 and 2021.

Annual distribution of political frames, the US

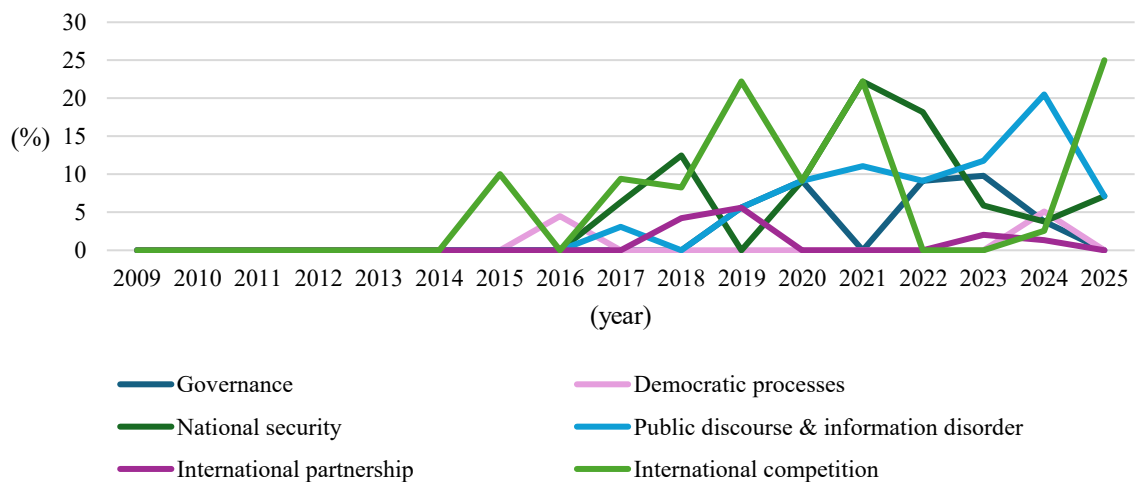


Figure 16. Annual distribution of political frames by full US sample (n=326) (percentage/year).

Most articles within *Public Discourse & Information Disorder* (75.9%) expressed negative sentiments about AI, followed by positive and none (10.3% respectively), and neutral (3.4%). The majority of articles within *Governance* (72.2%) also expressed negative sentiments which was followed by neutral sentiments (27.3%). The majority of articles within *National Security* (61.1%) expressed positive sentiments about AI, followed by negative (22.2%) and neutral (16.7%). Similarly, the majority of articles within *International Competition* (86.4%) expressed positive sentiments about AI which was followed by neutral (9.1%), and none (4.5%). Lastly, *International Partnership* and *Democratic Processes* were relatively mixed. 50% of articles were negative, 25% positive and 25% neutral in the former, and 40% were negative, 40% neutral, and 20% of articles expressed no sentiments in the latter.

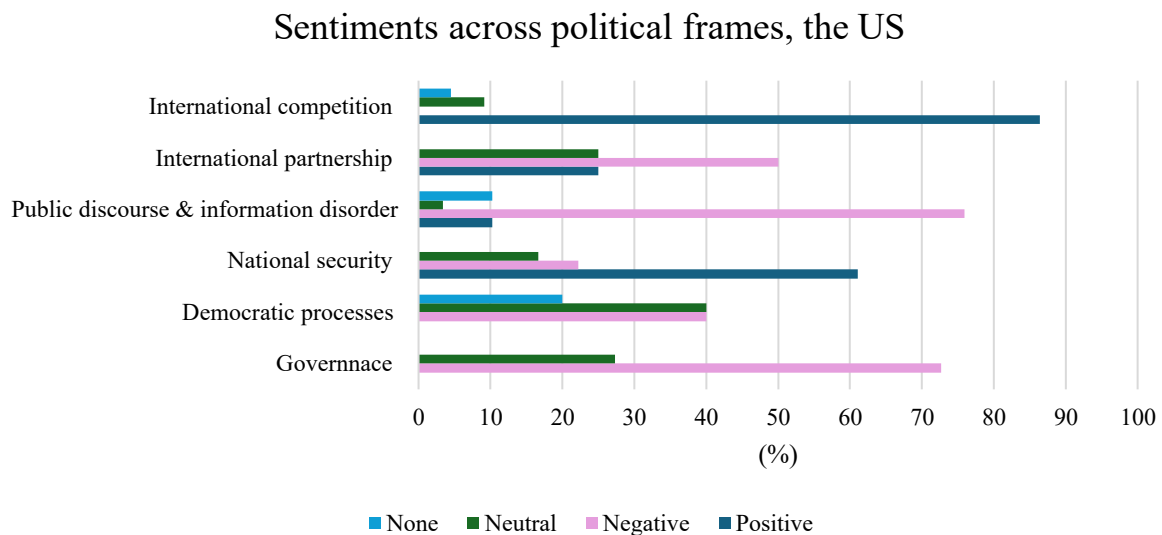


Figure 17. Sentiment distribution across political frames in the US sample (frame/percentage).

The chi-square goodness of fit for each frame revealed that *National Security*, *Public Discourse & Information Disorder*, and *International Competition* displayed valid tests and were statistically significant. This means that these frames had a skewed sentiment distribution and that no test assumptions were violated. *Governance* yielded a valid test but was not statistically significant. *Democratic Processes* and *International Partnership* were not statistically significant or valid due to assumption violations caused by low n-numbers.

Table 5. Chi-square goodness of fit for the political frames' sentiment distribution in the US sample. Statistical significance is marked with an asterisk (*).

Frame	Asymp. Sig	Assumptions met
Governance	0.132	Yes
Democratic Processes	0.819	No (3 cells (100%) have expected frequencies less than 5. The minimum expected cell frequency is 1.7).
National Security	0.042*	Yes
Public Discourse & Information Disorder	< 0.001*	Yes
International Partnership	0.779	No (3 cells (100%) have expected frequencies less than 5. The minimum expected cell frequency is 1.3).
International Competition	< 0.001*	Yes

6 Discussion

Informed by the previous chapter, the following sections aim to answer the research question of the study: *what are the differences and similarities in the news media's portrayal of political topics related to artificial intelligence in the United States and Sweden?*

This is achieved by employing and analyzing descriptive statistics and statistical tests, and by drawing on the previous literature and using some qualitative insights. The theoretical framework inspires the structure of the chapter. First, a comparison of the salience and sentiments of the meta-frames in Swedish and US media. Second, and lengthiest, a cross-country comparison of each political frame's salience and sentiment distribution. Third, an evaluation of the theoretical framework based on the limitations presented in previous chapters. Fourth, a brief discussion on the limitations of the empirical analysis, as well as some future research avenues.

