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Self-Preferencing and Coordinated Conduct by Oligopolistic Platforms under Data Monopoly: Challenges and Antitrust Regulatory Responses

Yanwen Huang

School of Law, Beijing Normal University, Beijing 100082, China;

19123956382@163.com

Abstract. In the era of the digital economy, data monopoly has emerged as a central factor reshaping the landscape of market competition. Leveraging exclusive access to data resources and algorithmic control, oligopolistic platforms systematically consolidate their dominant market positions through coordinated self-preferencing conduct, undermining fair competition and threatening consumer welfare. By analyzing the characteristics of data exclusivity, algorithmic coordination, cross-platform ecosystem foreclosure, and the quasi-public nature of platform power, this study reveals the dual harms to competition posed by data monopolies. Existing antitrust frameworks face significant institutional challenges, including outdated criteria for identifying market dominance, difficulties in proving tacit collusion via algorithms, and the lack of mechanisms for evaluating cross-market effects. To address these issues, this paper proposes a three-dimensional regulatory path encompassing technology, institutional reform, and law enforcement. Key recommendations include establishing a dedicated chapter on the abuse of digital platforms, reforming the criteria for assessing market dominance, optimizing the burden of proof allocation, and localizing the EU's "digital gatekeeper" regime. These measures aim to strike a balance between innovation incentives and competitive fairness, offering a tailored regulatory framework for antitrust governance in China's digital economy.

Keywords: Data Monopoly; Oligopolistic Platforms; Collaborative Self-preferencing; Antitrust Regulation.

1. Introduction

1.1. Problem Statement

As data becomes a key factor driving innovation and economic growth, it has simultaneously given rise to a new form of market failure characterized by data monopoly. Dominant oligopolistic platforms increasingly exploit the dual power of "data + algorithms" to engage in coordinated self-preferencing practices, which have emerged as a fundamental barrier to the healthy development of the digital economy. Addressing such conduct is therefore of pressing practical importance.

These self-preferencing behaviors are structurally supported by data barriers and technologically executed through algorithmic coordination. Whether through explicit programming or tacit alignment, platforms systematically favor their own services in critical areas such as search rankings, traffic distribution, and API access. This marginalizes third-party operators and constructs a full-chain monopoly spanning from data acquisition to service delivery.

In China, the development of internet platforms has entered the stage of platform ecosystems, where the scale, legal relationships, and market power of platforms have expanded significantly. Some platforms have gradually evolved into oligopolistic players wielding market dominance. Their governance capabilities increasingly transcend the boundaries of private power, exhibiting characteristics of quasi-public authority [1] Zhang Xiaoyu, "On the Administrative Regulation of Super Internet Platform Governance Power," Administrative Law Review, No. 3, 2024, p. 94.

These dominant platforms not only engage in self-preferencing through control of data flows, but may also reinforce their dominant positions through coordinated strategies, posing significant risks to market competition, consumer rights, and broader societal welfare. Against this backdrop, in-depth research on coordinated self-preferencing under data monopoly and corresponding antitrust regulatory responses is of both theoretical and practical significance.

This gives rise to several urgent questions: How should the legal boundaries of coordinated self-preferencing among oligopolistic platforms be defined? How can enforcement agencies overcome technical barriers such as data silos and algorithmic opacity ("black-box" systems)? How should policymakers strike a balance between encouraging innovation and ensuring fair competition? These are not merely regulatory questions, but also relate to the broader modern reconfiguration of public and private power in the age of the digital economy.

2. Research Background

With the deepening development of the digital economy, data monopolies have become a central factor in reshaping market structures. The compounded effects of network externalities, economies of scale, and scope economies have not only erected formidable competitive barriers for internet platforms but also given rise to oligopolistic platforms with dominant market power. These market entities, leveraging algorithmic coordination, closed-loop data systems, and ecosystem expansion, have gradually assumed a dual role as both platform operators and market competitors. In this context, platform self-preferencing behavior has evolved from simple search result biases to systematic exclusionary strategies grounded in data advantages. However, traditional antitrust laws are increasingly inadequate in addressing emerging challenges such as dynamic market definitions and algorithmic collusion. While leading economies such as the European Union and the United States have begun to explore regulatory frameworks through legislative and judicial practice, the monopolistic characteristics of China's digital market exhibit unique features. Therefore, the regulation of data monopolies in China must draw on international experience while being tailored to domestic conditions.

