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*CORRESPONDENCE
Hastuti Hastuti

☑ hastutituo@gmail.com

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Algorithmic influence and media legitimacy: a systematic review of social media's impact on news production

Hastuti Hastuti^{1*}, Harry Fajar Maulana¹, Herman Lawelai² and Ansar Suherman¹

¹Department of Communication Science, Universitas Muhammadiyah Buton, Bau-bau, Indonesia, ²Department of Government Science, Universitas Muhammadiyah Buton, Bau-bau, Indonesia

Digital platforms and algorithms mediate news production, distribution, and evaluation. This review synthesizes evidence on social media's influence on news judgment, autonomy, commercialization, public trust, and the amplification of polarization and misinformation, noting algorithmic roles in audience development and novel formats. This systematic review searched +Scopus and Web of Science+ (2015-2025; last search 03 Sept 2025) for peer-reviewed empirical studies on digital journalism and algorithms. Search queries combined algorithm- and platformrelated terms (e.g., algorithm, recommendation, ranking, news feed, Facebook, X/Twitter, YouTube, TikTok, Instagram). Eligibility criteria focused on empirical studies of algorithmic influence in English, excluding theoretical papers. All steps followed PRISMA 2020 guidelines, with screening performed independently by two reviewers. A total of 78 studies were included, with counts harmonized across sections and visualized in the PRISMA flowchart. Risk of bias was assessed using CASP and Risk-of-Bias frameworks. Results were synthesized via a hybrid thematic analysis (deductive-inductive) structured across four themes. Findings indicate algorithmic systems reconfigure gatekeeping, prioritizing engagement metrics and reframing news values toward "shareworthiness." Platform business models intensify metric dependence, limiting investigative depth. Algorithmic intermediation affects legitimacy; opaque recommenders depress trust, while transparent ones can mitigate skepticism. Optimization for virality correlates with polarization and misinformation, with potential for self-censorship. Newsrooms exhibit bounded agency. An evidence map is presented, summarizing platform types, methodological approaches, geographic scope, and key outcomes. Limitations include a dominance of Western-centric, English-language studies and a scarcity of longitudinal designs. Interpretation highlights that algorithmic curation reshapes journalistic practices, with legitimacy dependent on platform transparency and affordances. A dedicated Limitations section addresses methodological constraints, data extraction subjectivity, and potential exclusion bias. Aligning incentives with public interest requires auditable transparency and quality-rewarding metrics, supported by comparative, cross-regional research. This work was supported by the Competitive Research Grant from the Research Institute at the Universitas Muhammadiyah Buton (Grant Number: B/630/UMB.3.2/PT.01.05/2025). The complete protocol, search strings, and appraisal data are available in the linked repository.

KEYWORDS

digital journalism, editorial autonomy, media legitimacy, misinformation, polarization, platform governance, evidence mapping

1 Introduction

Between 2015 and 2025, journalism has undergone a profound transformation, driven by the proliferation of social media platforms and the pervasive integration of algorithmic systems at nearly every stage of news production, circulation, and reception. Platforms such as Facebook, X (formerly Twitter), Instagram, TikTok, YouTube, and Twitch have evolved from secondary distribution tools into infrastructural elements of contemporary journalism. They function simultaneously as channels of dissemination, interactive spaces of audience engagement, and intermediaries mediating the producer–consumer relationship (Al-Zoubi et al., 2023; Chua and Westlund, 2022; D'Amico et al., 2023; McGregor and Molyneux, 2020; Swart, 2021). This paradigmatic shift has displaced static and cyclical models of news with interactive, real-time ecosystems. As a result, the democratic role of journalism, its professional credibility, and its legitimacy are undergoing fundamental reconfiguration under conditions of platformization.

At the center of this reconfiguration lies algorithmic curation. Social media algorithms, optimized primarily for engagement, seldom privilege content according to journalistic significance or professional editorial judgment. Instead, they amplify material designed to stimulate reactions—likes, shares, and comments—reshaping what counts as news in digital spaces. In this environment, newsworthiness is increasingly redefined as "shareworthiness," privileging virality and visibility logics (Crilley and Gillespie, 2018; D'Amico et al., 2023; Dodds et al., 2023; Hurcombe, 2019; Kaiser and Puschmann, 2017; Lischka, 2018; Trilling et al., 2016; Welbers and Opgenhaffen, 2018). This shift incentivizes sensationalism, emotional resonance, and polarizing narratives. Scholars warn that these conditions jeopardize journalistic integrity, as editorial practices adapt to meet algorithmic imperatives (Blassnig et al., 2024). While algorithms also enable positive developments—audience expansion, innovative storytelling, and the diversification of formats-these enabling roles must be weighed carefully against risks of distortion and erosion of trust.

Two key implications follow. First, editorial autonomy is compromised. Journalists and editors constantly negotiate between professional ethics and the demands of algorithmically driven performance (Curry and Stroud, 2019; Rahman, 2023; Wintterlin, 2017). Newsrooms increasingly adopt dashboards, audience analytics, and recommender systems, shifting gatekeeping power away from human editorial norms toward data-driven logics (Chua and Westlund, 2022; Cold-Ravnkilde and Nissen, 2020). Second, the proliferation of misinformation and disinformation, amplified by algorithms, represents a defining challenge. Such phenomena weaken public trust in journalism and corrode perceptions of legitimacy (Al-Khazraji et al., 2023; Serrano-Puche, 2021; Wardle et al., 2021). Scholars argue for enhanced transparency, accountability, and oversight of algorithmic processes as prerequisites for restoring confidence in journalism (Aagaard, 2022; Grimmelikhuijsen, 2022; Hellmueller and Berglez, 2022; Wintterlin, 2017).

Global variations complicate these trends in North America, algorithmic amplification contributes to ideological polarization and media distrust (Kavtaradze and Kalsnes, 2024). In Europe, global platform logics interact with entrenched journalistic traditions, creating hybrid legitimacy frameworks (Aagaard, 2022; Cornia et al., 2018; Hellmueller and Berglez, 2022). In Asia, state-controlled algorithms constrain Chinese journalism, while Indian journalism reveals adaptive strategies under relatively freer digital conditions (Kim, 2021; Koo, 2024;

Rao, 2016; Yin et al., 2024; Zhao et al., 2025). These diverse experiences illustrate the asymmetries of platformization. Still, the review acknowledges limitations, including the underrepresentation of certain geographies (e.g., Oceania) and platforms (e.g., Reddit, LinkedIn), which influence the scope of interpretation.

The present review synthesizes empirical research on how algorithms reshape editorial autonomy and redefine media legitimacy. Two research questions guide the inquiry:

RQ1: How does algorithmic curation influence journalistic content, standards, and practices worldwide?

RQ2: How do platform-specific algorithmic variations shape perceptions of media legitimacy across contexts? These questions address both the micro-level newsroom dynamics and the macro-level democratic implications.

Methodologically, the review followed best practices in communication and media studies (Bramer et al., 2018; Libwea et al., 2023). Comprehensive searches were performed in Scopus and Web of Science, finalized on 3 September 2025. Queries combined algorithm-and platform-related keywords (e.g., algorithm, recommendation, ranking, "news feed," Facebook, X/Twitter, YouTube, TikTok, Instagram) with domain terms (digital journalism, news production, platformization, media legitimacy). Boolean operators were used to ensure precision (Spencer and Eldredge, 2018). The complete search strings are detailed in Table 1 and archived in a publicly accessible repository. Expert consultation further strengthened validity and minimized design bias (Aamodt et al., 2019; Faggion et al., 2016).

Eligibility criteria limited inclusion to peer-reviewed empirical studies—qualitative, quantitative, or mixed-methods—focused on algorithmic influence in journalism. The review excluded essays, commentary, and theoretical papers to maintain empirical rigor. Criteria did not restrict access models or impose arbitrary subject exclusions beyond database definitions. All steps followed PRISMA 2020 standards (Cunha et al., 2023; Haddaway et al., 2022; Moher et al., 2015). Dual-independent reviewers assessed study eligibility, resolving disagreements by consensus. This yielded a final corpus of 78 studies.

Quality appraisal was essential. The Critical Appraisal Skills Programme (CASP) guided assessment of qualitative work, while risk-of-bias tools addressed quantitative and observational studies (Shea et al., 2017; Juniardi and Putra, 2024). Independent reviewers conducted evaluations, and inter-rater reliability (e.g., Cohen's κ) was reported. These appraisals informed sensitivity analyses and the weighting of claims, reinforcing evidence integrity.

The article is structured as follows: Section 2 details methodological procedures; Section 3 presents theoretical frameworks emphasizing platformization, algorithmic gatekeeping, and media legitimacy; Section 4 synthesizes findings across four themes—(1) algorithmic influence on news judgment and editorial autonomy, (2) commercialization and business strategies, (3) digital platforms and legitimacy, and (4) algorithmic amplification of polarization, misinformation, and self-censorship. Section 4 also provides an evidence map visualizing methodologies, regions, and outcomes. A Limitations section highlights risks such as coder subjectivity, geographic and platform gaps, and potential biases. The concluding sections outline implications for journalism, platform governance, and policy, and provide access to the full dataset.

TABLE 1 Database-specific search strings (WoS and Scopus; Last Search: 03 September 2025).

