Proceedings of the 5th International Conference on Financial Technology and Business Analysis
DOI: 10.54254/2754-1169/2026.38514

From Editorial Gatekeeping to Algorithmic Gatekeeping: The Mechanisms and Impacts of Digital Platforms Reshaping Information Distribution

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Abstract. In the digital age, the main power over how information is spread is moving away from professional editors and toward smart algorithms; this shows a big shift, from editors acting as gatekeepers to algorithms acting as gatekeepers. This paper takes that shift, from editors deciding what gets through to algorithms deciding what gets through, as its main topic, and it also uses examples such as Douyin and Jinri Toutiao to talk about how these mechanisms work and what social effects they have. The results show that, when algorithms act as gatekeepers, they match information efficiently and precisely and clearly lower the cost for people to get information, so personalization and user experience are improved; at the same time, however, recommendation methods that rely on user engagement tend to favor content that grabs attention, stirs emotions, or looks very similar, and this may weaken information diversity and public discussion. To deal with these problems, this study puts forward three ways to handle them: a balanced recommendation approach that combines "accuracy and diversity," a responsibility system that can be explained, checked, and audited, and shared supervision by editors and algorithms. The study also points out that algorithms and the public good are not necessarily opposites; the key is to use rule design to keep the desire for efficiency inside a framework, so platforms can balance efficiency and trust, and so the study can offer theoretical and practical references for improving the information environment.

Keywords: Algorithmic Gatekeeping, Editorial Gatekeeping, Information Cocoon, Algorithmic Accountability, Human–Algorithm Collaboration

1. Introduction

1.1. Research background

In the digital age, the power to spread information is slowly moving from professional editors to smart algorithms; in traditional media, editors used their professional skills and ethical rules to decide what the public could see; however, today, news aggregators, short-video platforms, and social media platforms use algorithms to pick the most suitable information for users, through

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DOI: 10.54254/2754-1169/2026.38514

methods such as matching users with similar choices and using deep learning, and they rely on data such as clicks, viewing time, and social connections [1].

The business logic of algorithmic recommendation is clear: precisely match interests, boost click rates and user engagement, and amplify platforms' commercial returns; nonetheless, its social influence remains controversial. These mechanisms can restrict users' exposure to diverse viewpoints, while engagement-driven recommendations may further amplify the spread of misinformation and viewpoint polarization [2, 3]. The recommendation logic is more opaque because of the "black box" of the algorithm, while platforms may amplify false and low-quality information due to the pursuit of profit. Studying this topic is of significant value: commercially, platforms must balance efficiency and trust; socially, distribution mechanisms directly impact the right to know, the formation of consensus, and the operation of democracy. Clarifying the evolutionary logic and social impact of the shift from editorial gatekeeping to algorithmic gatekeeping, with realistic implications for platform governance and information ecology improvement.

1.2. Literature review

Literature on information gatekeeping spans three distinct paradigms. Initially, some scholars, based on classical theories, emphasized the editor's professional judgment and obligation to serve the public interest, even if they themselves had a certain degree of inherent bias [1]. Subsequently, some studies focused on the operational mechanisms of algorithmic recommendation systems, revealing how algorithms, such as collaborative filtering and content recommendation, utilize historical data for personalized distribution. Some scholars have conducted research on Chinese platforms like Jinri Toutiao, confirming the central role of algorithms in news dissemination [4]. However, critical research has pointed out serious drawbacks: recommendation systems can create "information cocoons," limiting information diversity and exacerbating information polarization [5]. Furthermore, the lack of transparency in algorithms makes it difficult for regulatory agencies to effectively oversee the fairness of information, thereby exacerbating public distrust [6-8]. Finally, specific to short-video platforms, Douyin users exhibit strategic adaptability to algorithmic curation [9, 10].

From the existing literature, it is clear that most scholars have mainly studied the theoretical meaning of traditional editorial gatekeeping, the technical rules of algorithmic recommendation, and how personalized recommendation affects users' information consumption as individuals; very few scholars take the angle of institutional change and systematically compare what values editorial gatekeeping and algorithmic gatekeeping hold, or examine the differences in the logic of decision-making and social responsibility, or deeply explore the larger effects of algorithmic gatekeeping on the fairness of information distribution, content diversity, and the quality of public discussion.

1.3. Research framework

This paper's research logic is as follows: primarily, by sorting the industrial background of the transformation of information distribution from editorial gatekeeping to algorithmic gatekeeping, clarifying the realistic urgency and theoretical meaning of this research. Next, this study picks digital platforms as examples, describing how algorithms act as gatekeepers and how these platforms perform in the market; it also examines the good effects and problems, mainly focusing on how algorithmic control improves distribution efficiency and user experience, as well as problems caused by information cocoons, algorithmic bias, and the shrinking public domain; based on these problems, it gives governance steps for three areas: algorithm transparency, content diversity, and

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users' media literacy; in the end, it sums up the findings, lists this study's theoretical contribution and practical value, and outlines the research limits and future directions.

