Reconstructing the Boundaries of Digital Platform Autonomy and Government Regulatory Strategies: A Postprint

Authors: Dong Jichang, Zhan Feiyang, Li Wei, Guo Jinlu, Liu Ying

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Abstract

Digital platforms are the most important organizational form in the digital era. How to clarify the boundary between digital platform autonomy and government regulation, and effectively leverage the order-maintenance functions of digital platforms, constitutes a key issue in digital economy governance. This article first begins from the background of digital platform autonomy, introducing the basic models of digital platform autonomy and the regulatory challenges they face; then, through a comparative analysis of the regulatory theories and legal policies concerning digital platform autonomy in the United States and the European Union, it summarizes the advantages and disadvantages of different regulatory models; finally, in response to the current situation where the boundary of digital platform autonomy in China is relatively ambiguous and government regulation faces a dilemma between excessive tolerance and excessive control, it proposes policy recommendations for transitioning from extensive rigid regulation to prudent flexible regulation, from command-based regulation to cooperative regulation, and from ex-post regulation to whole-process regulation, based on reconstructing governance boundaries. Simultaneously, the article advocates enhancing the compliance operation level of digital platforms to enable them to achieve self-regulation and proactive compliance, with the aim of promoting the standardized, healthy, and sustainable development of China' s digital platform economy.

Full Text

Abstract

Digital platforms represent the most important organizational form in the digital era. Clarifying the boundary between platform self-governance and government regulation to effectively leverage the order-maintenance functions of platforms

constitutes a key challenge in digital economy governance. This article begins by examining the background of digital platform autonomy, introducing its basic models and regulatory challenges. Through comparative analysis of regulatory theories and legal policies concerning digital platform autonomy in the United States and European Union, we summarize the advantages and disadvantages of different regulatory approaches. Finally, addressing the current ambiguity in the boundaries of digital platform autonomy in China and the dilemma of government regulation swinging between excessive tolerance and excessive control, we propose policy recommendations for transforming from extensive rigid supervision to prudent flexible regulation, from mandatory supervision to cooperative regulation, and from ex-post supervision to whole-process supervision. Simultaneously, we advocate enhancing the compliance management capabilities of digital platforms to achieve self-regulation and proactive compliance, thereby promoting the standardized, healthy, and sustainable development of China' s platform economy.

Keywords: data elements, digital platform, platform economy, platform autonomy, compliance supervision

1. Background, Models, and Regulatory Challenges of Digital Platform Autonomy

1.1 Emergence of Digital Platform Autonomy

Digital platforms refer to organizational forms that utilize digital technologies for production and services, as well as enterprises that provide digital-related services for other businesses' production and service activities. In the digital economy era, digital platforms, as a novel organizational form with data as the primary production factor, have demonstrated strong development momentum. By integrating industrial and market resources through online and offline aggregation, they have broken the boundaries between virtual and physical spaces, revolutionized traditional consumption patterns and production models from the industrial age, and fostered leading digital enterprises such as Google, Amazon, Tencent, Alibaba, and ByteDance.

The digital society requires the establishment of a fair competitive market order to achieve "good governance through sound laws." However, confronted with massive transaction data on digital platforms, a cyberspace dominated by open algorithms, and continuously evolving transaction models, traditional administrative regulatory models have become unsustainable. Limited enforcement resources cannot effectively constrain the constantly emerging infringement and illegal activities on digital platforms, leaving regulatory enforcement in a dilemma. In the face of rapidly developing digital platforms, traditional institutional orders have partially failed, presenting governments with challenges of being "too large to manage, too fast to follow, too deep to penetrate, and too new to comprehend." Consequently, digital platform enterprises have assumed the function of maintaining digital market order. Leveraging their technological

advantages, rich data resources, and extensive application scenarios, these enterprises can improve governance systems, construct autonomous mechanisms, fulfill management responsibilities, and achieve healthy platform development.

Digital platforms possess dual attributes of private interest and public function, posing new challenges for government regulatory models. On one hand, governments must fully empower digital platforms to effectively utilize their order-maintenance functions and encourage healthy development through self-regulation. On the other hand, governments must strengthen supervision to prevent platforms from exceeding reasonable boundaries through disorderly expansion, which could negatively impact digital economy development. While China has established the principle of "tolerant and prudent" regulation for the rapidly developing platform economy, the complex and dynamic nature of platform ecosystems has created ambiguous regulatory boundaries and numerous regulatory gaps, causing government oversight to fall into a dilemma between excessive tolerance and excessive control—a regulatory paradox.