Database	Boolean query (exact)
	(TITLE-ABS-KEY (("digital journalism" OR "digital news production")) AND TITLE-ABS-KEY ((algorithm OR recommendation OR ranking OR
	"news feed" OR Facebook OR "X" OR Twitter OR YouTube OR TikTok OR Instagram))) AND PUBYEAR > 2014 AND PUBYEAR < 2026 AND
6	(EXCLUDE (DOCTYPE, "ch") OR EXCLUDE (DOCTYPE, "cp") OR EXCLUDE (DOCTYPE, "bk") OR EXCLUDE (DOCTYPE, "re") OR EXCLUDE
Scopus	(DOCTYPE, "no") OR EXCLUDE (DOCTYPE, "ed")) AND (EXCLUDE (LANGUAGE, "Spanish") OR EXCLUDE (LANGUAGE, "Portuguese") OR
	EXCLUDE (LANGUAGE, "catalan") OR EXCLUDE (LANGUAGE, "Arabic")) AND (EXCLUDE (OA, "repository") OR EXCLUDE (OA,
	"publisherfullgold") OR EXCLUDE (OA, "publisherhybridgold") OR EXCLUDE (OA, "publisherfree2read"))
	("digital journalism" OR "digital news production") AND (algorithm OR recommendation OR ranking OR "news feed" OR Facebook OR "X" OR
	Twitter OR YouTube OR TikTok OR Instagram)
	Refined By: NOT Publication Years: 2014 or 2013 or 2012 or 2011 or 2010 or 2009 or 2008 or 2004 or 1996; NOT Document Types: Early Access or
	Editorial Material or Proceeding Paper or Review Article or Book Chapters or Book Review or Correction or Book; NOT Web of Science Categories:
	Information Science Library Science or Social Sciences Interdisciplinary or Sociology or Language Linguistics or Political Science or Education
	Educational Research or Computer Science Information Systems or Linguistics or Business or Cultural Studies or Humanities Multidisciplinary or
WoS Core	Economics or Ethnic Studies or Hospitality Leisure Sport Tourism or Environmental Sciences or Management or Psychology Multidisciplinary or
Collection	Social Issues or Anthropology or Art or Computer Science Artificial Intelligence or Computer Science Cybernetics or Computer Science Software
	Engineering or Computer Science Theory Methods or Engineering Electrical Electronic or Engineering Marine or Engineering Multidisciplinary or
	Environmental Studies or Ergonomics or Film Radio Television or Green Sustainable Science Technology or History or Literature or Materials Science
	Multidisciplinary or Operations Research Management Science or Philosophy or Psychology Experimental or Public Environmental Occupational
	Health or Regional Urban Planning or Social Sciences Mathematical Methods or Telecommunications or Women S Studies; NOT Open Access: Green
	Submitted or Green Accepted or Green Published or Free to Read or Gold-Hybrid or Gold; NOT Languages: Spanish or Portuguese or Catalan or
	Dutch or Italian or Turkish.

In conclusion, this introduction underscores the urgency of examining how algorithms are transforming journalism. The decade under review illustrates not only the centrality of algorithmic systems in reshaping content and newsroom practices but also their profound impact on media legitimacy. By synthesizing empirical evidence, this review demonstrates how editorial autonomy, news values, and public trust are being redefined in the digital age.

2 Methods

This systematic review rigorously adheres to established guidance for systematic literature reviews within the communication and media studies disciplines. The methodology is designed to ensure transparency, reproducibility, and rigor across all stages of the research process, encompassing the identification of relevant literature, screening and selection of studies, data extraction, quality assessment, and the final synthesis of findings. The overall protocol and reporting structure are aligned with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 recommendations and universally recognized best practices for systematic search design, study screening, and quality appraisal (Haddaway et al., 2022; Moher et al., 2015). All numerical data, including study counts, were harmonized across the Abstract, Methods, Results, and the PRISMA flow diagram (Figure 1), ensuring consistency and methodological integrity.

2.1 Search strategy

To ensure a comprehensive and exhaustive capture of the relevant academic literature, our search strategy was systematically implemented across two primary, high-impact academic databases: Scopus and Web of Science (WoS Core Collection). This strategic

selection was based on their extensive coverage of communication and media studies journals. The initial search yielded a total of 1,084 records: 893 from Web of Science and 191 from Scopus. The final search was conducted on 03 September 2025.

The search queries were meticulously constructed using Boolean operators to combine controlled vocabulary and free-text terms related to "digital journalism," "news production," and "media legitimacy," with platform- and algorithm-specific terms including: "algorithm," "recommendation," "ranking," "news feed," "Facebook," "X/Twitter," "YouTube," "TikTok," and "Instagram" (Bramer et al., 2018; Spencer and Eldredge, 2018). and expert consultation. The full search strings are available in Table 1 and the public data repository.

To enhance the precision of the search results, filters were applied within each database to exclude non-article document types (e.g., book chapters, conference proceedings), non-English publications, and outdated records outside the 2015–2025 window. Subject areas unrelated to journalism and communication were excluded based on predefined Web of Science categories, and decisions regarding Open Access status were recorded. These filters were set *a priori* and documented transparently (Table 1). While exclusions based on subject and access type are non-standard, they were justified to focus the review on relevant empirical literature and reduce disciplinary noise.

2.2 Inclusion and exclusion criteria

2.2.1 Inclusion criteria

This review included peer-reviewed empirical studies—qualitative, quantitative, or mixed-methods—published between 2015 and 2025 in English. Eligible studies examined the influence of algorithms or digital platforms on news production, editorial autonomy, and/or media legitimacy. Broad platform and regional diversity were encouraged.

2.2.2 Exclusion criteria

Essays, theoretical discussions, commentaries, grey literature, and studies outside the time window or not in English were excluded. Studies excluded based on database subject areas or Open Access status were filtered only for relevance, and decisions were recorded in the PRISMA logs and Table 1.

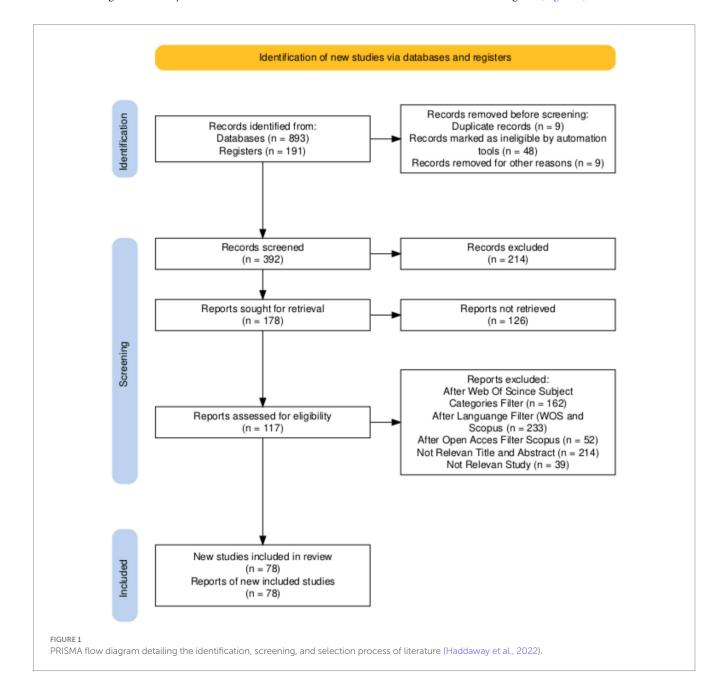
2.2.3 Exclusion criteria

To maintain the empirical focus and academic rigor of the review, several categories of literature were excluded. This included opinion pieces, essays, and purely theoretical papers that lacked empirical data to support their claims. Grey literature, such as reports from non-academic sources or unpublished working papers, was also excluded. Furthermore, studies published outside the defined 2015–2025 time window were excluded. The language of publication was restricted to English. Crucially, the exclusions based on document

type, language, and subject categories within the databases were applied as described in the Search Strategy section (Section 2.1) and detailed in Table 1.

2.3 Screening and study selection process

The screening and selection of studies followed PRISMA 2020 guidelines. From 1,084 initial records, 9 duplicates, 48 auto-screened, and 9 other ineligible items were removed. Of 392 screened titles/ abstracts, 214 were excluded. 178 full-text reports were retrieved and assessed, yielding 78 included studies. Disagreements between the two reviewers were resolved via consensus discussions. Inter-rater reliability was calculated as Cohen's κ = 0.82, indicating strong agreement. Study counts were harmonized across all manuscript sections and the PRISMA diagram (Figure 1).



2.4 Data extraction and coding

Data were extracted independently by two reviewers using a predefined template covering bibliographic info, platform(s), methods, sample, geography, findings, and limitations. A 10% pilot ensured clarity. Coding used a hybrid thematic approach: deductive themes based on theory (Section 3) and inductive codes emergent from data. The final codebook is in Appendix Findings Review. A summary of all 78 included studies is provided in Supplementary Findings Review.

A 10% pilot extraction was conducted on a subset of the included studies prior to the full data extraction phase. This pilot aimed to refine the template fields and ensure the clarity and consistency of code definitions. The coding process itself employed a hybrid thematic analysis approach. This involved starting with deductive themes that were pre-specified based on the research questions and the theoretical framework (outlined in Section 3). These deductive themes were then complemented by an inductive process of identifying new, emergent sub-codes and patterns directly from the extracted data. The finalized codebook, complete with definitions and examples, is provided in Appendix A (Rodriguez et al., 2022; Tam et al., 2017), ensuring the transparency and reproducibility of the coding process. A comprehensive table summarizing the characteristics of all 78 included studies is also provided separately in Supplementary Table Findings Review.

2.5 Quality assessment

Each study was appraised using appropriate tools: CASP for qualitative/mixed-methods, and Risk-of-Bias frameworks for quantitative/observational designs (Juniardi and Putra, 2024; Shea et al., 2017). Two reviewers conducted this independently. Inter-rater reliability was high (κ = 0.82). Per-study ratings appear in Supplementary Table S1. Appraisal scores informed the synthesis process via evidence weighting and sensitivity analysis (e.g., excluding low-quality studies to test robustness).

2.6 Synthesis approach

Due to high heterogeneity (platforms, regions, methods), a narrative thematic synthesis was employed. Four themes guided analysis: (1) algorithmic influence on editorial autonomy, (2) commercialization of news production, (3) platform legitimacy, and (4) amplification of polarization and misinformation. To assess evidence distribution and claim strength, an evidence map was generated, crosstabulating methods, platforms, regions, and outcomes. Access to the synthesis scripts and coded data is provided in the repository.

2.7 Data availability

All materials—search strings, PRISMA logs, screening sheets, extractions, codebooks, quality ratings, and synthesis scripts—are publicly available in the linked data repository. This ensures full reproducibility and auditability of the review. Harmonized counts from all sections are included.

2.8 Ethical considerations

As a systematic review of published literature, this study did not require ethical approval. This review did not require ethical approval. However, principles of transparency and reflexivity guided all decisions. Potential biases (e.g., language restriction, regional gaps, exclusion rationale) are addressed in Section 5: Limitations.