Some demarcations and clarifications are required. First, like the previous chapter, the discussion is delimited to investigating country-level differences, and discussions about non-political meta-frames, as well as differences between newspapers are absent. Second, the research question calls for an identification of differences and similarities rather than establishing causation. However, drawing on some political events in the respective countries, the discussion, at times, *speculates* on possible causes for the differences and similarities. Third, and related to the second, this study theoretically aligns with frame theory, thus the assumption that the media's discussion on AI mirrors both the political and public discussions on the inquiry. Speculations about causation, therefore, carry the theoretical assumptions of frame theory. Fourth, among the various factors Entman (1993) notes as determining whether a piece of information becomes salient, this study places a certain emphasis on repetition and frequency as indicators of salience. Thereby the assumption that highly frequent frames also are salient.

6.1 Meta-framings of AI

Focusing on *Politics*, this section evaluates the distribution of meta-frames and sentiments across the two countries by discussing (1) the sentiment distribution, (2) the occurrences of *Politics* relative to the other meta-frames, and (3) the politicization of news events.

Amongst the most prevailing differences between the countries at the meta-level is the distribution of sentiments. In Sweden, 38.8% of articles were positive, 29.4% negative, 18.7% neutral, and 13.2% expressed no sentiments. In the US, 50.9% of articles were positive, 25.8% negative, 19.6% neutral, and 3.7% expressed no sentiment. Both the chi-square test of independence ($p < 0.001$) and Fisher-Freeman-Halton exact test ($p < 0.00$) were statistically significant, implying that sentiment and country are related. This implies that the sentiment distribution is unlikely to be random. Coupled with the descriptive statistics above, this suggests that US news media is significantly more positive towards AI compared to Swedish news media which provides a more balanced view of the inquiry. However, although the association is statistically significant, it remains weak as indicated by Cramér's V ($ES = 0.191$).

Drawing on the past literature, Duberry & Hamidi (2021) also found that European newspapers provide a more balanced view of the risks and benefits of AI compared to US newspapers (p. 758). The diverging sentiment distributions can be ascribed to a variety of factors. However, one possible explanation is that the country's respective news media mirror their national priorities and objectives. The US is the world leader in AI and has a nationalist and market-driven approach to AI development and deployment. AI is often seen as a strategic asset contributing to US hegemony and the general discussion around the technology is therefore positive (Bareis & Katzenbach, 2022). Sweden, on the other hand, primarily operates within the EU which takes a more cautious approach where establishing safe and trustworthy AI are among the key objectives, making the media discourse more balanced (European Commission, 2025).

Despite diverging in overall sentiment distribution, the countries are highly convergent in the sentiment distribution within *Politics*. Most articles within *Politics* expressed negative sentiments about AI both in Sweden (43.5%) and the US (42.7%) which was followed by positive sentiments (32.9% and 38.2%, respectively). Recall that the chi-square goodness of

fit tests for *Politics* in the respective countries was statistically significant. This means that the distribution of sentiments within *Politics* was skewed towards negative sentiments. *Politics* was also the only meta-frame where most articles were negative, which together with the findings above suggests that *Politics* was the most critical meta-frame in both countries. These conclusions resonate with Cools et al. (2024), who noted that dystopian frames often prevailed in topics concerning the politics of AI (p. 16). One possible explanation is that many of the issues raised within *Politics*, such as surveillance, election fraud, and deepfakes, are critical, explaining why both countries displayed similar sentiment distribution within *Politics* despite having different overall sentiment distributions.

Moreover, the countries are strikingly similar in terms of the occurrence and annual distribution of *Politics* relative to the other meta-frames. The political frame was the most frequent frame in both Sweden (26.1%) and the US (27.3%) and although being the last to emerge in both countries (2013 in Sweden and 2015 in the US), political issues have dominated the AI news reporting in recent years. The early discussions about AI in both countries largely revolved around technological breakthroughs mirroring the rapid advancements of AI research. Most articles addressed issues such as IBM's Watson winning Jeopardy or businesses investing in AI to gain a competitive advantage. However, as the technology advanced and increasingly moved from the lab and into society, it became subject to political discussions. From primarily reporting on the technical aspects of AI, the discussion in the late 2010s increasingly revolved around more critical political issues such as autonomous weapons, AI regulation, and AI-generated deepfakes.

The late arrival of the political discussions around AI resonates with the existing literature. Cools et al. (2024) found that political discussions around AI peaked during the late 2010s and Chuan et al. (2019) noted that political issues related to AI have increasingly become prominent in the media (p. 5). Similarly, Ittefaq et al. (2025) noted that issues relating to regulation, ethics, and data privacy received minimal attention until 2015 but that they since then have received significant attention (p.11). Aligning with the qualitative insights in previous paragraphs, Chuan et al. (2019) speculate that the increase in the media's reporting on the politics of AI is due to the growing impact the technology has on people.

However, at first glance, the salience of *Politics* relative to other meta-frames in this study diverges somewhat from the existing literature. Chuan et al. (2019) found that 'policy and

politics' accounted for 12% of the total sample in their study of five major American newspapers' coverage of AI between 2009 and 2018 (p. 3). Nguyen & Hekman (2024) concluded that 'AI & Politics' was the least frequent meta-frame in their study of four internationally renowned newspapers between 2010 and 2021, accounting for 20% of the sample (p. 444). This study, on the other hand, found that over a quarter of news articles in Swedish and US media reported on political issues of AI. The differences in the salience of *Politics* most likely stem from sampling differences. This study analyzed articles published between 2009 and 2025, with most articles assigned to *Politics* published between 2022 and 2025. Chuan et al. (2019) sampled articles up to 2018, and Nguyen & Hekman (2024) up to 2021. Adjusting this study's sample to 2009-2018 reveals that *Politics* accounted for 15.7% of the total sample in Sweden and 11.7% in the US, thereby aligning with Chuan et al.'s (2019) findings. Similarly, 18.5% of articles in Sweden and 19.0% in the US fell within the political frame when limiting the sample to 2009-2021, thus aligning with Nguyen & Hekman's (2024) findings. The seeming differences in the salience of *Politics* between this study and the previous literature most likely stem from methodological differences.

Lastly, some impactful and prominent news events were reported by most newspapers, allowing for comparisons regarding what constitutes a political issue. The politicization of specific events related to AI were similar between the countries except for DeepSeek which is a Chinese AI model that was released in 2025. Most US articles involving DeepSeek discussed China's AI capabilities relative to the US's. The articles had an alarming tone, and the AI model was portrayed as a threat to the US's strategic AI advantages. For these reasons, many US articles discussing DeepSeek were placed within *International Competition*, which is a political frame. In Sweden, on the other hand, articles discussing DeepSeek were primarily placed within *Business & Economy* or *Science & Technology*, i.e., non-political frames. One share of articles in Sweden discussed the financial implications of DeepSeek, focusing on the stock market's reaction to the AI model. Another share of articles portrayed DeepSeek as a technological breakthrough, emphasizing its relatively low production cost and high performance despite limited access to advanced chips. Why US media politicized DeepSeek whereas Swedish media did not most likely relate to the rivalry between China and the US, where technological supremacy is an important factor for achieving political and economic dominance. China's technological advancements therefore become a political issue in the US but not in Sweden.

