Research on the Application Challenges and Improvement Pathways of the "Notice-and-Takedown" Rule in Social E-commerce Environments

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Abstract. With the rapid advancement of mobile internet technology, social e-commerce platforms represented by Douyin, Xiaohongshu, and Weibo have surged to prominence, emerging as new engines driving digital economic growth. This novel content-driven transaction model has significantly invigorated market vitality by constructing interest-driven, trust-endorsed. However, the massive volume of content, rapid dissemination, and ambiguous subject identities inherent in social e-commerce pose severe challenges to traditional intellectual property protection rules. This paper examines the "notice-and-takedown" rule, thoroughly analyzing its application challenges in social e-commerce and proposing systematic improvement pathways. Research indicates that the "notice-and-takedown" rule, born in the Web 1.0 era, has become systematically ill-suited to address the dynamic and fragmented environment of social e-commerce. It urgently requires innovation across multiple dimensions, including rule design, Research indicates that the "notice-and-takedown" rule, born in the Web 1.0 era, has become systematically ill-suited to address the dynamic and fragmented environment of social e-commerce. It urgently requires innovation across multiple dimensions, including rule design, technological empowerment, and governance models. This study holds significant theoretical and practical implications for ensuring transaction security, incentivizing innovation, and clarifying platform responsibilities.

Keywords: Notice-and-takedown Rule; Social E-commerce; Platform Responsibility; Intellectual Property; Legal Application.

1. Legal Foundations and Evolution of the "Notice-and-Takedown" Rule

1.1 Legal Origins of the Rule

The "notice-and-takedown" rule traces its origins to the "safe harbor" provisions of the U.S. Digital Millennium Copyright Act (DMCA) of 1998. Its core principle lies in establishing liability exemptions to balance the interests of rights holders, online service providers, and the public. Its legal foundations manifest in three key aspects: First, the principle of technological neutrality. The rule acknowledges the technical intermediary status of online service providers, preventing them from bearing excessive review responsibilities. Second, the principle of balancing interests. It protects intellectual property rights while accommodating technological development and public. Its legal foundations manifest in three key aspects: First, the principle of technological neutrality. The rule acknowledges the technical intermediary status of online service providers, preventing them from bearing excessive review responsibilities. Second, the principle of balancing interests. It protects intellectual property rights while accommodating technological development and public interests. Third, the principle of prioritizing efficiency. By establishing rapid processing mechanisms, it enables timely cessation of infringing activities.

1.2 Analysis of Core Requirements

(1)Requirements for a Valid Notice

A valid notice is the prerequisite for triggering the rules. According to Article 14 of China's Regulations on the Protection of Information Network Transmission Rights, a valid notice must include: the rights holder's identity proof, proof of ownership, the network address of the infringing content, and preliminary evidence of infringement. These elements ensure the notice's accuracy and validity.

(2) Definition of Necessary Measures

Upon receiving a valid notice, platforms must implement necessary measures such as deletion, blocking, or disconnection of links. The term “necessary” carries dual implications: first, the measures must effectively halt infringement; second, they should be proportionate to the severity of the infringement to avoid excessive interference. In the realm of online copyright infringement, both rules and practice should recognize two forms of fault for indirect liability of network service providers: intentional and negligent[1].

(3)pplication of the Red Flag Standard

The red flag standard constitutes a crucial component of the rules. When infringing facts are as conspicuous as a “red flag,” platforms must implement necessary measures even if no notice has been issued by the rights holder. This standard aims to prevent platforms from deliberately ignoring blatant infringements.

1.3 Application of the Rule in Traditional E-commerce

In traditional e-commerce environments, the “notice-and-takedown” rule demonstrates high applicability. Taking Taobao as an example, its established “Intellectual Property Protection Platform” handles infringement complaints through standardized procedures. In 2022, it processed over ten million infringement complaints, achieving an effective complaint resolution rate exceeding 95%. This success primarily stems from the following characteristics of traditional e-commerce environments: First, highstability of infringing content. Product information typically exists as static pages, making it easy to locate and identify. Second, clear identity of parties involved. All merchants undergo real-name verification, ensuring smooth channels for liability tracing. Third, well-defined platform role. As a neutral technical service provider, the platform maintains a high degree of standardization in its processing procedures.