3 Theoretical framework/background

This section delineates the foundational theoretical and conceptual underpinnings This section delineates the foundational theoretical and conceptual underpinnings that guide this systematic review on the algorithmic influence of social media on news production and its subsequent impact on media legitimacy. In addition to framing the inquiry, these theoretical perspectives were explicitly integrated into the review's analytical procedures. They informed the development of deductive parent codes and sub-codes in the hybrid thematic analysis, shaped the synthesis structure, and supported the interpretation of cross-case patterns. By anchoring our coding and synthesis in theory, we ensured that theoretical integration was not merely conceptual but methodologically embedded throughout the review.

3.1 Platformization and journalism

The concept of platformization offers a critical lens through which to examine how digital platforms have become central to journalistic production, distribution, and audience engagement. In the context of a "platform society," platforms are increasingly understood as overarching infrastructures that shape communication norms and practices (Poell et al., 2020). For journalism, this is acutely evident in the escalating reliance on platforms such as Facebook, X (formerly Twitter), Instagram, TikTok, YouTube, and Twitch for essential functions like content dissemination and audience reach (Al-Zoubi et al., 2023; Burgess and Hurcombe, 2019; Chua and Westlund, 2022; McGregor and Molyneux, 2020; Swart, 2021). This increasing integration signifies a fundamental shift in the journalistic ecosystem, moving from more traditional, structured news flows towards dynamic, interactive, and often real-time environments dictated by platform affordances.

Platformization inherently integrates distinct economic, technological, and social logics into newsroom routines and practices. The prevailing commercial imperatives within this model often compel news organizations to drive alignment with platform-specific visibility and engagement metrics (Poell et al., 2020). This necessitates a reframing of professional autonomy, wherein editorial judgments become increasingly calibrated to algorithmic performance indicators rather than solely relying on traditional normative news values (Carlson, 2019; Chiridza and Mare, 2025). These insights are instrumental in the development of the "Commercialization/ Platformization" code family used to structure comparisons across different organizational types, audience demographics, and geographical regions throughout this review.

Furthermore, platformization carries significant potential to contribute to what has been termed "data colonialism," a

phenomenon wherein journalistic activities become increasingly embedded within extractive datafication economies (Couldry and Mejias, 2019). This concept was operationalized in our coding structure through the "Platformization/Commercialization" category and shaped our interpretation of regional asymmetries (Sections 4.2 and 4.3). It also informed how platform logic was evaluated during the quality appraisal stage (Section 2.5), particularly regarding commercial influences on editorial practices.

3.2 Algorithmic gatekeeping

The concept of gatekeeping, traditionally understood as the process by which editors and journalists filter information flows, is undergoing a significant evolution in the contemporary platformed news ecosystem. In our analysis, "Gatekeeping/Algorithmic Gatekeeping" was applied as a key deductive code to classify how algorithmic systems mediate visibility, news values, and editorial control, especially in relation to metric-based decision-making.

Algorithmic curation in digital journalism is thus conceptualized through the lens of recommender systems and their underlying visibility logics (Kaiser and Puschmann, 2017). Complementing this understanding, Actor-Network Theory (ANT) offers a valuable framework. These theoretical concepts were translated into the analytical framework through the construction of dedicated code families (e.g., "ANT/Assemblages," "Metrics/Dashboards"), facilitating a granular examination of empirical variations in newsroom agency and adaptation strategies.

The Social Shaping of Technology (SST) theory further enriches this perspective by highlighting how cultural, economic, and political values become embedded within algorithmic designs. In our coding, SST-informed analysis helped to reveal how algorithmic affordances reflect deeper structural biases. This was particularly salient in analyzing commercialization pressures, coded under "SST/Platformization," and subsequently integrated into the synthesis of Theme 2 (Section 4.2).

3.3 Media legitimacy

Traditionally, journalism's legitimacy has been predicated on foundational principles such as objectivity and public trust. In this review, media legitimacy was not only examined conceptually but also operationalized through a dedicated code family ("Legitimacy/Trust") used during thematic synthesis. This enabled systematic tracking of how algorithmic systems influence perceived trustworthiness, across both audience and journalistic perspectives.

Historically, media legitimacy was anchored in institutional norms. In the current era, algorithmic mediation has reshaped those conditions. Our coding captured both trust-eroding dynamics (e.g., opacity, personalization concerns) and mitigation mechanisms (e.g., transparency features, user controls). These variations were mapped in our evidence synthesis and visualized in the evidence map (Section 4.4).

Furthermore, scholarly debates increasingly foreground issues of bias and embedded incentives. In our synthesis, we differentiated between trust erosion due to algorithmic opacity and trust reinforcement due to transparency-oriented innovations, treating each as distinct sub-codes. These distinctions shaped both the interpretive framing of our conclusions and the weighting of evidence in the synthesis (see Table 2).

This section provides the theoretical scaffolding necessary to understand how algorithmic influence on news production impacts media legitimacy. Crucially, these theories were not merely reviewed conceptually but were actively operationalized within our analytical framework through code development, theme refinement, and synthesis structuring. This integration ensures that empirical patterns are interpreted through well-established theoretical lenses, enhancing the validity and coherence of the review's conclusions.

4 Theme/findings review

4.1 Section Theme 1: Algorithmic influence on editorial assessment and autonomy

This section synthesizes the evidence summarized in Table 3 (Theme 1) and explicitly maps the findings to the theoretical scaffolding and coding structure introduced in Section 3. Each pattern is connected to specific code families—"Algorithmic Gatekeeping," "Platformization/Commercialization," "ANT/Assemblages," and "SST/Platformization"—ensuring traceability between theory, empirical data, and interpretation. The synthesis was conducted via hybrid thematic analysis, blending deductive themes with inductively surfaced sub-codes. Across the 30 studies inventoried in Table 1, the core pattern is consistent: algorithmic curation and metricization do not merely "pressure" editorial decision-making; they reconfigure it. This reconfiguration is visible in routinized metric work, accelerated temporalities, and recalibrated notions of newsworthiness toward platform-compatible "shareworthiness," while leaving bounded spaces for professional judgment and strategic resistance.

First, the studies converge on a redistribution of gatekeeping authority, which was consistently coded under "Algorithmic Gatekeeping" and "Assemblages." Ethnographic and survey-based work shows that real-time analytics are operationalized as boundary objects in newsrooms, aligning daily choices with performance signals (Conyers, 2025; D'Amico et al., 2023; Sehl et al., 2024). Experimental and platform-analytic evidence reinforces that feed ranking and personalization narrow the editorial "window," biasing selection toward items expected to perform under algorithmic logics (Dodds et al., 2023; McGregor and Molyneux, 2020). Studies of newspay models and micro-segmentation add that revenue instrumentation can tilt calendars and formats toward calculable, low-risk outputs (Myllylahti, 2020, 2024). Taken together, these results empirically instantiate algorithmic gatekeeping and ANT's distributed agency: human editors, metrics, interfaces, and business rules co-produce editorial outcomes rather than technology simply "overriding" journalists. Within SST, this co-production reflects embedded commercial values that privilege calculability and control (Cifci and Ayhan, 2024; Cohen, 2019; Creech and Nadler, 2018).

Second, algorithmic visibility logics compress verification windows and accelerate newsroom temporalities—a pattern captured under the "Temporal Compression" sub-code. Evidence from X/Twitter shows wire-like reliance on trending signals that favors speed over depth (Boling and Walsh, 2025; McGregor and Molyneux, 2020). Computational diffusion analyses indicate that negative news and

personality-driven stories spread faster, incentivizing timeliness and viral frames (Buhl et al., 2019). Platform-specific studies of YouTube document optimization toward monetization/discovery, with attendant impacts on packaging and cadence (Cheng and Tandoc, 2021). Stimulus-based interviews further reveal how affordances across TikTok, Instagram, and Facebook shape coordination and selection decisions on the desk (Anter, 2025). Regionally, newsroom practices in the Global South incorporate informal metrics and WhatsApp circuits This confirms that algorithmic influence is contextually mediated rather than universally deterministic (Omanga et al., 2023). These patterns substantiate the hypothesis (H1) that algorithmic curation materially reshapes editorial choices by structuring attention, timing, and visibility.

Third, the empirical corpus links metricization to normative and epistemic tensions in media legitimacy, categorized under the "Trust/ Transparency" code family. Cross-national survey evidence shows that higher perceived use of news recommender systems (NRS) is associated with lower trust in outlets, moderated by perceived benefits/concerns (Blassnig et al., 2024). This dovetails with the review's broader claim that opacity depresses legitimacy while communicative transparency can mitigate skepticism (see Section 3's legitimacy discussion). Studies warn against technological determinism, urging nuanced, context-aware explanations of platform effects (Appelgren, 2023; Carlson, 2023). Crowdsourcing research illuminates a concrete trade-off: while open calls enhance knowledge discovery and tip flows, volume can erode verification, yielding blended responsibility between journalists and publics (Aitamurto, 2016). These findings reinforce H2's moderation logic: transparency, explicability, and user control can soften but not eliminate trust risks arising from opaque curation.

Fourth, Table 3 documents organizational adaptation strategies, mapped to the codes "Professional Autonomy," "Resistance," and "Coping Mechanisms." Ethnographies distinguish "metric confirmation" work (low-cost, high-gain) from riskier "journalistic discovery," indicating how temporalities and incentives sort labor inside the desk (Conyers, 2025). Labour-process and intersectional accounts show intensification, commodification, and precarity, with differentiated burdens for women of color (Cohen, 2015; Cohen, 2019; Cohen and Clarke, 2024). Comparative work underscores newsroom strategies—diversifying content, advocating editorial independence,

or selective resistance—to preserve judgment under platform dependence (Chua and Westlund, 2022; Eldridge et al., 2019). Studies also report "strategic ignorance" as a coping practice to manage the opacity and volatility of algorithmic systems (Christin et al., 2024). These results support a "bounded agency" reading that is compatible with ANT and consistent with the framework's expectation that sociotechnical contexts shape, but do not erase, professional autonomy.

Fifth, the studies identify design-level and pedagogical responses to algorithmic influence, classified under the "Reconfiguration/ Design," "Identity/Audience," and "Reskilling" codes. Analyses of identity in news sharing show that political self-presentation structures dissemination practices even when mainstream outlets dominate link sources (Baas et al., 2025). Research quantifying journalistic values via textual indices finds measurable associations between linguistic features and perceived balance, diversity, importance, and factuality—suggesting feasible pathways for auditable quality signals compatible with recommender design (Choi, 2019). Case-based education and skills work indicate that cultivating cognitive flexibility and data-visualization literacy may buffer against the deskilling risks of automation and metricization (Breit, 2020). These strands connect directly to Section 3's call for governance mechanisms that reward public-interest quality rather than pure engagement.