6.2 Political framings of AI

The following section compares the salience and sentiment distribution for all political frames. However, note that since neither of the countries had *Other Political Frame*, it is absent from this subchapter. Moreover, although the same analytical procedures were conducted for each political frame, the content of the respective discussions differ. All political frames were subject to the chi-square test of independence, Cramér's V, Fisher's exact test, and Fisher-Freeman-Halton exact test for evaluating country-level differences in frame and sentiment. Some qualitative assessments and cross-comparisons with the existing literature were also conducted. Due to a somewhat limited scope, the results of all analytical procedures are not delved into and factors such as data availability and outcome of the statistical test determined the topics for discussion. In some cases, the discussion was primarily guided by the statistical test results, while others drew more on qualitative insights and existing literature.

Below are some of the descriptive statistics for each political frame and the results of the statistical tests. No assumptions were violated in the tests examining the association between frame and country. However, the chi-square test of independence examining the association between country and sentiments for the respective frames were all invalid due to assumption violations caused by low n-numbers. These results are still presented for transparency and because they largely align with the results of the Fisher-Freeman-Halton exact test, all of which were valid.

Table 6. Association between country and frame. Distribution of each political frame across the total sample for the respective country, and the p-values for the chi-square test of independence, Cramér's V, and Fisher's exact test. Statistical significance is marked with an asterisk (*).

Frame	Occurrences (total sample)		Association country & frame		
	SWE	US	Pearson chi-square. Asymp. Sig. (2- sided)	Cramér's V	Fisher's Exact Test Exact Sig. (2-sided)
Governance	8%	3.4%	0.011*	0.099	0.017*
Democratic Processes	1.5%	1.5%	1.00	0.00	1.00
National Security	6.1%	5.5%	0.738	0.013	0.867
Public Discourse & Information Disorder	4.9%	8.9%	0.045*	0.079	0.063
International Partnership	1.8%	1.2%	0.524	0.025	0.752
International Competition	3.7%	6.7%	0.078	0.069	0.112

Table 7. Association between country and sentiment per frame. Rounded sentiment distribution of each political frame, and the p-values for the chi-square test of independence, Cramér's V, and Fisher-Freeman-Halton exact test. Statistical significance is marked with an asterisk (*).

Frame	Sentiment distribution (%)		Association country & sentiment (per frame)		
	Pos/Neg/Neutral/None				
	SWE	US	Pearson chi-square. Asymp. Sig. (2-sided)	Cramér's V	Fisher-Freeman-Halton Exact Test Exact Sig. (2-sided)
Governance	19/39/31/12	0/73/23/0	0.152	0.378	0.200
Democratic Processes	60/0/20/20	0/40/40/20	0.149	0.730	0.286
National Security	20/70/5/5	61/22/17/0	0.013*	0.532	0.005*
Public Discourse & Information Disorder	13/75/6/6	10/76/3/10	0.936	0.097	1.000
International Partnership	100/0/0/0	15/50/25/0	0.040*	0.802	0.033*
International Competition	67/8/0/25	86/0/9/5	0.108	0.422	0.098

6.2.1 Governance

Governance concerns news content covering governmental interventions and discussions about AI regulation. The frame was the most salient political frame in Swedish media with an occurrence of 30.6% of the political frames or 8% for the total Swedish sample. In US media, on the other hand, *Governance* was the fourth most salient political frame at 12.4%, or 3.4% of the total sample. Both the chi-square test of independence ($p=0.011$ & $ES=0.099$) and Fisher's exact test ($p=0.017$) (see Table 6) were statistically significant, implying that *Governance* and country are related to each other, with Swedish media reporting more on issues relating to AI regulation and governance compared to US media. This can partly be attributed to the countries' different AI priorities and objectives. Sweden aligns with the EU's strategy which focuses on AI trust and are pioneers in AI governance with its AI Act (European Commission, 2025). The US does not have bipartisan support regarding AI regulation, and there is a strong belief, especially among Republicans, that regulation stifles innovation (The White House, 2025). The political debate in the US about AI regulation has been much slower and not as forceful as in Sweden, explaining why the media discourse around the issue differs between the countries.

Despite diverging in overall salience, the countries converge in the annual distribution of the occurrence of the frame. *Governance*, together with *International Partnership*, was the second to last political frame to appear in Swedish media in 2018. Similarly, it appeared first in 2019 in US media and was the last political frame to emerge. Interestingly, both countries experienced a peak in the occurrence of *Governance* during the same time (2022-2023). An average of 18.6% of Swedish articles reported on governance issues each year during the period, which is a threefold increase relative to the average occurrence of the frame between 2018 and 2022 (5.6%). In the US, an average of 9.5% of all articles reported on governance issues between 2022 and 2023, which is almost a twofold increase compared to the yearly average between 2019 and 2021 (4.9%) (see Figures 9 & 16).

Politics was the last meta-frame to appear in both countries, and *Governance* was among the last political frames to appear. It was previously noted that critical inquiries related to AI and politics in the US and Swedish media emerged in the late 2010s. However, critical political inquiries such as autonomous weapons and election interferences probably developed faster than lawmakers and policymakers were acting, explaining the late arrival of *Governance* in

the news media's reporting. The previous literature also suggests that AI regulation is often believed to mitigate the dangers of AI (Totlani, 2023). Each country's respective administration responded to the critical voices roughly at the same time. The European Commission proposed the AI Act in April 2021, which was agreed upon in the European Parliament and the Council in December 2023 (European Commission, 2024). Meanwhile, in October 2023, then-President Biden signed a comprehensive executive order laying out the policy directions for safe and sustainable AI development and deployment (Executive Order No. 14,110, 2023). Notably, these two political events coincided with the peaks in the occurrence of *Governance* in both countries' media landscapes. Both countries had a late arrival of *Governance* but a sudden surge from 2022 to 2023, which can be attributed to the fact that lawmakers "caught up" to the critical discussions and acted on them roughly at the same time.

6.2.2 Democratic Processes

Democratic Processes relate to issues such as democratic institutions, elections, civic engagement, and decision-making. The share of articles containing the frame was equal for Sweden and the US, accounting for 1.5% of the total sample or 5.9% among the political frames, respectively. Disregarding *Other Political Frame* which was absent in both countries, *Democratic Processes* was the least frequent political frame in Sweden, and the second to least frequent in the US.