2. Business Characteristics of Social E-commerce and Its Challenges to the Rule

2.1 Development Status and Characteristics of Social E-commerce

(1) Market Scale and Key Players

As of December 2023, China's social e-commerce user base reached 850 million, accounting for 79.2% of the total internet population. Platform types primarily include:

- Content community platforms like Xiaohongshu and Douyin;
- Social relationship platforms like WeChat Mini Programs;
- Live-streaming commerce platforms like Kuaishou and Taobao Live.

(2)Analysis of Key Characteristics

Immediacy of Content Creation: Users generate content anytime, anywhere, resulting in dynamically evolving infringement risks;Networked Transmission Pathways: Viral dissemination through social relationship chains rapidly amplifies the impact of infringements;Diverse Business Entities: Participation in sales spans professional merchants to ordinary users, complicating liability determination.

2.2 Specific Challenges to Rules Posed by Social Commerce

(1)The Dilemma of Establishing Qualified Notification

In live-streaming sales scenarios, infringing acts may only manifest in the host's impromptu verbal commentary, making precise identification through traditional methods difficult. Under current legislation, the rights holder's notification serves as the basis for proving the network service provider's actual knowledge in practice. According to legal provisions, if the rights holder can demonstrate that the network service provider had actual or constructive knowledge[2], the provider remains liable for infringement. However, this burden of proof is challenging for rights holders, who often struggle to demonstrate the subjective state of actual or constructive knowledge. For instance, if a prominent host displays infringing goods for only 30 seconds during a 3-hour livestream, rights holders face near-impossibility in providing required pinpointing information.

(2) Difficulty in Implementing Necessary Measures

Social e-commerce content has a short lifecycle, rendering traditional “removal” measures often too late to prevent infringement damage. Data indicates that peak dissemination of popular short videos typically occurs within two hours of posting, while platforms take an average of 4-6 hours to process complaints.

(3) Ambiguity in Flag Standard Determination

In UGC content, the boundary between commercial promotion and personal sharing is blurred, making it difficult for platforms to determine whether infringement meets the “flag” standard. For instance, whether a beauty blogger's shared experience constitutes infringement against a specific brand ofteninvolves significant dispute.

3. Analysis of Challenges in Applying the “Notice-and-Takedown” Rule to Social Commerce

3.1 Operational Challenges at the Micro Level

(1) Difficulties in Evidence Preservation and Retention

The ephemeral nature of social commerce content poses significant challenges for evidence preservation. Taking livestreaming as an example, infringing acts occur in an instant, requiring rights holders to record the entire session to preserve evidence—a process that substantially increases the cost of enforcement.

(2)Professional Requirements for Infringement Determination

Content formats like short videos and livestreams incorporate diverse materials—music, images, text—requiring specialized knowledge and skills for infringement assessment. Ordinary platform reviewers often lack this capability, while expert reviews substantially increase operational costs.

(3)Conflict Between Timeliness and Effectiveness

In social e-commerce, infringing content can rapidly gain massive traffic. Platforms must balance protecting rights holders' interests with avoiding false positives, placing higher demands on their handling mechanisms.

3.2 Institutional Challenges at the Meso-Level

(1)Ambiguous Boundaries of Platform Liability

The widespread adoption of algorithmic recommendation technology has transformed platforms from passive intermediaries. When platforms proactively push potentially infringing content through algorithms, determining their liability becomes complex. Existing laws fail to clearly define platform responsibilities under algorithmic recommendation systems.

(2) Lack of Safeguards Against Rule Abuse

The asymmetrical design of the “notice-and-takedown” rule makes it susceptible to malicious exploitation. In practice, competitors frequently file false complaints to undermine business rivals, yet existing systems lack effective prevention and punishment mechanisms.

(3)Absence of Cross-Platform Coordination Mechanisms

In the social e-commerce ecosystem, infringing activities often span multiple platforms. For instance, infringing content may spread on Platform A while transactions are completed on Platform B. The lack of cross-platform collaboration mechanisms significantly undermines the effectiveness of rights protectionefforts.

4. Analysis of the Deep-Seated Causes of Rule Application Dilemmas

4.1 Structural Contradictions at the Legislative Level

(1)Disconnect Between Rule Design and Industry Characteristics

The current "notice-and-takedown" rule is built upon the internet architecture of the Web 1.0 era, based on assumptions such as: infringing content remains stable, subject identities are clear, and dissemination paths are linear. These premises fundamentally conflict with the dynamic, networked, and anonymous characteristics of social e-commerce.