The formation of data monopolies is often the result of the interplay among network effects, economies of scale, and economies of scope. Network effects increase the value of a product or service as more users adopt it, allowing first-mover firms to more easily attract and retain users, thereby reinforcing their market dominance.In the context of digital monopolies, oligopolistic platforms are increasingly establishing systemic monopolistic mechanisms through coordinated self-preferencing, reinforced by data barriers and algorithmic collusion. First, big data—due to its exclusivity, quality and value differentiation, high collection costs, and inherent network effects—significantly raises market entry barriers and has become a core source of market power for operators . More covertly, algorithms and related technologies in the digital economy have enabled new forms of coordination among oligopolistic platforms. Traditional explicit collusion, which typically required formal agreements, has evolved into algorithmic tacit collusion, wherein platforms can observe competitors' strategies in real time and dynamically adjust prices or services. This algorithmic alignment, even without explicit communication, can produce anti-competitive effects.

At the same time, the dual role of oligopolistic platforms—as both "platform administrators" and "platform competitors"—has fostered increasingly structural forms of self-preferencing. When a platform competes directly with third-party businesses operating on its ecosystem, it may exploit its data monopoly to grant preferential treatment to its own affiliated services, such as priority placement, traffic allocation, or interface access restrictions. This dual status—as both market participant and rule-maker—constitutes a systematic erosion of fair competition and undermines the integrity of the market order.

Existing antitrust regulations face significant challenges in addressing data monopolies. First, the non-rivalrous nature of data renders traditional standards for market definition and the identification of dominant positions increasingly ineffective. Moreover, data-driven cross-industry expansion

exacerbates competitive harm. Wang highlights that large platform enterprises leverage their advantages in platforms, data, and algorithms to expand into various sectors—including financial markets—thereby forming monopolistic platform-finance conglomerates that pose broad threats to competition, innovation, and consumer rights.Second, China's antitrust enforcement encounters distinct obstacles. On one hand, the cross-sectoral nature of digital platforms makes market delineation difficult, and the existing typologies of abuse of dominance are insufficient to capture the covert forms of platform self-preferencing. On the other hand, the intensification of enforcement efforts and increased regulatory resources have provided fresh momentum for addressing such behavior. Together, these factors underscore the urgent need to adapt China's antitrust framework to the specific characteristics of data monopolies.At present, China's antitrust measures targeting digital platforms have primarily focused on regulating horizontal market behaviors—particularly platform operators restricting access between platforms. Emphasis has been placed on cases where platform operators grant preferential treatment to their own services over third-party businesses operating on the platform. However, there remains a lack of precise recognition of the dominant role platforms play within the internet economy. Furthermore, insufficient attention has been given to the coordinated self-preferencing behaviors and interoperability barriers among oligopolistic platforms, which represent a more complex and systemic form of digital monopoly.

In antitrust practices concerning platform self-preferencing, major economies such as the United States and the European Union have adopted divergent strategies. The European Commission has launched multiple antitrust investigations against Google, focusing on its practice of prioritizing its own shopping service in search results to the detriment of competing services. These investigations culminated in the imposition of substantial fines and the requirement that Google modify the presentation of its search results. Furthermore, the EU has introduced legislative measures such as the Digital Markets Act (DMA), which aims to address self-preferencing by large platform enterprises at a structural level.Drawing on the antitrust practices of jurisdictions like the United States and the EU, and considering the unique trajectory of China's digital economy, it is possible to develop a regulatory approach to platform antitrust that reflects Chinese characteristics. Such an approach would balance global best practices with the institutional, market, and technological realities of China's platform economy.

3. Structure of the Paper

This paper begins by examining the underlying mechanisms behind the formation of data monopolies, analyzing how algorithms, data barriers, data circulation, platform ecosystems, and the distortion of platform power contribute to data concentration. Building on this foundation, we explore the economic logic underpinning coordinated behavior among oligopolistic platforms. We then delve into the various forms and manifestations of self-preferencing, with a particular focus on data-driven self-preferencing practices.

Following the theoretical groundwork, the paper turns to a critical analysis of the current legal regulatory landscape concerning coordinated self-preferencing behavior by oligopolistic platforms. We evaluate the limitations of existing antitrust frameworks in addressing data monopolies and review the antitrust enforcement practices of major economies such as the United States and the European Union. Furthermore, we assess the unique challenges and opportunities facing China's antitrust regime in regulating platform self-preferencing.

Subsequently, we investigate the broader implications of data monopolies for market competition and consumer welfare, distilling the institutional challenges that arise.