Although the occurrences converged, the topics of discussion within the frame diverged. Most Swedish articles discussed AI's potential in fostering and strengthening democracy. One article in *Dagens Nyheter* reported that Pakistan's former prime minister Imran Khan—who was incarcerated at the time, was able to bypass the state's attempt to stop his party from holding rallies and spreading its message ahead of the election. This, by launching an election campaign using a voice created by AI (Petersson, 2023). In a similar vein, an opinion piece published in *Dagens Nyheter* argued that AI could improve democracy by enhancing transparency, integrity, and openness (Ågren, 2023). In US media, on the other hand, most articles assigned to *Democratic Processes* covered the US elections. One article published in *The Washington Post* discussed the US sanctions against Russia and Iran over attempted election interferences (Stein, 2024). Another article from *The New York Post*

reported that a reliable AI system had predicted that Trump would win the 2016 election (Steinbuch, 2016).

US and Swedish media, to an extent, position themselves on two sides of the academic debate regarding AI's effect on democracy. Some hold that AI can nurture public debate, connect people, and improve and optimize information flow (Schippers, 2020). Others point to AI's ability to harm democracy across the individual, the group, the institutional, and the systemic level through deepfakes, surveillance, and election interference, for example (Jungherr, 2023). Recall the descriptive statistics and the results of the respective chi-square goodness of fit for *Democratic Processes*. In Sweden, most (60%) of articles were positive about AI, while in the US 40% were negative, while another 40% were neutral. Neither of the countries displayed valid chi-square goodness of fit tests due to test violations caused by low n-numbers, and neither rejected the null hypothesis. Neither of the chi-square test of independence ($p=0.149$) nor the Fisher-Freeman-Halton exact test ($p=0.286$) examining the association between country and sentiment for the frame were statistically significant (see Table 7). Drawing valid and generalizable quantitative conclusions for *Democratic Processes* is difficult due to the low n-numbers ($n=5$ for the respective countries). However, grounding the discussion solely on the descriptive statistics and the qualitative insights, it is interesting that Swedish media highlighted the positive effects of AI on democracy, whereas the opposite often prevailed in the US media. This is interesting insofar as US media, in general, was found to be more positive about AI than Swedish media.

US and Swedish media displayed a similar sporadic temporal pattern regarding *Democratic Processes*. The frame was the second political frame to appear in both countries (2014 in Sweden and 2016 in the US) and was not evenly distributed. In Sweden, the frame appeared in 2014, 2021, 2022, and 2023, whereas it only appeared in 2016 and 2024 in US media. While the annual occurrence of the frame in Sweden appears random, *Democratic Processes* only appeared during an election year in the US. Why it did not appear around the 2020 election might be a result of the general decline in AI news reporting at the time (see Figures 9 & 16).

6.2.3 National Security

National Security includes discussions related to national security, sovereignty, and national strategic interests. It was the second most frequent political frame in Swedish media, accounting for 23.5% of the political frames or 6.1% of all frames. In comparison, it was the third most frequent political frame in US media (20.2% and 5.5% respectively). The frame occurred at comparable frequencies in both countries and neither the chi-square test of independence ($p = 0.74$) nor Fisher's exact test ($p = 0.87$) revealed statistical significance, meaning that *National Security* was not related to country (see Table 6).

However, differences emerge when examining the sentiment distribution within *National Security* between the countries. In Swedish media, most articles within the frame expressed negative sentiments about AI (70%). In the US, on the contrary, most articles expressed positive sentiments (66.6%). Recall that the chi-square goodness of fit for the respective countries revealed statistical significance, suggesting that the observed distribution differed from the expectation of an even distribution. Chi-square test of independence and Fisher-Freeman-Halton exact test were employed to evaluate whether sentiment distribution within *National Security* significantly differed between the countries. The chi-square test of independence showed statistical significance ($p = 0.013$) but since 4 cells had an expected count less than 5, a key assumption of the test was violated. Fisher-Freeman-Halton exact test, which is more suitable for smaller sample sizes, was, on the other hand, valid and suggested statistical significance ($p = 0.005$) (see Table 7). This implies that sentiments within *National Security* are associated with country, thus the conclusion that Swedish articles covering national security issues are generally more negative towards AI than US articles that tend to be more positive about such inquiries. Since Cramér's V is used to measure the effect size for the chi-square test of independence the results should be taken with caution since the test was invalid. However, interestingly $ES = 0.53$ which indicates a moderate effect size.

The theoretical framework and the topics within *National Security* might explain why US articles were significantly more positive than Swedish articles in their reporting on national security issues. Recall that this study diverged from Nguyen & Hekman's (2024) frame 'AI & weapons' and conceptualized it more broadly to include other national security issues such as surveillance and sovereignty. The assessment of the topics within *National Security*

reveals that most articles did discuss military applications of AI. In Swedish news articles, the discussions often revolved around other countries' AI military applications, highlighting or problematizing the ethical concerns or adverse security implications. An example is an article published in *Svenska Dagbladet* that reported that Chinese missiles, at the time, had recently become equipped with AI which raised security concerns among its neighboring states (Augustsson, 2016). However, in the US, which is the world's most significant military power, many articles discussed how AI could enhance the country's military capabilities, thus the positive sentiments. One opinion piece published in *The Washington Post*, for example, argued that AI and machine learning help soldiers perform their tasks more efficiently, accurately, and quickly and did not raise issues associated with autonomous weapons systems like many Swedish articles (Probasco, 2024).

6.2.4 Public Discourse & Information Disorder

Public Discourse & Information Disorder capture issues such as the automation of the digital public sphere, fake news, and deepfakes and was prominent in both countries' news media landscapes. In Sweden, the frame accounted for 4.9% of the total sample or 18.8% among the political frames and was the third most salient political frame. In US media, the frame was the most salient political frame accounting for 32.6% of the political frames or 8.9% of the full US sample. Chi-square test of independence and Fisher's exact test assessed whether the occurrence of *Public Discourse & Information Disorder* and country were associated. Like the respective tests for the other political frames, the p-values differed. However, for *Public Discourse & Information Disorder*, the results fell on opposite sides of the 0.05 significance level. The chi-square test of independence revealed statistical significance ($p=0.045$), albeit a low effect size ($ES=0.079$), whereas Fisher's exact test revealed no statistical significance ($p=0.063$) (see Table 6). However, recall the assumptions of both tests. All values are more than 5, and while Fisher's exact test is theoretically valid for larger sample sizes, it is computationally more intensive, making the chi-square test of independence more appropriate. More weight is therefore put on the chi-square test than on Fisher's exact test. Taken together, these results suggest a weak association between *Public Discourse & Information Disorder* and country, with US media reporting slightly more about issues such as fake news and deepfakes. One possible explanation is that the US experienced heightened controversy surrounding fake news during Trump's presidency, mirroring the news media's increased attention.