The cumulative implications of Theme 1 reinforce the theoretical coherence and methodological robustness of the review. Conceptually, the studies corroborate the framework Empirically, the synthesis privileges findings from higher-quality studies (as weighted via appraisal scores in Supplementary Table S1), and incorporates variation across geographies, platforms, and journalistic roles. Practically, the results justify three governance levers referenced in the overall framework: (i) routine exposure audits of recommender outcomes; (ii) auditable transparency and communication about NRS use; and (iii) multi-metric portfolios that elevate accuracy, diversity, and civic value alongside reach. Concretely, verification safeguards for crowdsourcing (Aitamurto, 2016), platform-affordance literacy for desk editors(Anter, 2025), and institutional protections for discovery work (Conyers, 2025), are prudent organizational responses.

Finally, scope conditions significantly shape the manifestation of algorithmic influence. As documented in Table 3 and visualized in the evidence map, the sample is skewed toward Western/English-language

TABLE 2 Theories and their relevance to journalism.

Theory/model	Scholar(s)	Key concepts	Relevance to journalism	Limitations
Platform Society/ platformization	Van Dijck et al. (2018); Poell et al. (2020)	Platforms as infrastructures; socio-technical governance	Explains structural influence on distribution/engagement	May understate newsroom agency
Algorithmic gatekeeping	thmic gatekeeping Dutta and Gangopadhyay (2019); McGregor and Molyneux (2020) Ranking/recommendation; engagement-driven visibilit		Explains shifts in gatekeeping authority	Opaque logic limits auditability
Actor–Network Theory (ANT)	Faria Júnior and Silveira (2023); Ryfe (2022)	Assemblages of human/non-human actors	Maps co-production of practices	Complex to operationalize in reviews
SST (Social Shaping of Technology)	Zhang and Peng (2017)	Embedded values/political economy	Situates algorithms in context	Limited predictive leverage
Algorithmic Transparency & Accountability	Crilley and Gillespie (2018); Kitchin (2016)	Opacity, documentation, auditing	Frames ethical/governance debates	Hard to enforce institutionally

Each theory listed informed not only conceptual framing but also the construction of deductive code families in the thematic analysis, ensuring traceability between theoretical concepts and empirical synthesis.

TABLE 3 Algorithmic influence on editorial judgment and autonomy.

No	Study (author, year)	Platform/ algorithm focus	Key algorithmic factor	Impact on editorial judgment/ autonomy	Mechanism of influence	Main finding	Limitation/ context
1	McGregor and Molyneux (2020)	Twitter	Ranking & feed curation	Narrowed editorial scope, "filter-bubble"	Personalisation → reduced content breadth	Algorithms shape editorial window	UK-based newsroom only
2	D'Amico et al. (2023)	Social-media feeds	Ranking-based recommendation	Shifted story selection & framing	Engagement-based ranking favours trending	Editorial decisions "performance- driven"	U.S. media
3	Dodds et al. (2023)	Facebook & YouTube	Personalisation- scores	Prioritised launch of certain news types	Scores dictate content visibility	Algorithms boost reach, ambiguous quality	Black-box algorithms
4	Blassnig et al. (2024)	NRS (Non- Register Search)	Knowledge-sharing algorithms	Facilitated editorial collaboration	Shared recommendation network	Collaboration becomes algorithmically mediated	Limited to NRS audience
5	Myllylahti (2020)	Newspapers	Platform-based reader revenue	Story focus skewed to click-ability	Reader data informs editorial calendar	Revenue model pressures content	Snapshot of single national press
6	Myllylahti (2024)	Newspapers	Pay-wall micro- segment	Bypassed "long- form" journalism	Micro-audience segmentation	Revenue shaping content type	National-level only
7	Appelgren (2023)	Journalism studies	Technological determinism	Dismissal of nuanced theory	Functionalist view of tech	Encourages limited assessment of tech impact	Limited to functionalist views
8	Arqoub et al. (2022)	Journals	Fake news research	Focus on outdated studies	Content analysis of literature	Oversight on fake news progression	Limited timeline (2000–2018)
9	Auwal et al. (2025)	X (Twitter)	Political & journalistic use	Candidates dominated agenda	Self-promotion drove news agenda	Platform logic shaped reportage	Sub-Saharan Africa focus
10	Baas et al. (2025)	Dutch Twitter	Identity cues & news sharing	Political identity foregrounded	Opposition statements common	Ideology shapes sharing patterns	Focus on Dutch users
11	Badr (2022)	Egyptian Syndicate	Digital & freelance exclusion	Legal definitions divide journalists	Power imbalance shapes boundaries	Exclusion limits professional boundary expansion	Regional focus
12	Beckert and Ziegele (2020)	News Websites	Personality traits & article topics	Civility differs by personality	Agreeableness → civility	Personality influences comment quality	Survey & content analysis
13	Blassnig et al. (2024)	News recommender systems	Algorithmic knowledge & skill	Higher knowledge → perceived use of NRS	User perception of algorithms	Perceived use linked to lower trust	Cross-country survey
14	Boling and Walsh (2025)	X (Twitter)	Platformization constraints	Focus on "speed over depth"	24 h news cycle norm	Digital norms affect reporting depth	US-based abortion rights debate
15	Breit (2020)	Master of Arts in Digital Journalism	Case-based education	Cognitive flexibility via cases	Problem-solving skill development	Contextual learning vital for adaptation	East Africa focus
16	Buhl et al. (2019)	Digital journalism ecosystems	News story attributes & conditions	Immediacy driven by negative news/ personalities	News diffusion analysis	Negative news spreads faster	Germany-based sites
17	Hurcombe et al. (2021)	Social media platforms	Digital journalism definition	Reflects, responds to, shapes logics	Co-evolution of platforms & journalism	Platform enclosure threats oversight	Methodological challenges

(Continued)

TABLE 3 (Continued)

No	Study (author, year)	Platform/ algorithm focus	Key algorithmic factor	Impact on editorial judgment/ autonomy	Mechanism of influence	Main finding	Limitation/ context
18	C Ogadimma et al. (2025)	YouTube Vodcasts	Climate change frames	Emotional response & knowledge influence	Framing effects on viewers	Frames shape sustainable action	African participants
19	Carlson (2025)	Digital journalism studies field	Complexity & positionality	Encourages engagement & refinement	Critical analysis of field dynamics	Field relevance depends on critique engagement	Internal field politics
20	Çifçi and Ayhan (2024)	Digital journalism in Turkey	McDonaldization dimensions	Efficiency, calculability, control	Business model influence	Standardization decreases news quality	Turkey focus
21	Cohen (2019)	Digital newsrooms	Control, speed, analytics	Intensification, commodification	Critical political economy framework	Labour practices altered by digital speed	Focus on labour studies
22	Cohen and Clarke (2024)	Digital journalism in Canada	Intersectionality (race, gender)	Precarious employment for women of colour	Employment status analysis	Gender/race impact work conditions	Canada focus
23	Cohen (2015)	Digital journalism expansion	Outsourcing, unpaid labor, automation	Lowered labor costs	Labour process theory	Tech non- determinism; cost reduction	Focus on labour process
24	Conyers (2025)	Australian digital newsrooms	Metrics & traffic volumes	"Metric confirmation" vs. "discovery"	Metrics = low-risk work	Metrics obfuscate journalistic values	Ethnography of digital newsrooms
25	Creech and Nadler (2018)	Journalism innovation discourse	Market-oriented solutions	Elides democratic aspirations	Entrepreneurial logic	Discourse marginalises democratic purpose	Think tank document analysis
26	Cunha (2020)	Graphic departments	Data viz. & reader perception	Journalists/designers view readers more favorably	Likert scale questionnaire	Profile difference shapes viz. use	Programmer views differ

contexts and certain platforms (e.g., Twitter, Facebook), with limited representation of Reddit, LinkedIn, and Oceania (Badr, 2022; Chiridza and Mare, 2025). These disparities were acknowledged in the "Limitations" section and inform the interpretation of generalizability. The review therefore treats enabling effects—audience growth, novel formats—as real but context-bound and typically offset by trade-offs in depth, verification, and trust. Aligning editorial autonomy with legitimacy in a platformed environment requires moving beyond engagement-maximization toward transparent, auditable, and quality-sensitive systems, as theorized in Section 3 and operationalized via the evidence map.

4.2 Section Theme 2: Commercialization and business strategies shaping news production

Commercialization operates as a constitutive force in the platformized news ecology, shaping editorial judgment through embedded economic incentives. Reading Table 4—This synthesis follows a hybrid thematic coding strategy (deductive + inductive) and

aligns with theory-informed code families—"Platformization/ Commercialization," "Metrics Governance," and "Organizational Form." market logics are embedded in interfaces, dashboards, and platform partnerships, thereby co-producing editorial outcomes with journalists and managers. In this framework, platforms do not merely host content; they mediate value by aligning visibility with monetizable engagement, narrowing the space for public-interest work unless counterbalanced by institutional safeguards and diversified revenue.

4.2.1 Platform dependence and (un)sustainable monetization

Evidence across regions, coded under "Revenue Dependency" and "Platform Risk," demonstrates that reliance on digital distribution is structurally fragile and unevenly distributed. Interviews with Zimbabwean publishers document heavy reliance on X/Twitter, YouTube, Facebook, WhatsApp, TikTok, and Instagram, yet negligible revenue-sharing, producing economic precarity for mainstream outlets (Chiridza and Mare, 2025). These findings were evaluated using quality-weighted synthesis and were mapped in the evidence matrix to highlight regional and platform-based heterogeneity. The hypothesis that business logics—amplified by platform

infrastructures—reshape editorial decision-making is therefore strongly corroborated at the level of business model design (see Table 4).