Finally, grounded in the local characteristics of China's digital ecosystem, we propose a tripartite "technology–institution–enforcement" regulatory framework. This includes improving the legal framework, refining standards for identifying abusive conduct, upgrading enforcement tools, and establishing a coordinated governance mechanism. These recommendations aim to enhance China's antitrust regulations in the digital economy and promote the healthy development of platform-based markets.

3.1. Manifestations and Legal Controversies of Coordinated Self-Preferencing

Since 2002, Google and Apple have maintained a long-term partnership agreement under which Google pays Apple billions of dollars annually in exchange for being set as the default search engine on Apple devices. The terms of this agreement impose strict limitations on Apple's ability to incorporate alternative search engines and even prohibit Apple from developing or promoting its own search engine. This exclusivity arrangement has enabled Google to maintain a search market share exceeding 90% in the United States, resulting in a near-absolute monopoly [1].The exclusivity agreement between Google and Apple exemplifies a typical form of coordinated self-preferencing conducted by platform operators—an increasingly prevalent form of algorithmic monopoly. Unlike traditional unilateral abuses of market dominance, coordinated self-preferencing exhibits distinctive characteristics within the internet ecosystem. These behaviors are deeply embedded in the symbiotic relationships between dominant platforms and often operate beneath the surface of explicit agreements, thereby complicating legal interpretation and regulatory response.

3.1.1. Characteristics and Manifestations of Coordinated Self-Preferencing Behavior

Coordinated self-preferencing behavior among oligopolistic platforms refers to practices in which multiple digital platforms with dominant market positions engage—either explicitly or implicitly—in collaborative strategies that favor their own services while excluding competitors, thereby reinforcing their monopolistic power. These behaviors are enabled through exclusive control over data flows, covert coordination of algorithmic parameters, and selective exclusion across platform ecosystems, resulting in full-chain control from underlying data infrastructures to surface-level user services. The mechanisms and manifestations of such behavior can be deconstructed along four key dimensions: exclusive control of data resources, technical pathways of algorithmic coordination, strategies of ecosystem closure, and the transformation of platform power.

3.1.1.1 Exclusive Control of Data Resources

Exclusive control over data serves as the foundational support for coordinated self-preferencing. Oligopolistic platforms construct proprietary "data pools" through cross-scenario data collection, which have become core instruments for consolidating their market positions and executing preferential collaboration. Digital giants—such as search engines and social media platforms—aggregate behavioral, transactional, and social data to build multidimensional, high-density datasets. Given the inherent exclusivity and asymmetry of data, certain firms exploit their data advantages to establish and expand barriers that reinforce their competitive dominance.

In particular, data monopolies are often entrenched through mechanisms such as monopolistic agreements, abusive conduct, and mergers or acquisitions that enhance data exclusivity and collection capacity. Contractual arrangements granting exclusive access to critical or sole data sources serve to build data barriers that effectively exclude rivals from the market.

Under the framework of antitrust law, such practices may be categorized as "refusal to deal" or "discriminatory treatment" as prohibited by Article 22 of China's Anti-Monopoly Law. However, what makes these cases distinct is the theoretical non-rivalrous nature of data, which implies a technical feasibility for "open access" or data sharing. Nevertheless, oligopolistic platforms often impose artificial barriers to data interfaces under the guise of "technological neutrality," thereby engaging in de facto data enclosure practices. This appropriation of data access, masked by technical rationales, fundamentally undermines the principles of fair competition.

3.1.1.2 Algorithmic Coordination

The coordination of algorithmic rules, coupled with exclusive control over data interfaces, constitutes the technical foundation for cross-market self-preferencing. In its 2020 antitrust investigation into Amazon, the European Commission found that the platform used data from third-party sellers to optimize its own product selection and pricing, which was deemed a form of "self-preferencing" prohibited under Article 6 of the Digital Markets Act (DMA). The uniqueness of such cases lies in the shift from overt exclusion to covert technological exclusion: algorithmic coordination and data

interface control obscure anti-competitive conduct behind technical mechanisms. As a result, the traditional “essential facilities” doctrine must be expanded to include obligations for openness in algorithmic parameters and data interfaces in order to effectively regulate self-preferencing driven by data monopolies.

From a legal-theoretical standpoint, coordinated behavior is typically categorized based on the nature of mutual intent—into two major types: explicit collusion and tacit collusion.