The countries display similar temporal patterns in the occurrence of *Public Discourse & Information Disorder*, as both experienced a steady presence of the frame from the early to mid-2020s. The frame first appeared in the US media in 2017 with a yearly frequency ranging from 9.1% to 20.5% between 2020 and 2024. In Sweden, the frame appeared first in 2019 and occurred annually at rates between 9.1% and 10.5% between 2022 and 2024. Moreover, both peaked in 2024 with 10.5% of all Swedish articles containing the frame and 20.5% in the US (see Figures 9 & 16). One explanation for this convergence is that AI tools became mainstream and accessible during the early to mid-2020s in both countries. Accordingly, many of the stories in these news articles tended to report on issues such as deepfakes and fake news linked to AI-powered services.

Lastly, the countries converged in their sentiment distribution. Around three-quarters of the articles in both countries containing the frame expressed negative sentiments about AI. Recall that the respective chi-square goodness of fit tests were statistically significant, suggesting that sentiments were negatively skewed. However, whereas the test for the US sample was valid, it was invalid for the Swedish sample due to low n-numbers. *Public Discourse & Information Disorder* was also the most pessimistic political frame in both countries as it had the highest share of articles expressing negative sentiments among the political frames. Many topics within the frame, such as deepfakes and fake news are inherently negative. Articles across both countries tended to discuss how cybercriminals can leverage AI for malicious intents such as impersonations or spreading misinformation, thus explaining why these articles often expressed negative sentiments.

6.2.5 International Partnership

International Partnership involves discussions about AI in cross-national contexts such as collaborations, diplomatic relations, and global governance. Disregarding *Other Political frame*, the frame was the second least occurring political frame in Sweden accounting for 1.8% of the total sample or 7.1% among the political frames. It was the least occurring political frame in the US media, accounting for 1.2% of the total sample or 4.5% among the political frames. Neither of the chi-square test of independence ($p=0.52$) nor Fisher's exact test ($p=0.75$) indicated statistical significance, meaning that the occurrence of *International Partnership* was not associated with country (see Table 6).

The temporal distribution of the frame follows a similar pattern in the US and Swedish media. *International Partnership* appeared first in 2018 and was the second to last political frame to appear in both countries. Moreover, both countries displayed two peaks in occurrences: during the late 2010s and mid-2020s. There was a surge in Swedish media between 2018 and 2020 in which the frame, on average, accounted for 5.9% of the total sample each year. Similarly, an average of 4.9% of US articles during 2018 and 2019 contained the frame. The second and more recent peak in Swedish media occurred during 2024 and 2025, in which, on average, 2.5% of articles contained the frame, whereas the corresponding number and year for the US was 1.7% between 2023 and 2024. Moreover, in between these peaks (2021-2023 for Sweden and 2020-2022 for the US), 0% of articles were concerned with international partnerships (see Figures 9 & 16).

Sweden (and Europe) and the US have a long-standing deep technological partnership that requires mutual involvement and responsibility (Ramaswamy, 2025). The countries thus operate in tandem, explaining why they experienced peaks and declines in AI reporting on international partnership roughly at a similar time and scale. The latter peak during the mid-2020s was smaller compared to the earlier surge at the end of the 2010s. This can be attributed to the fact that AI has increasingly become politicized, and that the international climate has harshened. Gaining a competitive advantage in AI capabilities has become an important imperative in Sweden and especially in the US, thus the recent decline in the international partnership discourse. The fact that both countries had no reporting on international partnership at the beginning of the 2020s can be attributed to two factors. First, the general media discourse on AI declined in the early 2020s, and *International Partnership* was already relatively infrequent before this drop, further diminishing as overall media attention to AI declined. Second, the pause in news media's reporting on international partnership coincided with the peak of the Covid-19 pandemic, a period marked by national lockdowns and a shift towards domestic concerns. As a result, both national governments and the media redirected their attention away from international AI partnerships toward more urgent and domestic pandemic-related inquiries.

Further examination of the news articles assigned *International Partnership* reveals possible diverging motives and objectives behind the AI partnership. News articles in Sweden emphasized the mutual gains that partnership could yield, often highlighting enhanced AI capabilities. US articles, on the other hand, often discussed how the increased partnership

could diminish China's relative AI capabilities, further positioning AI partnership as a strategic necessity. One example is an article published in *USA Today* that reported on the Biden administration's efforts to curb the sale of AI chips to China and Russia, while making it easier for US allies to access them. Throughout the article, the author stressed the importance of strengthening international partnerships to counter China's AI influence (Ramaswamy, 2025). Articles of this character did not appear in the Swedish sample, reflecting the deep technological rivalry between the US and China.

A final note on the sentiment distribution is required since *International Partnership* was the only political frame along with *National Security* displaying a statistically significant result for the Fisher-Freeman-Halton exact test (see Table 7). It is important to note that the chi-square goodness of fit tests were neither valid nor statistically significant for the US sample, and that the test could not be executed for the Swedish sample since 100% of the observations were positive. The results from the Fisher-Freeman-Halton exact test should therefore not be overinterpreted, especially given the low n-numbers.

6.2.6 International Competition

International Competition captures the global rivalries and power struggles over AI. It was the fourth most frequent political frame in Sweden accounting for 14.1% of the political frames or 3.7% of all frames. It was the second most salient frame in the US, accounting for 24.7% of the political frames or 6.7% of all frames. Neither the chi-square test of independence ($p=0.078$) nor Fisher's exact test ($p=0.112$) revealed a statistically significant association between the occurrence of *International Competition* and country (see Table 6).

However, two interesting differences emerge when qualitatively assessing the articles within the frame. The first concerns which actor or country is positioned as the subject of competition. In the US media, all articles ($n=22$) covering AI and international competition discussed the US's AI rivalry with China. In Sweden, on the other hand, no specific country was mentioned, instead most articles generally and sometimes vaguely discussed the need for Sweden to enhance its AI capabilities to stay competitive internationally. Second, and related to the previous, are concerns about whom the competition takes place with. As alluded to, in the US all articles concerned the US-China rivalry. However, in Sweden, 75% of articles discussed Sweden's AI competitiveness relative to other actors, but 25% of articles reported

on AI competition between other actors. For example, one article published in *Aftonbladet*, reported on the technological rivalry between the US and China without mentioning Sweden (Kerpner, 2023). Another article published in *Aftonbladet* reported that Vladimir Putin ordered increased funding for AI research to gain a competitive advantage, but there was no discussion of Sweden's AI capabilities (Aftonbladet, 2023).