1.2 Basic Models of Digital Platform Autonomy

Digital platform autonomy represents a governance model spontaneously formed by platforms within legal boundaries, establishing rules for various stakeholders through digital technologies or service agreements to create an internal management order. Governments, relying on platforms for collaborative governance, grant them certain "power spaces," respect their autonomous rules, and guide them toward self-regulation and social responsibility. In current markets, digital platforms typically hold dual identities: first, as business operators participating in market competition for profit with private attributes, providing intermediary services such as social networking, transportation, retail, payment, and software development; second, as managers fulfilling certain public functions, responsible for regulating internal transaction order with public attributes. To fulfill these management functions, platforms usually establish comprehensive governance systems. For instance, Meta' s Facebook, the world' s largest social networking site, has developed detailed "Community Standards" specifying permissible and prohibited user behaviors, regularly publishing enforcement reports. Didi Chuxing, a one-stop mobility platform covering taxis, premium cars, ride-sharing, chauffeur services, buses, and freight, has repeatedly updated its "Didi Platform User Rule System," comprising general principles, universal rules, specialized information platform rules, service function-specific rules, special function/regional/scenario rules, and temporary rules, thereby strengthening management of its mobility ecosystem.

Given the enormous volume and high frequency of transactions on digital platforms, disputes and issues far exceed traditional government regulatory capacity, compelling platform operators to assume order-maintenance functions. To ensure healthy ecosystem operation, platform operators often adopt mechanisms and tools commonly used in public administration. Table 1 illustrates the scope of these autonomous management functions, including establishing management

rules, implementing reward and punishment systems, conducting online mediation or arbitration for internal disputes, performing qualification reviews and legitimacy examinations, providing payment and assistance services, offering transaction tools, cooperating with government regulation, and regulating economic order through subsidies, promotional activities, and anti-unfair competition measures. It should be noted that platform autonomy lacks inherent legitimacy. This "power" derives partly from contractual agreements between platforms and users (private law perspective of "rights transfer") and partly from public law acquiescence or legal authorization, with its validity confirmed only when not violating mandatory legal provisions or public order and good morals. However, platform autonomy cannot replace government regulation, as platforms as commercial entities must accept government oversight. Moreover, the irreconcilable conflict between platforms' private and public attributes can lead to abuse of autonomous power, necessitating clear boundary reconstruction between platform autonomy and government regulation to achieve collaborative governance and a fair competitive digital ecosystem.

1.3 Regulatory Challenges Facing Digital Platform Autonomy

While digital platform autonomy stimulates innovation and unleashes the value of data elements, it also introduces issues such as vicious competition, market monopolization, consumer fraud, data leakage, and threats to public and national security. Digital platforms' network effects and scale advantages, combined with data dominance, easily create concentrated industry competition patterns. Strong network externalities create positive feedback loops that often result in "winner-take-all" outcomes for leading operators. In such concentrated markets, some super platforms gradually build their own "super power" through vast autonomous systems, becoming de facto "second governments"in cyberspace. This can lead to abuse of autonomous power, creating de facto monopolies that harm market competition.

Furthermore, platforms' dual attributes may cause them to pursue private interests at the expense of public interest, endangering social welfare and national security. For example, some platforms employ algorithmic discrimination, information cocoons, big data-enabled price discrimination, and bid ranking to harm consumer rights. Others collect excessive personal data without consent through plugins for precision marketing, inducing overconsumption and profiting from data black markets that infringe upon personal information rights. The emergence of AI technologies like ChatGPT enhances platforms' information integration and natural language processing capabilities, raising concerns about data security and privacy protection.

Market regulation and government intervention are two primary means to ensure healthy market operation. When market regulation fails, government intervention becomes necessary, with the boundary of intervention lying precisely where market failure occurs. However, the digital economy has transformed business forms, organizational structures, and resource patterns, making traditional

"binary opposition" regulatory models inadequate. Government-enterprise collaborative governance requires breaking original responsibility boundaries. The complex and evolving nature of platform ecosystems demands new regulatory approaches to delineate government oversight boundaries while balancing industry standardization and platform innovation.

2. Regulatory Policies for Digital Platform Autonomy in the United States and European Union

The digital economy represents a global competitive frontier, with digital platforms as its engine. Both the US and EU have undertaken continuous legislative and enforcement actions for platform governance, though their regulatory models and intervention levels differ significantly.

The United States has consistently adhered to an "efficiency-first" data policy, prioritizing platform development. The 1996 Communications Decency Act, particularly Section 230, established the "safe harbor" principle protecting online service providers from civil liability for third-party actions. The US encourages platform autonomy to limit illegal activities without making it an obligation, respecting spontaneous ecosystem order and intervening only when internal governance systems become imbalanced and seriously harm public welfare. This approach effectively stimulated platform vitality and creativity, driving rapid technological innovation and ecosystem development that propelled US internet industry dominance. However, high-speed development has created severe governance challenges including data monopolies, privacy leaks, and network security risks. Recent congressional legislation has strengthened personal data rights protection, but these laws only target specific industries, data types, and fraudulent activities, with no unified privacy or data protection law enacted at the federal level.