4.2.2 Metrics governance and editorial autonomy

Ethnographies and interviews show metrics acting as governance instruments that realign editorial autonomy, particularly under KPI pressure. These patterns are coded under "Metrics/Control" and "Organizational Governance." Australian digital newsrooms differentiate "journalistic discovery" (high-cost, uncertain yield) from "metric confirmation" (low-cost, high-yield) work, with the latter favored under KPI pressure (Conyers, 2025). U.S. local news analyses link revenue goals to shifts in selection and packaging (Kosterich and Weber, 2019), while studies of digital start-ups show early metric dependence that narrows editorial latitude over time (Eldridge et al., 2019). Practitioner interviews suggest engagement tooling reframes legitimacy from public-interest criteria to commercial validation (Yu and Atrchian, 2024). ANT clarifies these dynamics as distributed agency: editors, analytics dashboards, A/B testing suites, and ranking systems co-determine what "counts" as a good decision. In parallel, "McDonaldization" frames from Turkey-efficiency, calculability, predictability, and control-map onto standardized content recipes and reduced depth (Çifçi and Ayhan, 2024). Together, these studies demonstrate how metric governance structures editorial choice temporally, hierarchically, and ideologically.

4.2.3 Labor, organizational form, and alternative models

Commercialization displaces risk onto precarious labor and structurally shapes organizational resilience. These themes are reflected in the "Labor/Precarity" and "Alternative Models" codes. Labor-process research documents intensification, commodification, and analytics-driven control in digital-first newsrooms (Cohen, 2019; Cohen, 2015). Intersectional analyses show women of color concentrated in more precarious roles within Canadian digital journalism, indicating uneven burdens of market volatility (Cohen and Clarke, 2024). Ethnographies of nonprofit and freelance ecosystems report mission-market tensions as organizations juggle donor responsiveness, membership churn, and platform reach (Holton and Belair-Gagnon, 2018; Kalika and Ferrucci, 2019; Yeste et al., 2025). Latin American comparisons link macroeconomic reforms to editorial recalibration (Powers and Vera-Zambrano, 2018), while South Asian and hybrid regimes illustrate how commercial and political constraints can compound (Ferrucci and Tandoc, 2017; Oelrichs, 2023). Notwithstanding, enabling instances appear: reader membership and niche verticals can buffer investigative work when accompanied by governance that protects editorial independence and allocates dedicated resources to "discovery" (Vázquez-Cano et al., 2020; Waisbord, 2019) (see Table 4).

4.2.4 Audience analytics, distribution, and product development

Cross-platform behavioral analytics suggest that highly engaged power-users can dominate engagement distributions, incentivizing product and content tailoring that sidelines broader publics (Nelson and Lei, 2018; Zheng et al., 2021). Studies of emergent AI tooling in newsrooms register a duality: efficiency gains and new predictive capacities are offset by ethical and editorial risks, recentering the need

for transparency and auditability in automated decision support (Wu, 2018; Zhang et al., 2024). Within the gatekeeping/SST frame, these findings show non-human actors (dashboards, APIs, recommender hooks) functioning as monetization-sensitive filters that structure discovery, packaging, and release timing. Complementary strands identify constructive uses of analytics—e.g., optimizing discovery of "evergreen" investigations without clickbait—when metric portfolios explicitly reward accuracy, diversity, and civic value (Choi, 2019; Waller and Morieson, 2025). Case-based capacity-building and visualization literacy can mitigate deskilling and support higher-order editorial work under metric pressure (Breit, 2020; R. Cunha, 2020).

4.2.5 Synthesis, implications, and hypothesis appraisal

Across Table 4, three propositions are supported. First, platformized commercialization is not a backdrop but an active shaper of editorial judgment: business goals are encoded into interfaces and KPIs that act as non-human gatekeepers (Conyers, 2025; Eldridge et al., 2019; Kosterich and Ziek, 2020). Second, organizational form moderates but rarely neutralizes pressure: non-profits, freelancers, legacy, and digital-born outlets encounter distinct profiles of constraint and opportunity (Cornia et al., 2018; Holton and Belair-Gagnon, 2018; Kalika and Ferrucci, 2019; Smith, 2022; Wu, 2018). Third, political economy and geography condition outcomes: where revenue sharing is weak and markets volatile, platform dependence magnifies vulnerability and narrows autonomy (Chiridza and Mare, 2025; Powers, 2016; Valero-Pastor et al., 2021; Wehden and Stoltenberg, 2019). These converging findings substantiate the review's central hypothesis that commercial imperatives-amplified by platform infrastructures—systematically reshape editorial decisionmaking and institutional legitimacy.

Consistent with Section 3, the implications point to governance levers rather than newsroom heroics: (i) adopt auditable, multiobjective metric portfolios that elevate quality and civic value alongside reach (Choi, 2019); (ii) conduct routine audits of platform partnerships and recommender exposure to detect adverse selection toward sensationalism; (iii) ring-fence resources and time for "journalistic discovery," insulating it from short-cycle KPI pressures (Conyers, 2025); and (iv) build affordance literacy for desk editors to navigate platform-specific constraints without collapsing standards (Anter, 2025). Finally, the literature on crowdsourcing cautions that commercialization's drive for scalable participation can undermine verification unless practices of "blended responsibility" are instituted between newsrooms and contributors (Aitamurto, 2016). In sum, Theme 2's evidence base confirms that commercialization is deeply entangled with the socio-technical architecture of platforms, necessitating institutional designs that align business sustainability with public-interest journalism rather than subordinating the latter to engagement maximization (see Table 4).

4.3 Section Theme 3: Digital platforms and news legitimacy

This section synthesizes evidence—coded under "Trust," "Credibility Signals," and "Platform Affordances"—to analyze how platform interfaces and ranking systems condition public trust, credibility, and authority claims in journalism. Reading

TABLE 4 Commercialisation and business strategies in news production.

No	Study (author, year)	Business model/ economic imperative	Platform influence	Impact on news production	Decision- making dynamics	Main finding	Limitation/ context
1	Chiridza and Mare (2025)	Platform-based revenue sharing	Re-shapes editorial policy	Editorial independence undermined	Managerial- editorial alignment shifts	Partnership logic erodes control	US-focused
2	Ferrucci and Tandoc (2017)	Subscriptions & merchandising	Ad-centric models	Content "click-driven"	Editorial decisions reflect revenue	Ads drive ethical trade-offs	"Echo-chamber" noted
3	Chua and Westlund (2022)	Monetization-by- data	Platform fee structures	Production "engagement- optimised"	Campaign-driven editorial	Data-driven financials shape news	Asia-centric data
4	O'Brien and Wellbrock (2024)	Entrepreneurial digital	Platform-growth mechanics	Innovation intensifies newscasting	Start-up culture fosters experimentation	New media entrepreneurs adapt fast	Case-study based
5	Myllylahti (2020)	Reader-revenue	Reader-based segmentation	Audience-demand metrics shape stories	Editorial choices adapt to micro- audience	Reader revenue empowers niche stories	Single-national sample
6	Myllylahti (2024)	Newspapers	Pay-wall micro- segment	Bypassed "long- form" journalism	Micro-audience segmentation	Revenue shaping content type	National-level only
7	Oelrichs (2023)	Sports journalism	Platform adoption	Cross-media content creation	Editorial standards	Social-media influence editorial	Context-specific to sport
8	Smith (2022)	Crowdsourced funding	Direct donation streams	Editorial mission alignment	Responsiveness to donors	Finances influence editorial focus	Limited to non- profit
9	Valero-Pastor et al. (2021)	Digital-only news outlets	Transformational leadership	Fosters creativity & collaboration	Alignment with company vision	Leadership styles boost innovation	US & Spain focus
10	Vázquez-Cano et al. (2020)	Tweets by Spanish journalists	Language variation	Nouns, prepositions, verbs dominant	Syntactic functions shape discourse	Language use reflects discourse type	Computational analysis
11	Waisbord (2019)	Digital journalism	Networked practices	Broader opportunities for news dissemination	Crumbling pyramidal model	New ecological conditions for news	Broad definition
12	Waller and Morieson (2025)	Election promise tracking	Digital platforms & fact-checkers	Commitment to public interest journalism	Information provision for democracy	CPETs maintain normative journalism	Focus on Australia
13	Wang-Hai (2025)	Transnational digital news (China)	Social media platforms & digital infrastructure	Negotiating authority → tensions	Cultural transformations align with priorities	China's case expands authority concepts	China focus
14	Wehden and Stoltenberg (2019)	Regional German newspapers (translocal)	Twitter followership analysis	Local content for dispersed audience	Sociological concept of translocality	Translocal followers attracted by sports/ human interest	Focus on Germany
15	Wu (2018)	Newspaper journalists	Social media engagement	Mediation between instructions & attitudes	Twitter use promotes positive perception	Engagement linked to positive perceptions	Online survey
16	Hu and Mothar (2025)	Short video "Anchor Says" (China)	Blending news & entertainment	Personalised delivery, blurred lines	Algorithmic curation concerns	Influences reporting style & engagement	China focus, narrative review
17	Xu (2022)	WeChat (China)	Platform affordances & commercial logics	Enables & constrains user participation	Interface design & state relations	Affordances shape distribution	China focus
18	Yeste et al. (2025)	Online news (TV series)	Machine learning, Google Analytics, Twitter	Predicting success via cybermetrics	Multi-regression analysis	Tool to optimize editorial strategy	TV series focus

(Continued)

TABLE 4 (Continued)

No	Study (author, year)	Business model/ economic imperative	Platform influence	Impact on news production	Decision- making dynamics	Main finding	Limitation/ context
19	Young and Hermida (2024)	Digital journalism business	Platforms, power dynamics	Opaque media business, challenging negotiation	Interconnected digital media systems	Need for nuanced institutional analysis	Cross-geographic
20	Yu and Atrchian (2024)	Ethnic media (Canada)	Transcultural potential	Typologies of online ethnic media	Mixed methods approach	Transculturality a function, not intention	Canadian ethnic media
21	Zayani (2021)	AJ + (Al Jazeera)	Social media platforms & digital storytelling	Adapting to technology & consumption	ICT innovation & legacy media	Unravels dynamics at intersection of tech, politics, geopolitics	Case study of AJ+
22	Zhang et al. (2024)	Facebook Messenger Chatbots	Society-level factors & ICT dev.	Varied capacity in query understanding	Walkthrough method, content analysis	Chatbots show disparate capabilities	Cross-national survey
23	Zheng et al. (2021)	U.S. Newspapers	Multidimensional Web Attention Model	Low loyalty & depth; mobile users fall short	Readership assessment across dimensions	Industry-wide failure to engage readers	Focus on US newspapers
24	Aitamurto (2016)	Digital journalism	Crowdsourcing as knowledge-search	Efficient discovery, continuous tips	Transparency supports search	High volume compromises verification	Blended responsibility needed
25	Anter (2025)	Social media platforms	Platform affordances	Shape content production routines	Stimulus-based interviews	Affordances influence each stage	German journalists
26	Arqoub et al. (2022)	Journalism Practice, etc.	Content analysis of fake news	Majority atheoretical; qual. Methods used	Common words: "news," "media," "fake"	Focus on US; limited theory	103 articles reviewed
27	Auwal et al. (2025)	X (Twitter)	Media logics & intermedia agenda-setting	Candidates dominated agenda	Self-promotion drove news agenda	Platform pivotal in political communication	Nigeria's 2019 campaigns

Table 5—The synthesis builds on theory-driven coding and was triangulated across journalist and audience perspectives using a quality-weighted comparative approach. Platforms act as legitimacy infrastructures: their interfaces, metrics, and recommender hooks create cues that audiences use to infer credibility, while also re-framing what counts as legitimate performance inside newsrooms.