Accordingly, while the US was featured as a central actor in all American news articles covering international AI competition, Sweden was portrayed as a key actor in 75% of the Swedish articles. Interestingly, when removing the observations within *International Competition* where Sweden was not mentioned, both the chi-square test of independence ($p=0.017$ & $ES=0.094$) and Fisher's exact test ($p=0.026$) became statistically significant. This suggests that while there is no association between country and reporting on AI international competition in general, there is a small association between country and news reporting on their own countries' AI capabilities relative to other countries or actors.

There are divergences in the annual occurrence of *International Competition*, and the above discussions may assist in explaining these. The US media landscape experienced a peak in international AI competition news reporting between 2017 and 2021, with a frequency ranging from 9.4% to 22.2% per year of the full sample (see Figure 16). China issued its *New Generation Artificial Intelligence Development Plan* in 2017, a top-level design blueprint laying out the direction of the country's approach to research and development (R&D) of AI. Since 2017, AI has been a national priority in China, and the country aims to become the world leader in AI innovation by 2030 (Webster et al., 2017). The US, which at the time and currently is the world leader within AI, responded quickly by imposing export restrictions and tariffs against China on components crucial for AI development. The Technological Cold War between China and the US was initiated and intensified during the late 2010s, explaining why media reporting on the issue surged. Sweden did not experience a similarly dramatic peak in news reporting on AI international competition. However, there was a notable spike during 2022 and 2023 when 9.1% and 6.9% of all Swedish articles featured the frame (see Figure 9). Many European countries were improving their AI capabilities faster than Sweden, this increased the media's attention to the issue as many articles published during this time urged policymakers to invest in Sweden's AI R&D.

The sentiment distribution within the frame is similar between the two countries. Recall that most articles within *International Competition* expressed positive sentiments in Swedish media (66.7%) and US media (86.4%). The respective chi-square goodness of fit revealed statistical significance, suggesting that the distributions were skewed towards positive sentiments. Although the goodness of fit for the Swedish sample was invalid due to low n-numbers, the descriptive statistics still suggest that articles covering international AI competition tended to be positive about the technology. This is unsurprising since most of these articles emphasized AI as a strategic capability and stressed the need to acquire more AI knowledge and skills.

6.3 Evaluation of theoretical framework

Given this study's aim to develop a theoretical framework suitable for scholars interested in the political media framings of AI, the following sections evaluate the framework based on the limitations presented in section 3.4. These are (1) information loss, (2) overlapping frames, and (3) cultural bias.

6.3.1 Information loss

An inevitable limitation when using deductive frameworks is information loss, meaning that frames that are not predetermined often remain undetected (Ardèvol-Abreu, 2015, p. 433).

The frames *Other Meta-frame* and *Other Political Frame* are useful for quantifying the information loss. 21.8% of articles in Sweden were assigned *Other Meta-frame* and it was the second most prominent meta-frame. In the US, it accounted for 19.0% of the sample and was the third most frequent meta-frame. Neither of the countries displayed *Other Political Frame*, suggesting that while information loss was profound at the meta-level, it was minimal at the political-frame level, thereby confirming earlier theorizations.

The previous literature assisted in identifying frames outside of this study's theoretical framework, which was noted in the category 'other frame' in the coding schedule. In Sweden, the most frequent frame outside the theoretical framework was *Culture* (news articles concerning movies, art, and music), accounting for 26.4% of frames within *Other Meta-frame* or 5.8% of the total Swedish sample. This was followed by *Healthcare* (13.9% or 3.1%) and *Singularity* and *Games* (9.7% or 2.1%). In the US, *Healthcare* was the most

frequent meta-frame outside of the theoretical framework, accounting for 24.6% of frames within *Other Meta-frame* or 4.6% of the total US sample. This was followed by *Culture* (21.3% or 4.0%) and *AI as an Assistant* (18% or 3.7%).

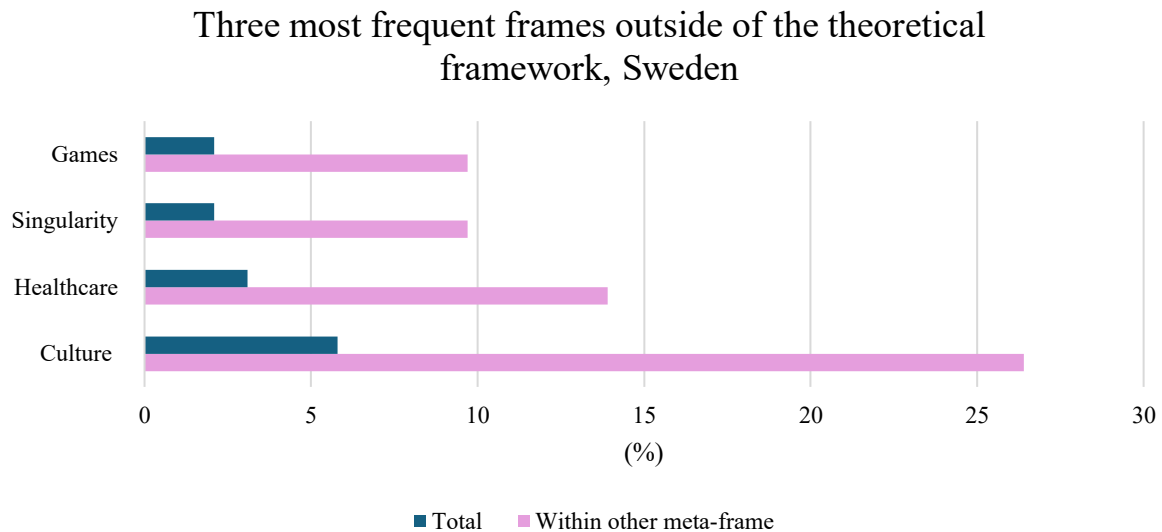


Figure 18. The distribution of the three most frequent meta-frames outside the theoretical framework, within *other meta-frame*, and across the total Swedish sample (frame/percentage)