(2)Legal Updates Lagging Behind Technological Advancements

The inherent sluggishness of legislative procedures makes it difficult for laws to keep pace with technological developments. Take live-streamed e-commerce as an example: this business model matured within just 2-3 years, whereas the revision cycle for relevant laws typically requires over 5 years.

4.2 Technical Implementation Barriers

(1)Limitations of Content Recognition Technology

Despite significant advancements in artificial intelligence, the accuracy of infringement detection in complex scenarios remains limited. Particularly in fields such as speech recognition and image recognition, existing technologies struggle to meet law enforcement requirements. Algorithm-based monitoring and handling of suspected infringing content have become routine for e-commerce platforms. Consequently, the traditional internet-based private enforcement model—the "manual notice-manual removal-manual declaration" cycle—has evolved in the AI era into an "algorithm-based notice-algorithm-based removal-algorithm-based declaration" model. This shift inevitably leads to increased abuse of notices and creates new challenges of abusive removals and declarations, exacerbating imbalances in stakeholder interests [3].

(2) Insufficient Data Processing Capabilities

Social e-commerce platforms generate massive volumes of content daily, placing enormous strain on data processing. Take Douyin as an example: the platform must process tens of millions of short videos daily, a task beyond the capacity of traditional content moderation methods.

4.3 Systemic Deficiencies at the Governance Level

(1) Incomplete Multi-Stakeholder Governance Mechanisms

Social e-commerce governance requires participation from multiple parties including governments, platforms, industry organizations, and users. Currently, responsibilities remain poorly defined and collaborative mechanisms are absent, resulting in suboptimal governance outcomes.

(2)Lack of Cross-Border Collaboration Mechanisms

Social e-commerce inherently possesses global characteristics, while intellectual property protection is inherently territorial. This contradiction is particularly evident in the handling of cross-border infringement cases.

5. Systematic Development of Rule Improvement Pathways

5.1 Refining the Rules Themselves

(1)Establish a Tiered and Categorized Handling Mechanism

Implement differentiated strategies for various types of infringing content. Create fast-track channels for time-sensitive scenarios like live-stream infringement, while introducing appeal buffer periods for standard UGC content. Specifically, establish a "three-color channel" system: - Red Channel: For urgent live-stream infringement, ensuring a response within one hour; Yellow Channel handles ordinary short video infringements with resolution within 24 hours; Green Channel addresses content disputes with a 48-hour appeal period.

(2)Enhancing Counter-Notification and Restoration Mechanisms

Optimize existing procedures to ensure timely exercise of defense rights by the accused party. This includes: streamlining counter-notification processes, establishing rapid restoration mechanisms, and introducing security deposit systems.

5.2 Technology Empowerment and Governance Innovation

(1)Deep Application of Artificial Intelligence Technology

Develop specialized infringement detection algorithms tailored for social e-commerce scenarios to enhance identification accuracy and efficiency. For example, establish multimodal infringement detection models using deep learning technology to analyze information across multiple dimensions such as video, audio, and text simultaneously.

(2)Blockchain-Based Evidence Storage and Traceability System

Establish a blockchain-based electronic evidence storage system to ensure the integrity and credibility of infringement evidence. Simultaneously, leverage blockchain technology to enable end-to-end traceability of the entire infringement chain.

(3)Credit Evaluation and Differentiated Governance

Establish a platform-based credit evaluation system to implement differentiated governance based on users' historical behavior. Simplify processes for users with good credit while strengthening oversight for those with poor credit.

5.3 Building a Multi-Stakeholder Governance System

(1)Clarify Responsibilities of All Parties

Redefine the rights and obligations of all stakeholders, including platforms, users, and rights holders. Specifically, establish clear standards for the platform's duty of care in algorithmic recommendation scenarios.

(2) Establish Industry Self-Regulation Mechanisms

Lead industry associations to develop intellectual property protection guidelines for social e-commerce, implement an industry blacklist system, and foster self-regulatory constraints.

(3)Enhance Third-Party Dispute Resolution Mechanisms

Introduce specialized third-party dispute resolution bodies to handle complex infringement determinations. This approach alleviates platform pressure while enhancing the professionalism and credibility of resolution processes.

(4)Strengthen Cross-Border Collaboration

Establish cross-border collaboration mechanisms through bilateral or multilateral agreements to address transnational infringement issues. This includes mutual recognition of evidence and law enforcement cooperation.

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