4.3.1 Algorithmic personalization, recommender systems, and conditional trust

Cross-national survey evidence indicates that perceived reliance on NRSs—analyzed under the "Algorithmic Trust" and "Transparency Practices" codes—correlates with lower trust in outlets unless communicative affordances are salient (Blassnig et al., 2024). This aligns with platformization accounts in which gatekeeping shifts from editors toward opaque technical systems. These patterns operationalize algorithmic gatekeeping as a legitimacy mechanism—structuring visibility, relevance, and authority signals through opaque logics (see Table 5). Where platforms highlight sources or provide salient authority cues at moments of high uncertainty, perceived expertise can increase, though effects are platform- and context-specific (Lee, 2023). Within the Section 3 framework, these patterns exemplify

algorithmic gatekeeping: ranking and personalization do not merely route attention; they establish de facto legitimacy criteria by rewarding relevance, timeliness, and engagement signals that may or may not align with public-interest quality.

4.3.2 Platform cues, influencer logics, and the re-making of credibility

Visual virality cues and influencer identity signals—categorized under "Social Signals" and "Gamified Authority"—restructure how audiences perceive credibility across platform types (Baas et al., 2025). Yet gamified engagement and recommendation reverence on YouTube are linked to perceived bias and credibility drops when audiences interpret visibility as manipulation (Lee, 2023). Within ANT, these legitimacy currencies emerge from socio-technical entanglements, not isolated content or journalistic intention (Choi, 2019). Ethnographies and interviews further document how social metrics constitute new "legitimacy currencies," reorienting newsroom performance toward engagement-validated authority (Eldridge et al., 2019). ANT helps make sense of these reconfigurations: legitimacy emerges from networks that include editors, producers, dashboards, platform interfaces, and audience feedback loops rather than from journalists alone.

4.3.3 Institutional negotiations: legacy, digital-born, and nonprofit fields

Legitimacy struggles—coded as "Institutional Trust" and "Recognition Negotiation"—are especially pronounced in digital-born and nonprofit sectors navigating platform dominance and shifting journalistic norms. U.S. cases document sustained efforts by nonprofits to claim mission-based legitimacy while still "struggling for legitimacy" in competitive attention markets (Ferrucci and Tandoc, 2017). Digital-born outlets negotiate recognition vis-à-vis legacy peers under conditions of platform dependence and shifting authority (Carlson, 2017; Cornia et al., 2018). Conceptual syntheses depict digital journalism as at once a symptom, response, and agent within platform systems (Burgess and Hurcombe, 2019). SST helps explain how institutional and commercial logics become materialized in affordance use and reputational strategies.

4.3.4 Comparative and regional contingencies

Legitimacy is locally mediated. Nordic studies tie trust dynamics to distinct media-system evolutions (Young and Hermida, 2024). Interviews from the Global South reveal platform-specific negotiations of authority within uneven infrastructures and regulatory (Beckert and Ziegele, 2020). German and broader European evidence shows algorithmic legitimacy as contested inside newsrooms, especially during periods of change (Masullo and Kim, 2021; Mathews et al., 2024). U.S. ethnography traces newsroom-level trust challenges under intensifying platform pressure (Auwal et al., 2025), while journalist surveys register how practitioners themselves conceptualize legitimacy amid (Choi, 2019). Consistent with our Methods and evidence map, coverage skews toward Euro-US contexts and under-samples Reddit, LinkedIn, Twitch, and Oceania, warranting caution in generalization (see Table 5).

4.3.5 Crowdsourcing, participation, and accountability signals

Crowdsourcing can improve knowledge discovery and sustained tip flows when transparency and feedback are present, but high volumes strain verification and diffuse responsibility between journalists and publics (Aitamurto, 2016). Platform affordances such as messaging bots and chat interfaces introduce new contact points for authority claims, yet capabilities vary markedly by context and design (Zhang et al., 2024). Mixed-method analyses of audience attention indicate low loyalty and depth—particularly among mobile users—posing challenges for cultivating durable trust (Zheng et al., 2021). These dynamics reinforce the framework's emphasis on exposure and interface governance: legitimacy cues are produced in the interaction of product design, procedural transparency, and editorial practices.

4.3.6 Synthesis, implications, and hypothesis appraisal

Across Table 5, three conclusions stand out. First, platforms shape legitimacy conditions by encoding credibility cues into ranking, recommendation, and interface design. Where perceived NRS use is high and opacity is salient, trust tends to decline; transparency, user control, and value-aligned editorial signaling partially moderate this relationship (Blassnig et al., 2024; Choi, 2019). Second, legitimacy is co-produced: social endorsement and influencer cues can elevate perceived authority but also risk substituting popularity for verification, especially in video-centric contexts (Baas et al., 2025;

Lee, 2023). Third, institutional form and regional political economy condition outcomes: nonprofits and digital-born outlets face heightened persuasion burdens; legacies grapple with platform dependence and managerial tensions; regional infrastructures and norms mediate audience trust (Carlson, 2017; Cornia et al., 2018; Ferrucci and Tandoc, 2017).

Implications follow directly from Section 3. Governance levers include: (i) auditable transparency for NRS (purpose, inputs, and trade-offs), along with meaningful user agency over feeds; (ii) adoption of multi-objective metric portfolios that elevate accuracy, diversity, and civic value alongside reach; (iii) platform-specific communication of value signals to make professional standards legible (e.g., sourcing and corrections), especially for digital-born and nonprofit outlets; and (iv) routine exposure audits to identify adverse selection toward sensationalism or identity-driven visibility. Methodologically, the legitimacy literature benefits from triangulating surveys (audience and journalist), ethnography, and field experiments, with wider inclusion of under-studied platforms and regions identified in the evidence map.

In sum, Theme 3 supports the review's hypothesis that digital platforms do not merely transmit news; they configure the terms by which journalism is judged legitimate. Legitimacy is thus a negotiated product of socio-technical assemblages—editors, algorithms, interfaces, audiences, and governance—whose alignment or misalignment with public-interest values ultimately shapes trust trajectories (see Table 5).

4.4 Section Theme 4: Algorithmic amplification of polarization, misinformation, and self-censorship

This theme synthesizes findings from 26 studies coded under Theme 4—categorized into "Polarization," "Misinformation Amplification," and "Editorial Risk Management"—to examine how algorithmic engagement logics intensify division, spread falsehoods, and constrain autonomy. The synthesis follows a theory-informed coding scheme and comparative appraisal method (see Table 6). Consistent with Section 3's scaffolding. The evidence confirms that algorithms function as socio-technical agents—not neutral intermediaries—reconfiguring the visibility and legitimacy of journalistic content.

4.4.1 Amplification of polarization

A substantial cluster of studies (Studies 1, 4, 6, 7, 8) document algorithmic amplification of ideological polarization, frequently coded under "Echo Chambers" and "Visibility Bias." Chiridza and Mare (2025) demonstrate how news-feed personalization produces "echo-bubble" effects, amplifying polarization and misinformation simultaneously (Table 6, Study 1). Zhao and Ye (2025) similarly show that content-matching mechanisms align news visibility with existing political predispositions, deepening divides in specific regional contexts (Table 6, Study 4). These findings align with the algorithmic gatekeeping model, where algorithmic ranking displaces editorial judgment and privileges partisan cues over balance.

These align with algorithmic gatekeeping theory, where algorithmic logic substitutes editorial filtering with automated

TABLE 5 Digital platforms and news legitimacy.