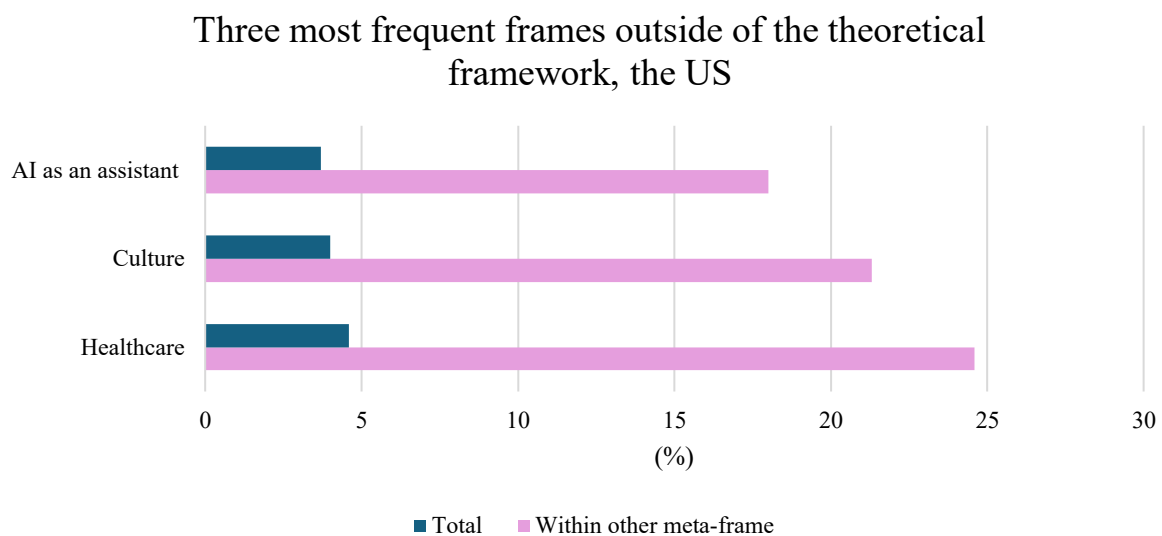


Figure 19. The distribution of the three most frequent meta-frames outside the theoretical framework, within *other meta-frame*, and across the total US sample (frame/percentage).

6.3.2 Overlapping frames

There are three general configurations of overlapping frames: (1) meta-frame and meta-frame, (2) meta-frame and political frame, and (3) political frame and political frame. Data about overlapping frames is derived from the informal ‘comment’ category. 8.1% (n=53) of articles were flagged as having a secondary frame, i.e., the main frame overlapping with another one. However, not all overlaps were documented as this would have been out of scope, while also causing conceptual difficulties as the extent of overlap varied between articles and frames. The following evaluation is primarily rooted in qualitative insights, and the data points should mainly be used to understand how the three overlapping frame configurations are distributed.

21.8% (n=12) of the articles noted as having a secondary frame involved overlapping meta-frames. *Science & Technology* (i.e., news about technological breakthroughs, and research and development) was the meta-frame with most overlaps, primarily with *Business & Economy* and *Other Meta-frame*. Much of the AI R&D is conducted by large US companies such as Google and Meta, and many news articles across both countries’ media landscapes reported on these companies’ AI investments. This caused overlaps since *Business & Economy* is concerned with issues including businesses’ AI adoption. *Science & Technology* also tended to overlap with *Other Meta-frame* since the meaning and implication of a “technological breakthrough” became a conceptual issue. An example is Google’s AI beating the world’s best ‘Go’ player. Such articles could be categorized as *Science & Technology* as it could be interpreted as a breakthrough, but an equally valid categorization is *Other Meta-frame* as it addresses AI and games.

Overlapping frames were most common at the political frame level. 72.2% (n=38) of the articles noted as having a secondary frame involved an overlap between political frames and two configurations stand out. First, and as theorized in the theory chapter, the overlap between *Democratic Processes* and *Public Discourse & Information Disorder*. Many articles discussed deepfakes and fake news and how these could interfere with democratic processes, particularly elections. Second, the overlap between *International Partnership* and *International Competition*. As alluded to, this overlap was particularly prominent in the US media as AI partnerships were portrayed as mechanisms to compete with China.

The lowest proportion of overlaps was between meta-frames and political frames, accounting for 6.0% (n=3) of the articles noted as having a secondary frame. *Governance* was the most frequent political frame overlapping with other meta-frames, as critical articles often argued for regulation to mitigate the risks of AI. However, this was not exclusive to meta-frames as *Governance* also tended to overlap with political frames, making the common denominator the criticalness of the news article.

6.3.3 Cultural bias

Lastly, and most briefly, Entman's (1991) notion of the cultural embeddedness of frames raised concerns about cultural bias as none of the studies that formed the basis of the theoretical framework examined Swedish or even Nordic newspapers. Acknowledging the subjectivity of evaluating cultural biases, some quantitative and qualitative investigations and insights may assist the inquiry.

Recall that Swedish and American media were subject to similar quantities of information loss. Neither the chi-square test of independence ($p=0.28$) nor Fisher's exact test ($p=0.44$) revealed significance, meaning that there was no relationship between the occurrence of *Other Meta-frame* and country. Moreover, among the 47 articles that were color-coded red during the data collection procedures, 25 were American and 22 were Swedish. These findings suggest that the theoretical framework was equally suitable to both countries' media landscapes as they experienced similar information losses and levels of uncertainty in the coding procedures. Shifting to a more qualitative perspective, US articles were often more time-consuming to code as they were often longer, covered more topics, and were more intricate than Swedish articles. However, this is not to say that the framework was skewed towards any country, rather that the empirical analysis was easier to conduct on the Swedish sample.

In summary, the theoretical framework performed as expected. Whereas the meta-level framework was subject to information loss, the political frames experienced issues of overlapping frames. There were no decisive or pivotal differences in the framework's performance across countries, dismissing the possible limitation of cultural biases. Neither of the limitations is assumed to have affected the quality of the results, and taken together, the framework was useful for the research inquiry.

6.4 Limitations and future research

Lastly, a note on three overarching limitations that also forms the basis for future research avenues. First, by limiting the sample to newspapers, other traditional and non-traditional media channels were excluded. Although justified given the limited scope of the study, exploring different media outlets' portrayals of AI could be fruitful as these might differ in their framings of AI. Aligning with Nguyen & Hekman's (2024) proposals, scholars could study television and radio as it would allow for the analysis of visual images and tones. Another research avenue is the examination of social media outlets such as Facebook, Instagram, and TikTok. Social media discourses tend to be bottom-up, faster, and more interactive, creating a different information flow and possibly yielding other framings of AI.

Second, the study had a relatively low n-number (652). A larger sample size would have contributed to greater statistical power, increased generalizability, and fewer assumption violations. The low n-numbers are due to the manual coding of each article which was deemed necessary due to the potential limitation of overlapping frames as discussed in the theory chapter. Given the demonstrated fruitfulness of the theoretical framework, a possible research avenue is employing Large Language Models (LLM) to assess the differences and similarities in news media's portrayal of political topics related to AI, as this would allow for higher n-numbers.

Third, a common pitfall of quantitative methodologies is the issue of understanding causes, reasons, and motivations. The manual coding of articles opened the research inquiry to some qualitative insights which proved valuable for answering the research question. Again, with the fruitfulness of the theoretical framework, another research avenue is to conduct a qualitative content analysis of Swedish and American newspapers. This could further the qualitative observations by capturing nuances and depth, revealing context, and identifying frame dynamics and contradictions.