2. Case description

As Table 1 shows, this paper takes representative digital platforms at home and abroad as cases; in news apps, Jinri Toutiao from ByteDance is an example, and algorithm-based recommendation is the key base of its news delivery models, as it uses user behavior data and content features to help match content to users [4]. By collecting user data such as clicks, searches, and reading time, the platform builds a detailed interest tag system, so personalized content can be sent to each user; in social media and short video areas, Douyin is an example, and its recommendation system can keep adjusting the information flow based on interactions between users and video content, and it can also affect what content users see through algorithm picking [9]. These platforms' algorithm gatekeeping mode achieved significant commercial success, with user scales reaching hundreds of millions; however, they frequently faced public criticism and regulatory concerns due to low-quality content and information cocoons. These two cases represent typical forms of algorithm gatekeeping in the areas of News with pictures and text, and short videos, simultaneously reflecting the opportunities and challenges faced by digital platforms as the power of information distribution shifts.

Table 1. Comparative overview of algorithmic gatekeeping case studies

Platform	Media Format	Core Algorithmic Mechanism	Primary Commercial Outcome	Associated Societal Challenge
Jinri Toutiao	News & Text	Interest Tagging & Collaborative Filtering	High user retention	Information cocoons
Douyin	Short-Video	Interactive Behavior Analysis	Massive user scale	Content quality concerns

3. Algorithmic gatekeeping: impact assessment and challenge analysis

3.1. Efficacy of algorithmic gatekeeping in information distribution

3.1.1. Breaking processing bottlenecks for precise content matching

The main strength of algorithm gatekeeping is that it computes very fast, and traditional editorial teams are limited by people and time; each day they can only choose and show a small amount of information, so many good but not popular items may be buried; algorithms can pull features from huge amounts of content and match users in milliseconds, and they push information to users who are most likely to be interested; this close matching makes information distribution more efficient, raises users' satisfaction, and makes them use platforms longer; for content creators, algorithm recommendations clearly lower the barriers to being seen, so new and unpopular creators can get chances to avoid the channel barriers of traditional media and reach their target audiences directly.

3.1.2. Reducing cognitive load and enhancing personalization

Under the traditional editorial gatekeeping model, users need to actively browse multiple information sources to acquire content they are interested in, which requires significant time and cognitive load. In contrast, algorithmic gatekeeping reduces the cost of information search by

DOI: 10.54254/2754-1169/2026.38514

actively recommending high-quality or attractive content to users. At the same time, the algorithm can persistently learn users' evolving interests and dynamically adjust recommendation strategies, enabling the informational consumption experience to become personalized. This "getting exactly what you want" experience is something traditional media cannot offer, and it is also the critical point that digital platforms can appeal to a large number of users in a short period. Relevant research indicates that news recommendation systems can improve the efficiency of users gaining relevant information through personalization mechanisms; however, this must be balanced with content diversity.

3.2. Structural deficiencies and socio-technical challenges

3.2.1. "Information cocoon" effect and ideological polarization

Recommendation systems are usually set up to get more user engagement and more interactions, and content that makes people feel strong emotions often gets more clicks; as a result, algorithms may keep strengthening information that fits users' interests or views, so users have fewer chances to see different opinions, and over time, they are trapped in "information cocoons" [11]. At the social level, many users are put into different "information tribes," and the base for public discussion is worn away, while social agreement becomes hard to build; recent studies also show that when social media ranking methods aim at user engagement, they may increase the spread of false information; in this setting, algorithms are no longer a neutral channel, and they become an active force that pushes social division.

3.2.2. Algorithmic opacity, bias amplification and misinformation

How algorithms make decisions is still mostly unclear to users and regulators, and platforms often do not fully share specific data, so users find it hard to understand exactly why some content is pushed and some is hidden; because algorithmic recommendations are not explained enough, users and regulators find it harder to find and fix possible biases; at the same time, biases in training data and system design also affect whether different groups can get various kinds of information [6, 7, 12]. A more serious problem is that fake information may cause stronger emotional reactions and more interaction, so it is more likely to be spread [3]. Although traditional editing may also have biases, it follows professional ethics and checks facts; algorithms do not have the ability to judge facts or values. As a result, if ranking only depends on data measures, it may speed up the spread of fake or low-quality information; if platforms lack effective explanation, auditing, and human intervention systems, public distrust may become even worse.

3.2.3. Erosion of editorial values and the shrinking public sphere

When algorithms act as gatekeepers, they push professional editors to the edge in information distribution; in traditional media, editors not only filtered information, but also took on social duties, such as shaping public agendas and improving the quality of discussion, and they tried to balance views and bring public issues to light; however, on platforms ruled by algorithms, these public values are replaced by users' preference data; algorithms do not actively recommend content that is "needed but not popular," such as talks about serious public policy, so the public domain is taken over by fun and fragmented content; at the same time, to fit algorithm needs, creators often make titles that grab attention and content full of strong emotions but lacking meaning and depth, so bad

DOI: 10.54254/2754-1169/2026.38514

content tends to replace good content, and this harms the information environment and the base of democracy.