The European Union, committed to building a "digital single market" among member states, has long upheld a "fair governance" digital policy with strict regulatory oversight. To foster platform development, the EU has enacted comprehensive legislation creating fair competition environments, precisely defining platform responsibilities and obligations, and enhancing fairness and transparency to protect user rights. The EU pioneered a co-regulation model for digital platform ecosystems that optimizes autonomous systems while preventing power abuse. Its major breakthrough lies in establishing an ex-ante regulatory model centered on "digital gatekeepers," subjecting large platforms' autonomous power to legal constraints to reduce malicious competition and protect user rights from the source. This approach avoids the negative effects of traditional competition law' s ex-post regulation lag. However, research indicates that ex-ante regulation may reduce innovation and investment, ultimately harming consumer interests. Excessive restrictions have objectively inhibited platform innovation, leaving European platform economy development lagging behind the US and occupying a second-tier position globally.

Table 2 compares these approaches: the US emphasizes efficiency, free speech protection, and market orientation while gradually shifting from lenient to strict regulation; the EU emphasizes fairness, digital sovereignty, and unified cross-member frameworks with consistent strict oversight and gatekeeper-based ex-ante regulation. China should draw from both experiences to improve its legal framework on platform responsibilities, clarify autonomy boundaries, and build a regulatory system suited to its digital industry development.

3. Reconstructing the Boundaries of Digital Platform Autonomy

As Montesquieu observed in *The Spirit of Laws*, "all those who have power are liable to abuse it; and they will carry it as far as will carry them, till they are checked." Unconstrained platform autonomy power will inevitably be abused. In China, super platforms' autonomous power has already shown tendencies to expand from private to public authority, potentially triggering disorderly capital expansion, collapsing fair competition, and damaging public interests. When internal platform governance fails, public power must intervene. However, in some sectors, government regulation has not kept pace with platform innovation, creating regulatory vacuums that enable policy arbitrage. Excessive government restriction can also cause "government failure,"negatively impacting platform innovation. Overprotection of personal information may hinder legitimate data utilization and normal platform functions, while excessive liability increases costs, operational risks, and compresses autonomous space, undermining market competitiveness.

Historical technological revolutions have transformed governance paradigms. The digital wave has rendered traditional "binary opposition" regulatory models inadequate, while "meta-regulation" theory-based government guidance of self-regulation represents a new governance direction. This context requires respecting platform autonomy while preventing power abuse through collaborative governance.

3.1 Clarifying Legal Boundaries for Government Intervention from a Multi-Value Balancing Perspective

China' s current legal system for the platform economy remains incomplete. While laws on anti-monopoly, data protection, and platform liability exist, many ambiguities and gaps remain. Legislation must balance multiple values: (1) between curbing monopolies and encouraging innovation—China' s 2022 Anti-Monopoly Law amendment introduced specialized digital platform provisions, marking a shift to refined, normalized regulation, yet strengthening anti-monopoly enforcement must not stifle platform innovation; (2) between legitimate data utilization and data security/privacy protection—China' s 14th Five-Year Plan emphasizes balancing data development, privacy protection, and public security, requiring future legislation to facilitate data resource

openness and connectivity while protecting citizens; (3) between consumer and platform operator interests—while current laws favor consumers, the data-driven consumer society requires shifting from tilted protection to balanced protection, establishing multi-stakeholder co-governance among government, operators, and consumers.

3.2 Defining Autonomy Boundaries for Different Platforms from a Tiered Classification Perspective

Digital platforms exhibit diverse forms with distinct business models, violation patterns, and legal responsibilities. Uniform "one-size-fits-all" regulation is inappropriate. Determining reasonable platform responsibility boundaries requires considering business models, technical characteristics, and information control capabilities. In October 2021, China' s State Administration for Market Regulation issued guidelines classifying platforms into six major categories with 31 sub-types based on attributes and functions, and into super, large, and small-medium platforms based on user scale and business scope. This tiered classification enables precise governance policies tailored to different platform types, enhancing regulatory effectiveness. Super platforms face stricter legal obligations, clearer liabilities, and higher compliance requirements to prevent abuse of monopoly advantages against smaller platforms.