7 Conclusion

This study has examined the differences and similarities in the news media's portrayal of political topics related to artificial intelligence in Sweden and the United States. Studying AI through the media lens is relevant as it provides insights into public opinion and political and regulatory priorities. As such, the study has contributed to a deeper understanding of AI, from a political science and a media perspective. A deductive framework informed by frame theory, organized around several meta-frames and political frames, was developed. The salience and sentiments were evaluated using a quantitative content analysis of eight Swedish and American newspapers. The empirical analysis primarily consisted of descriptive statistics and statistical tests but was also informed by the previous literature and some qualitative insights and elements. The findings suggest a mix of differences and similarities between the US and Swedish news media landscapes.

The countries largely converged at the meta-level, displaying similar salience and sentiment distributions of the political frame relative to other meta-frames. More than one-quarter of all news articles across both countries discussed political issues related to AI. It was the most frequent meta-frame, while also exhibiting the latest introduction in the respective countries' news media landscapes. This suggests that the news media is showing increased attention to the political issues surrounding AI. Moreover, despite diverging in overall sentiments, with the US being more positive about AI while Sweden displaying a more balanced view, the countries converged in their sentiment distribution within the political frame. News articles covering political issues related to AI tended to express negative sentiments about the technology. The political frame was also the meta-frame with the highest share of articles expressing negative sentiments, thus concluding that articles covering the political issues of AI, as opposed to the economics or the technical aspects of AI, for example, were the most critical inquiries in both countries.

The Swedish and US media landscapes displayed greater divergences among the political frames. Albeit small effect sizes, the occurrence of *Governance*, *Public Discourse & Information Disorder*, and the adjusted *International Competition* (based on a reduced sample) were related to country. Swedish media generally reported more about AI regulation, whereas US media devoted more attention to issues such as fake news, deepfakes, the geopolitics of AI, and the technological rivalry with China. The countries displayed similar

sentiment distributions within the political frames but diverged in their coverage of national security issues. These articles tended to be positive about AI in the US, whereas the opposite prevailed in Sweden. Articles within this frame typically discussed the military applications of AI, explaining why the US, the world's most significant military power, tended to portray AI more positively.

This study has fulfilled its aims as it has furthered our understanding of the cross-national differences in the media's portrayal of AI and broadened the research field by shedding light on the political topics surrounding the technology. This, while developing, testing, and evaluating a theoretical framework suitable for scholars interested in the political framings of AI. The study confirms the political nature of AI and demonstrates the diverging perceptions of politics and AI in the media landscapes of two highly innovative Western countries. AI holds many of the future's promises and is believed by many to possibly change the world, but the challenges and risks cannot be overlooked. As the technology advances, more critical questions will be raised that ought to be addressed by national and international leaders and policymakers. Taking different approaches, three future research avenues have been presented. Further examining the politics of AI is crucial for grasping the consequences it entails for people and society- and part of the inquiry is knowing what information about AI is distributed to the masses.

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9 Appendix

9.1 Coding manual

Dimension	Categories
Publication year	YYYY (2009-2025)
Country	1. Sweden 2. The United States
Newspaper	1. Aftonbladet 2. Expressen 3. Svenska Dagbladet 4. Dagens Nyheter 5. The New York Times 6. The New York Post 7. The Washington Post 8. USA Today
Type of article	1. News article 2. Feature article 3. Opinion piece 4. Interview
Frame	1. Business & Economy 2. Education 3. Work 4. Science & Technology 5. Other Meta-frame 6. Governance 7. Democratic Processes 8. National Security

	9. Public Discourse & Information Disorder 10. International Partnership 11. International Competition 12. Other Political Frame
Sentiment	1. Positive 2. Negative 3. Neutral 4. None

9.2 Coding guide for frame categorization

Business & Economy

- Does the article discuss the economic impact (e.g., market growth/trends, financial investments) of AI?
- Does it focus on business adoption of AI?
- Are economic policies, trade, or financial risks related to AI discussed?
- Does it mention anything about AI and strengthening the economy?

Education

- Does the article address AI's role in education, learning systems, or student performance?
 - Does it discuss AI in academic institutions, curricula, or teacher/student adoption?
 - Are concerns about AI education and learning methods raised?
 - Does it discuss AI for other educational purposes?
 - Does it discuss enhancing knowledge or education about AI?
-

Work

- Does the article discuss AI and employment, workforce changes, or job displacements?
- Are topics such as workplace automation, productivity, or employee adaptation mentioned?
- Does it mention AI-driven hiring, skills demand, or labor laws?

Science & Technology

- Does the article primarily discuss AI technological advancement or research breakthroughs?
- Does it mention topics such as machine learning or robotics?
- Are there discussions about new AI models, innovations, or software development?

Governance

- Does the article discuss government policies, regulations, or strategies related to AI?
- Is government oversight and accountability mentioned?
- Does it discuss any regulatory challenges to AI?

Democratic Processes

- Does the article mention AI's impact on elections or democratic governance?
- Does it discuss voter behavior related to AI?
- Does it discuss political decision-making?
- Are there discussions about AI-driven political campaigns?
- Are there discussions about AI in the government/parliament?

National Security

- Does the article discuss AI in cybersecurity, intelligence, military applications, or surveillance?
 - Are concerns about AI-driven warfare or autonomous weapons raised?
 - Is AI portrayed as a tool for enhancing national security?
 - Is AI portrayed as a tool for diminishing national security?
-

Public Discourse & Information Disorder

- Does the article mention AI's role in shaping public opinion or (social) media?
- Are issues such as deepfakes and fake news mentioned?
- Are issues such as freedom of speech discussed?

International Partnership

- Does the article cover AI collaboration between countries and international organizations?
- Does it mention AI treaties or agreements?
- Is AI harmonization covered?

International Competition

- Does the article discuss AI competition between nations or international institutions?
 - Is AI discussed as a strategic asset for economic or technological dominance?
 - Are trade restrictions or tech nationalism mentioned?
 - Does it mention AI capabilities relative to other countries?
 - Does it discuss the need to strengthen AI competitiveness?
-

9.3 Coding guide for sentiment categorization

Tone	Description	Example keywords
Positive	Overall positive portrayal of AI (e.g., emphasizes the benefits of AI, progress, and innovation)	Innovation, efficient, adaptive, progress
Negative	Overall negative portrayal of AI (e.g., emphasizes risks and threats)	Dystopian, intrusive, unethical, risk, threat
Neutral	Present both positive and negative portrayals of AI in a balanced way	Mix of keywords
None	Lacks descriptive content and evaluative portrayals	No keywords