4. Governance strategies for transitioning from algorithm-only gatekeeping to human-machine collaboration

4.1. Integrating precision and diversity in recommendation systems

To solve the problem that algorithms keep strengthening similar information and lock users in an "information tribe," the main fix is to add variety limits to recommendation goals, so the closed loop that makes recommendations narrower and narrower can be broken; on the technical side, platforms should keep some share of "exploration content" in the main recommendation stream, and they should actively push content that is reliable, content with different but connected views, and public issues, while adding variety penalties to stop similar content from being too concentrated.

This can be done through ranking methods that care about variety, such as rules about how wide and balanced the mix is, so that the recommended set covers more topics, views, and source types; for example, platforms can use a method that balances relevance and newness, so no single view or content type is shown too much.

In the platform's user interface, diverse dashboards and an adjustable "exploration level" slider can be offered, and this moves users from passively receiving algorithmic shaping to actively controlling the information recipe; on the content side, the company can work with authoritative media and public institutions to set up a "required recommendation list," so every user's information flow always includes high-quality public affairs content, and the visibility of public issues across groups becomes a rule.

4.2. Establishing explainable and auditable algorithmic accountability

To deal with the problems that algorithmic decisions are not clear, that biases are hard to trace, and that fake information spreads more because it gets much interaction, the main plan is to change from a black box way to one that can be explained, checked, and corrected; platforms often say algorithms are not open because they need to protect their own technologies and stop people from gaming the system. However, this trade-off between confidentiality and accountability is not binary; it is possible to achieve meaningful transparency without disclosing sensitive code or parameters. Implement hierarchical transparency disclosure, explain the recommendation logic and ranking factors to users, and provide data explanations to regulators and third parties, so that the reasons for push and hide are understandable; platforms should establish independent algorithm audit and accountability mechanisms, regularly examine the fairness differences of the recommendation system among different groups and publish an annual accountability report, and open channels for users to appeals and manual review; to limit the interactive advantages of fake information from the beginning, bring signal of content credibility to the ranking model, weaken the objective function that is solely oriented towards click-through rate, and conduct pre-verification for contents with high dissemination potential but questionable sources instead of tackle it after it spread widely.

4.3. Fostering human-machine collaboration to safeguard editorial values

To address the issues of weakened editorial judgment, public issues giving way to entertainment, and problems of the content ecosystem, in which low-quality material crowds out high-quality

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content, the core solution is to re-establish human agency and shift the editor's role from being replaced by algorithms to collaborating with them. Platforms should set up an "editor priority" rule, so professional editors get first say in deciding what gets through and what topics people see for key issues such as public policy; algorithms handle efficient delivery, while editors take charge of value judgment and public agenda setting, and the two work together to keep public affairs from being swallowed by click-based logic. Platforms should also push creators to rely less on catchy headlines and emotional appeals, to add more depth, and to support original content; after review, high-quality videos get more reach, and this turns around the bad situation where low-quality content dominates the market. Content quality measures should cover factual accuracy, clear sources, depth of analysis, and how much they help the public understand; creators who keep meeting these standards can get rewards through a quality bonus system, such as better placement, a bigger revenue share, or recognition badges, while content that depends on shock value or false information should get less reach, so the market gives a push to solid content that serves the public; at the same time, platforms, schools, and public groups should work together to improve public media literacy in a planned way, helping users spot information cocoons and fake information, and build habits of checking and comparing several sources, which lays a base for making technology governance work.

5. Conclusion

5.1. Key findings

This paper centers on the shift of information distribution power, from editorial gatekeeping to algorithmic gatekeeping, and it compares the logic and social results of these two gatekeeping models with examples from Toutiao and Douyin; the study finds that algorithmic gatekeeping overcomes the hard parts of manual selection, reaches accurate matching at millisecond level, lowers the cost of getting information, and improves personalized experiences; however, its focus on interaction rates also brings negative problems; therefore, three governance paths are proposed: a balanced recommendation system that combines "precision and diversity," recommendations that can be explained and checked, and cooperation between editors and algorithms; the core view is that algorithms and public values are not necessarily opposed, and the key is to use mechanism design to keep efficiency logic inside a framework of diversity, fairness, and trust.

5.2. Theoretical and practical implications

This study gives a way for platforms to balance profit and trust, which can help news apps, short videos, and social media run well; it shows that chasing short-term clicks may hurt long-term trust, so platforms should put content variety and credibility in their main goals; it also meets people's need to know and agree in the digital age, and can help improve platform rules and the information environment.

5.3. Limitations and future study

This paper relies primarily on second-hand data and literature analysis; it lacks first-hand data and offers limited empirical strength, while the case studies focus on domestic platforms and lack cross-cultural comparison. In the future, this paper can obtain first-hand data from questionnaires, depth interviews, and algorithm audit experiments, studying recommendation differences among different

DOI: 10.54254/2754-1169/2026.38514

groups and expanding comparisons of cross-border platforms to test the actual effectiveness of governance strategies in the interaction between regulation and platform practices.

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