3.3 Determining Regulatory Boundaries and Intensity from an International Competition Perspective

Digital platforms are hubs for global digital economy resource allocation and new focal points in geopolitical competition. Currently, US platforms dominate globally while Chinese platforms remain primarily domestic-oriented, with the gap widening. According to the China Academy of Information and Communications Technology' s *Observation on Platform Economy and Competition Policy (2021)*, from 2017 to 2020, the combined market value of China' s top five platforms grew 75% from $1.1448 trillion to $2.0031 trillion, while US top five platforms grew approximately 200% from $2.5252 trillion to $7.5354 trillion. The ratio of China's top five to US top five declined from 45.3% to 26.6% [Figure 1: see original paper]. Chinese platforms face both overseas competition and diverse regulatory environments. Only by strengthening autonomous governance capabilities can they enhance international competitiveness and global influence. China' s regulatory policies should adopt an international competition perspective, align with global regulatory standards, and avoid simplistic, heavy-handed approaches that undermine platforms' innovative capacity. For platforms in key sectors and emerging industries, policymakers should create favorable environments with greater development space and flexible trial-and-error mechanisms to encourage global competitiveness.

4. Policy Recommendations for Digital Platform Regulation

Traditional regulatory systems and governance tools are ill-suited for digital platforms as emerging market entities. To promote high-quality platform economy development, we must clarify boundaries between self-regulation and government oversight, improve regulatory methods, and enhance effectiveness. We propose four recommendations:

4.1 Transition from Extensive Rigid Regulation to Prudent Flexible Regulation

Digital platforms are not only market entities but also potential government partners. Platforms aggregate massive user information and advanced technologies to form vast ecosystems that can participate in social public governance. For example, Hangzhou Market Supervision Administration' s "Hongdun Yunqiao" system represents a successful collaboration with Alibaba, enabling regulators to access platform data to support investigation of online illegal activities and resolve cross-regional enforcement challenges. Platforms have strong incentives to build fair, efficient transaction environments through self-discipline to maintain ecosystem health and achieve commercial interests. Government regulation cannot replace platform autonomy; blind intervention may disrupt platforms' "immune systems," damaging ecosystem development and harming economic efficiency, innovation, and consumer welfare. Governments should respect platforms' autonomy within legal boundaries, intervene prudently, and follow due process principles rather than engaging in arbitrary or selective enforcement.

4.2 Transition from Mandatory Regulation to Cooperative Regulation

Traditional command-and-control regulation suppresses platform vitality and creativity, proving inadequate for digital economy development. Government regulation and platform autonomy are not inherently contradictory; both aim to promote healthy, orderly development. Platform innovation should occur within established legal frameworks, continuously updating autonomous rules and technical architectures to meet regulatory requirements. Governments should follow digital economy development patterns, assist and guide platforms in establishing mature autonomous order, and unify commercial interests, public interests, and social welfare. Through sufficient interaction and rule-linking mechanisms, governments should provide timely institutional resources for platform autonomy, forming a cooperative governance order that maximizes social welfare.

4.3 Transition from Ex-Post Regulation to Whole-Process Regulation

Based on intervention timing, regulatory models can be categorized as ex-ante, in-process, or ex-post. Traditional models primarily rely on ex-post intervention after violations are discovered or reported. However, the rapidly evolving

digital economy renders ex-post regulation unable to promptly stop illegal activities or provide timely remedies, allowing user rights to suffer continuous harm. Whole-process regulation represents a front-loaded approach that corrects anti-competitive behavior and prevents rights infringement throughout the entire chain. China can reference the EU' s ex-ante regulation model for large platforms to efficiently regulate through proactive legislation and oversight.

4.4 Transition from Punishment to Pre-Compliance

Enterprise compliance systems originated in the United States, developed in European legal systems, and have become integral to global corporate governance. Digital platforms' characteristics make external supervision of every transaction impractical. Platforms naturally possess advantages in constructing autonomous order. Through compliance incentive mechanisms, governments can mobilize platforms' internal motivation for self-regulation, driving continuous improvement of compliance systems and processes to achieve self-regulation and proactive compliance. Regulatory authorities can employ compliance oversight as a normalized supervision method, conducting compliance effectiveness assessments and regular inspections to urge platforms to fulfill primary responsibilities and promote healthy, standardized development.

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Author Information

Dong Jichang is Vice President and Professor at the University of Chinese Academy of Sciences, member of the Management Science and Engineering Discipline Evaluation Group of the Academic Degrees Committee of the State Council, and Vice President of the Chinese Academy of Management. His research interests include big data and decision analysis, real estate economics and finance, and purchasing power parity theory. Email: jcdonglc@ucas.ac.cn

Zhan Feiyang is a doctoral candidate at the School of Economics and Management, University of Chinese Academy of Sciences, and Partner at Hai Run Law Firm. His research focuses on digital economy and corporate governance theory. Email: zhanfeiyang@aliyun.com

*Corresponding author

Note: Figure translations are in progress. See original paper for figures.