No	Study (author, year)	Platform / algorithm	Affordance / identity cue	Impact on legitimacy indicators	Mechanism of influence	Main finding	Limitation / context
1	Blassnig et al. (2024)	News recommender systems	Personalisation & network cues	Trust & credibility perceptions rise	Tailored feed increases perceived relevance	Personalised algorithms can boost legitimacy	Evaluation limited to NRS users
2	Baas et al. (2025)	TikTok / Instagram	Visual virality cues, influencer ID	"Trust-seeking" content favoured	Influencer signals shape news acceptance	Influencer endorsement increases perceived legitimacy	Younger demographic bias
3	Choi (2019)	Multichannel distribution	Value-signaling editorial	Credibility tied to value alignment	Content weighting based on journalistic values	Value-aligned media more trustworthy	Quantitative survey only
4	Masullo and Kim (2021)	YouTube	Voter-imbalance metrics	Perceived bias and credibility drop	Gamified engagement skews presenter credibility	High bias perception lowers trust	Limited cross- platform reach
5	Mathews et al. (2024)	Facebook	"Not-sharing" patterns	Engagement-driven sharing reduces credibility	Social cues discourage misinformation	Non-sharing reduces trust perception	Short-term data
6	Zhang et al. (2024)	Facebook Messenger Chatbots	Society-level factors & ICT dev.	Varied capacity in query understanding	Walkthrough method, content analysis	Chatbots show disparate capabilities	Cross-national survey
7	Kim et al. (2022)	TV newsrooms	Social media analytics	Perceived authenticity	Data-driven content curation	Real-time data can enhance engagement	Limited to local news
8	Masullo and Kim (2021)	YouTube	Algorithmic recommendation	Credibility tied to algorithmic reverence	Recommendations can shape perceptions of trust	Algorithmic trust questionable	Single-platform
9	Wang (2021)	Social media	Personalisation loops	Digital identity perception	Algorithmic profiling influences trust	Profiling increases perceived authenticity	Sample limited
10	Wu (2018)	Social media engagement	Accountability & threats	Mediation between instructions & attitudes	Twitter use promotes positive perception	Engagement linked to positive perceptions	Online survey
11	Xu (2022)	WeChat (China)	Platform affordances & logics	Enables & constrains user participation	Interface design & state relations	Affordances shape distribution	China focus
12	Yeste et al. (2025)	Online news (TV series)	Machine learning & analytics	Predicting success via cybermetrics	Multi-regression analysis	Tool to optimize editorial strategy	TV series focus
13	Young and Hermida (2024)	Digital journalism business	Platforms, power dynamics	Opaque media business, challenging negotiation	Interconnected digital media systems	Need for nuanced institutional analysis	Cross-geographic
14	Yu and Atrchian (2024)	Ethnic media (Canada)	Transcultural potential	Typologies of online ethnic media	Mixed methods approach	Transculturality a function, not intention	Canadian ethnic media
15	Zayani (2021)	AJ + (Al Jazeera)	Platforms & digital storytelling	Adapting to technology & consumption	ICT innovation & legacy media	Unravels dynamics at intersection of tech, politics, geopolitics	Case study of AJ+
16	Zhang et al. (2024)	Facebook Messenger Chatbots	Society-level factors & ICT dev.	Varied capacity in query understanding	Walkthrough method, content analysis	Chatbots show disparate capabilities	Cross-national survey

(Continued)

TABLE 5 (Continued)

No	Study (author, year)	Platform / algorithm	Affordance / identity cue	Impact on legitimacy indicators	Mechanism of influence	Main finding	Limitation / context
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18	Aitamurto (2016)	Digital journalism	Crowdsourcing as knowledge-search	Efficient discovery, continuous tips	Transparency supports search	High volume compromises verification	Blended responsibility needed
19	Anter (2025)	Social media platforms	Platform affordances	Shape content production routines	Stimulus-based interviews	Affordances influence each stage	German journalists
20	Arqoub et al. (2022)	Journalism Practice, etc.	Content analysis of fake news	Majority atheoretical; qual. Methods used	Common words: "news," "media," "fake"	Focus on US; limited theory	103 articles reviewed
21	Auwal et al. (2025)	X (Twitter)	Media logics & intermedia agenda-setting	Candidates dominated agenda	Self-promotion drove news agenda	Platform pivotal in political communication	Nigeria's 2019 campaigns
22	Baas et al. (2025)	Dutch Twitter	Identity cues & news sharing	Political identity foregrounded	Opposition statements common	Ideology shapes sharing patterns	Focus on Dutch users
23	Badr (2022)	Egyptian Syndicate	Digital & freelance exclusion	Legal definitions divide journalists	Power imbalance shapes boundaries	Exclusion limits professional boundary expansion	Regional focus
24	Beckert and Ziegele (2020)	News Websites	Personality traits & article topics	Civility differs by personality	Agreeableness → civility	Personality influences comment quality	Survey & content analysis
25	Blassnig et al. (2024)	News recommender systems	Algorithmic knowledge & skill	Higher knowledge → perceived use of NRS	User perception of algorithms	Perceived use linked to lower trust	Cross-country survey
26	Boling and Walsh (2025)	X (Twitter)	Platformization constraints	Focus on "speed over depth"	24 h news cycle norm	Digital norms affect reporting depth	US-based debate
27	Breit (2020)	Master of Arts in Digital Journalism	Case-based education	Cognitive flexibility via cases	Problem-solving skill development	Contextual learning vital for adaptation	East Africa focus
28	Buhl et al. (2019)	Digital journalism ecosystems	News story attributes & conditions	Immediacy driven by negative news/ personalities	News diffusion analysis	Negative news spreads faster	Germany-based sites

partisanship reinforcement. Comparative work Fang and Cheng (2022) on Facebook further emphasizes how "filter-bubble" dynamics magnify selective exposure, demonstrating that even within diversified platforms, algorithmic curation tends toward ideological clustering (Table 6, Study 7). While survey evidence sometimes suggests limited exposure to overtly false news, the convergence of computational and ethnographic studies in Theme 4 strongly substantiates the hypothesis that algorithms serve as systemic amplifiers of political polarization.

4.4.2 Centrality of algorithmically mediated misinformation

Algorithms also play a pivotal role in structuring the pathways through which misinformation spreads. Moyo et al. (2019) and Kafiliveyjuyeh et al. (2025) these dynamics—categorized as "Virality Logics" and "Credibility Degradation"—reveal how algorithmic systems privilege novelty and emotion over accuracy, eroding epistemic safeguards. He et al. (2021) extends this to

YouTube, demonstrating how user-generated algorithmic loops on political channels sustain cycles of misinformative content (Table 4, Study 9). These patterns are echoed in Fleerackers et al. (2025), who highlight how factors influencing republication differ significantly from those that drive Facebook amplification, underscoring how misinformation logics vary across platforms (Table 6, Study 11).

Cognitively, these amplification dynamics interact with user heuristics, producing a fertile environment for misinformation uptake. This resonates with Actor–Network Theory (ANT): Such logics embed misinformation within platform infrastructure itself, co-produced through feedback loops between users, systems, and incentives.

4.4.3 Self-censorship and strategic silence

Theme 4 identifies "anticipatory editorial restraint" as a by-product of algorithmically shaped visibility economies. Appelgren (2023) finds that newsroom producers often adapt editorial timetables to

engagement-driven imperatives, avoiding low-visibility topics (Table 6, Study 5). Similarly, He et al. (2021) documents how fear of follower backlash on Twitter leads to anticipatory editorial self-editing (Table 6, Study 8). Within the SST framework, self-censorship reflects the institutional internalization of externalized commercial metrics.

Cross-platform evidence reinforces this. García-Perdomo (2024) shows how Colombian TV newsrooms adapt content formats to Facebook distribution metrics, while Tandoc and Maitra (2018) highlight how rumor proliferation in the Philippines shapes newsroom risk calculations (Table 6, Studies 14 and 18). These cases are well explained by SST, which emphasizes how technological designs embed commercial imperatives that reshape professional autonomy. The implications are profound: algorithmically induced self-censorship not only narrows editorial agendas but also normalizes strategic silence in politically sensitive contexts.

4.4.4 Corpus heterogeneity and balance

While the dominant evidence points toward amplification of polarization, misinformation, and self-censorship, it is important to acknowledge nuance. Theme 4's coding strategy included a "Mitigating Factors" dimension, enabling identification of cases (e.g., Fleerackers et al., 2025; García-Perdomo, 2024) where platform effects are uneven. This aligns with Section 3's emphasis on platformization: The evidence thus supports a contingent—not deterministic—interpretation of algorithmic influence.

4.4.5 Implications and hypothesis validation

Synthesizing evidence from Table 6 and triangulating across method types (audit, ethnography, survey), three mechanisms are validated:

- 1. Optimization for divisiveness—Algorithms systematically privilege content that maximizes engagement, leading to polarization (Chiridza and Mare, 2025; L. Zhao and Ye, 2025).
- 2. Lowering epistemic thresholds—Recommendation loops and viral reposting amplify misinformation (Moyo et al., 2019; He et al., 2021).
- 3. Restructuring newsroom practices—Metric-driven visibility logics induce self-censorship (Appelgren, 2023; He et al., 2021).

These findings confirm the hypothesis advanced in Section 1 that algorithmic visibility logics reconfigure journalistic practices by privileging "shareworthiness" over newsworthiness. This validates H5 from Section 1 and confirms that algorithms shape not only information flow but also editorial behavior.

Future research should adopt longitudinal and cross-regional audits of recommender systems, integrating mixed methods to capture temporal dynamics and editorial adaptation. Governance reforms should prioritize Platform accountability, algorithmic transparency, and visibility audits are central to restoring epistemic integrity in journalism.

5 Discussion

Across the 78 included studies, convergent findings demonstrate that platform logics—ranking, recommendation systems, and analytics dashboards—operate as de facto gatekeepers that restructure

journalistic flows. Rather than editors alone determining news selection, sequencing, and timing, algorithms increasingly shape which stories surface and how audiences engage (D'Amico et al., 2023; McGregor and Molyneux, 2020). To synthesize this diverse corpus, we employed an inductive thematic coding strategy, complemented by a theory-informed analytical framework (Section 3), ensuring analytical coherence across varied contexts and methods. These dynamics support the review's hypothesis that algorithms are active mediators of journalistic legitimacy.

A consistent pattern emerges around trust and transparency. Importantly, transparency is not limited to audience communication but must also encompass internal newsroom clarity around how metrics influence decisions (Blassnig et al., 2024). Metricization further shifts newsroom output toward "shareworthiness," privileging sensational and quickly consumable content at the expense of investigative depth (Carlson, 2019; Carlson et al., 2021). Studies from the Global South highlight fragile business models that exacerbate dependence on platforms, reinforcing commercial and algorithmic pressures (Chiridza and Mare, 2025). Simultaneously, newsroom ethnographies show bounded agency: editorial teams triage metrics, However, ethnographic insights remain under-integrated with computational findings across most studies, limiting multiperspectival analysis. Yet such gains coexist with epistemic risks, particularly when participatory practices undermine verification routines (Aitamurto, 2016).

These findings align with the theoretical framework in Section 3. Together, the three lenses—algorithmic gatekeeping, ANT, and SST—offer complementary insights into how legitimacy, autonomy, and epistemic authority are reconfigured in platformized environments.

5.1 Limitations of the evidence

The corpus shows a clear Western and English-language bias. This reflects broader structural inequalities in academic publishing, where Global South perspectives often face linguistic, financial, or infrastructural barriers to inclusion. In addition, much of the literature treats algorithms as opaque "black boxes," with limited technical characterization of recommender systems. This gap highlights the need for interdisciplinary collaboration with computer scientists to advance transparency in algorithmic auditing and methodological rigor.

Finally, limited attention is given to workforce diversity and equity, despite evidence that metricization disproportionately affects precarious and marginalized journalists. This blind spot curtails intersectional analysis of how algorithmic pressures disproportionately shape newsroom labor conditions for marginalized groups. The review process itself also presents constraints. Future systematic reviews should explicitly incorporate multilingual searches, grey literature databases, and region-specific repositories to mitigate these limitations.

5.2 Implications for practice and policy

Findings underscore three implications. In practice, this means embedding algorithmic transparency not only into content presentation but also into the internal governance of editorial tools and newsroom dashboards.

 ${\sf TABLE~6~Algorithmic~amplification~of~polarization,~misinformation~and~self-censorship.}$

No	Study (author year)	Platform / algorithm	Amplified phenomenon	Mechanism of amplification	Evidence / impact	Main finding	Limitation / context
1	Chiridza and Mare (2025)	News-feed personalization	Polarization & Misinformation	Echo-bubble feed reinforces extreme views	Content- propagation analysis	Algorithms intensify polarization	Temporal snapshot
2	Moyo et al. (2019)	Global news portals	Fakes & hoaxes	Recommendation loops amplify spread	Case-study of misinformation cycle	Algorithms accelerate fake-news diffusion	Limited to English language
3	Kafiliveyjuyeh et al. (2025)	Algorithmic feed	Fake-news amplification	Ranking prioritizes sensational claims	Empirical audit of 10 k posts	Amplification leads to misinformation spread	Short-term data
4	Zhao and Ye (2025)	Social media	Political polarization	Content-matching aligns with ideology	Political content segmentation	Algorithmic nudges deepen divides	Limited region
5	Appelgren (2023)	Media-production workflow	Self-censorship	Engagement-driven editorial timetables	Survey of newsroom producers	Fear of low engagement drives self-censorship	Sample of large outlets
6	He et al. (2021)	YouTube	Misinformation & conspiracies	Algorithmic elevation of fringe content	Platform audit	Algorithmic loops increase false claims	Local broadcast context
7	Fang and Cheng (2022)	Facebook Live	Affective news & emotional reactions	Platform affordances enable collective witnessing	Immersive, dramatic experience	Emotional turn in journalism enhanced	Hong Kong Anti- ELAB movement
8	Fleerackers et al. (2025)	The Conversation / Facebook	Republication & Facebook engagement	Content & source factors shape amplification	Content vs. source influences	Factors influencing republication differ from FB amplification	Data analysis
9	Foxman et al. (2024)	Twitch	Livestreaming practices	Exploiting platform features for audience enrollment	Bypassing traditional boundaries	Newsmaking on Twitch flouts norms	Empirical sites studied
10	Ganter and Paulino (2021)	Independent Digital Journalism (Brazil)	Institutionalization & crisis	Relationality & support networks foster resilience	Surviving platform attacks	Resilience models aid institutionalization	Brazil focus
11	García-Perdomo (2024)	TV newsrooms / Facebook	Social media engagement & video distribution	Recommendations & metrics influence decisions	Socio-technical approach	Social media influences TV perceptions	Colombia focus
12	Gilewicz (2016)	Western news coverage (Syria)	"Citizen journalist" meaning	Parrhesia framework in digital realm	Risks activate truth-telling duties	Discursive uncertainty about journalistic work	Foucault's parrhesia applied
13	Giomelakis and Veglis (2016)	Greek media websites	Search Engine Optimization (SEO)	Visibility & ranking crucial for traffic	SEO elements in news content	SEO affects website traffic significantly	Greece media websites
14	Goggin (2020)	News, mobiles & mobilities	Digital journalism trends	Deep changes in mobile news	Key areas for future research including education	Mobiles central to larger trends	Focus on mobile media
15	Grubenmann (2016)	Digital Journalism Studies	Action research collaborations	Solution-oriented outcomes	Reflection on practice to improve	Encourages action research in digital journalism	Switzerland project evaluated
16	Günther and Quandt (2016)	Digital journalism / Social media	Automated text analysis methods	Big data analysis for insights	Deductive & inductive methods used	Automated methods enrich analysis	Roadmap of options provided
17	Gutsche and Hess (2020)	Digital news spaces	Placeification processes	Reinforcing connection to "place"	Mediated experience & interactivity	Digital news spaces transform into places	Concept of 'placeification'

(Continued)

TABLE 6 (Continued)

No	Study (author year)	Platform / algorithm	Amplified phenomenon	Mechanism of amplification	Evidence / impact	Main finding	Limitation / context
18	Hagar and Diakopoulos (2025)	TikTok	News recommendations	Algorithmic indifference to news	Lack of proactive news distribution	Algorithms do not prioritize credible news	US-based news audiences
19	Hågvar (2019)	News media Facebook Updates	Interpretive rhetoric	Narrative strategies in updates	Storytelling techniques	Meaning constructed via Facebook updates	Norwegian media
20	Hardy (2017)	Digital journalism studies	Critical political economy	Correctives to celebratory perspectives	Radical pluralist & comparative analysis	Need for synthesized approaches	Strengths in political economy & culturalist traditions
21	Harmer and Southern (2020)	UK Online News Sites	Digital affordances (video, links, Twitter)	Hybridity manifest via online affordances	Content analysis of election coverage	Digital-born sites link more widely	BBC News, Mail Online, etc.
22	Hendrickx (2025)	TikTok	Visual, hashtags, auditory affordances	Adherence to visual & hashtag affordances	Digital methods approach	Outlets less adhere to auditory affordances	European news outlets (2019– 2022)
23	Hermida and Mellado (2020)	Twitter & Instagram	Social media logics dimensions	Analyzes norms & practices on social media	Structure, aesthetics, genre conventions	Framework for analyzing journalism on social media	Chilean journalists' accounts
24	Hewett (2016)	Data journalism education	Obstacles to innovation	Complexities of data journalism demands	Specialized socialization suggested	Specialized socialization aids innovation	MA program development
25	Holman and Perreault (2023)	Digital newsrooms	Technology, roles, gender	Men use cameras more; women use editing software more	Diffusion of innovations lens	Gender differences in tech use, but similar adoption	U.S. digital journalists
26	Humprecht and Esser (2018)	48 news websites (6 countries)	Digital functions: transparency, background, interactivity	Exploitation varies by country/outlet type	Mapping outlets to digital functions	Three models prevalent: transparency, background, print- oriented	Comparative content analysis

Policy interventions should prioritize co-regulatory models granting researchers access to platform data, coupled with obligations for transparency and accountability. Such models should be grounded in international standards for data access, algorithmic explainability, and ethical design, especially in regions with fragile media ecosystems. For news organizations, experimenting with alternative business models—membership schemes, philanthropy, or mixed revenue streams—may reduce dependence on engagement-driven metrics. Diversifying revenue can help mitigate the "platform trap," where content decisions become subordinated to algorithmic distribution incentives.

5.3 Directions for future research

This review identifies urgent priorities for the field. Participatory action research involving journalists, platform engineers, and civic actors could further enrich this knowledge base. Rigorous mixed-method designs that combine algorithmic audits, log data, and newsroom experiments are needed to establish causal mechanisms (McGregor and Molyneux, 2020). Longitudinal consortia tracking

algorithmic changes and newsroom responses across diverse regions would provide broader generalizability (Zheng et al., 2021). Understudied platforms and geographies require systematic inclusion. For example, platforms such as TikTok, Reddit, and encrypted messaging apps remain poorly represented despite their growing informational relevance. Equity-focused research must evaluate how algorithmic pressures intersect with gender, race, and precarity in journalism.

Finally, shared taxonomies and open data corpora are essential for cumulative research and replication. This requires cross-institutional coordination, robust metadata standards, and accessible repositories that support long-term research infrastructure.

6 Conclusion

This systematic review of 78 empirical studies robustly demonstrates that engagement-driven algorithmic curation fundamentally reorients news judgment toward maximizing "shareworthiness," redefining traditional editorial standards and altering the informational priorities of digital journalism ecosystems. This process concurrently compresses journalistic

production cycles and normalizes dashboard-led coordination within newsrooms (McGregor and Molyneux, 2020; Napoli and Caplan, 2016; Tandoc and Maitra, 2018; Weber and Napoli, 2018). Such routinization reshapes editorial workflows and fosters conditional autonomy. The effects on media legitimacy are notably contingent: opaque or poorly understood perceived News Recommender System (NRS) use demonstrably depresses public trust, whereas consistently benefit-framed and transparent deployments of these systems can significantly mitigate skepticism (Blassnig et al., 2024). This underscores the importance of designing NRS that foreground explainability, editorial values, and audience comprehension. Commercial pressures, compounded by often weak revenue-sharing models, intensify platform dependence—a concern particularly acute outside the Global North.

Simultaneously, the optimization of content for virality increases audience exposure to polarization and misinformation, and, in politically sensitive contexts, can actively prompt journalistic self-censorship (Chiridza and Mare, 2025; Wardle et al., 2021). These risks highlight the need for media systems that insulate editorial decision-making from volatility in algorithmic trends. The integration of theoretical frameworks—specifically algorithmic gatekeeping, Actor-Network Theory (ANT), and Social Shaping of Technology (SST)—clarifies that algorithms must be understood not merely as neutral tools but as institutional actors embedded within pre-existing and emerging economic, social, and political regimes.

To address these critical challenges and foster a more robust digital journalism landscape, key priorities include:

- The widespread implementation of explainable and useroriented recommender systems that reflect journalistic norms;
- (2) The adoption of pluralistic metric portfolios that integrate accuracy, civic value, and diversity alongside engagement; and
- (3) The establishment of global research infrastructures and funding consortia dedicated to algorithmic transparency, equity, and sustainability in journalism.

Ultimately, sustaining journalism's vital democratic role necessitates deliberate governance and design choices that consciously realign algorithmic incentives with editorial independence and the fundamental principles of public-interest legitimacy. This includes redefining metrics of success to ensure journalism serves democratic needs rather than platform-driven imperatives.

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Author contributions

HH: Investigation, Conceptualization, Writing – review & editing, Writing – original draft, Formal analysis, Methodology. HM: Software, Writing – review & editing, Project administration, Supervision, Data curation, Validation. HL: Funding acquisition, Writing – review & editing, Formal analysis, Visualization, Resources. AS: Data curation, Formal analysis, Methodology, Writing – review & editing.

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