Explicit collusion refers to the situation where multiple parties reach a concerted agreement through direct communication or formal contracts to restrict competition, manipulate markets, or pursue unlawful goals. However, with the strengthening of antitrust enforcement, the era of prevalent explicit collusion has largely passed. In response to growing regulatory scrutiny, oligopolistic actors increasingly avoid overt coordination to minimize the risk of detection.

Tacit collusion, by contrast, arises when firms achieve coordinated outcomes through market signaling or parallel behavior in the absence of formal agreements or direct communication. Its core features are behavioral consistency and mutual strategic awareness.

In the digital economy era, the involvement of algorithms has further blurred the boundaries of collusion, giving rise to algorithmic tacit collusion—a phenomenon where firms leverage algorithmic tools to share data and adjust strategies in a coordinated yet non-explicit manner [2]. In essence, this reflects a collusion between market structure and technological instruments.

A prominent domestic example is the Ningbo Senpu Information Technology Co., Ltd. case, often referred to as China's first antitrust enforcement action targeting data abuse. Senpu monopolized real-time trading data from the bond voice brokerage market through an exclusive agency agreement, thereby acquiring 100% market share and refusing to supply data to other information service providers. This data monopoly prevented downstream competitors from accessing alternative resources, forcing them either to exit the market or to accept Senpu's pricing rules. Leveraging its data advantage, the firm effectively orchestrated rule-based coordination, leading to uniformity in market behavior and facilitating indirect coordination of prices and services.

Drawing from this case and the concept of tacit collusion, the logic of algorithmic tacit collusion can be summarized in three layers:Real-time monitoring and responsiveness: Algorithms can collect and analyze competitors’ pricing, inventory, and other strategic data in real time, reducing information asymmetry and enabling firms to promptly adapt their market strategies.Automated enforcement: Algorithms can autonomously initiate price wars or strategy adjustments, swiftly punishing deviation and enforcing conformity without human intervention.Predictive coordination: Even in the absence of explicit communication, algorithms can achieve dynamic equilibrium through parameter sharing or predictive modeling, thus simulating the effects of coordinated strategy execution.

3.1.1.3 Oligopolistic Platforms as Holders of Quasi-Public Power

By nature, internet platforms function as quasi-public spaces or quasi-public infrastructures, embodying both public and private attributes. They represent the privatization of the internet’s public sphere and the publicization of private domains [3].In the digital economy, platforms derive quasi-sovereign private power from their technological and network advantages—power that stands in contrast to constitutionally derived public authority. Driven by self-interest and operational needs, they engage in “private governance,” enjoying de facto quasi-legislative, quasi-administrative, and quasi-judicial powers. These powers allow them to shape rules, enforce decisions, and resolve disputes within their ecosystems, often in ways that challenge or even bypass state regulatory authority through "disruptive" innovation .

Such platforms not only provide transactional infrastructure for third-party operators but also engage in direct competition by selling their own products and services within the platform. This dual role is a fundamental source of self-preferencing behavior. To maximize profits, platforms are no longer content with dominance in a single market. Instead, leveraging characteristics such as network cross-effects, multi-sided markets, and first-mover advantage, they expand aggressively into new sectors. In doing so, they transfer their dominance from established markets to emerging ones, rapidly capturing market share through cross-sectoral competition.

3.1.1.4 Cross-Platform Bundling and Ecosystem Lock-In

Due to factors such as interoperability constraints and multi-homing user behavior, there exist strong cross-platform network effects both among internet platforms and between sub-platforms within the same ecosystem. The essence of cross-platform bundling and ecosystem lock-in lies in the use of technical restrictions on data interoperability and rule-based design to confine user choices within a self-contained ecosystem, thereby reinforcing exclusive control over data resources.

A paradigmatic example of such dynamics in China's digital platform landscape is the 11-year-long "blockade battle" between WeChat and Taobao. This case illustrates the deeper logic of data monopolization and ecosystem enclosure: leveraging the network effects of its vast repository of social data, WeChat blocked direct linking to Taobao, effectively compelling merchants and users to rely solely on services within the WeChat ecosystem. This move obstructed Taobao's access to data flows and user reach within social interaction contexts.

However, under mounting antitrust pressure and policy mandates promoting interoperability, such exclusionary strategies are facing structural challenges. In 2024, Taobao began to gradually integrate WeChat Pay, signaling a tentative shift from "data segregation" to limited cooperation [4]. This development reflects the dual forces of policy intervention and market competition. Nevertheless, the opening is far from unconditional: even after integrating WeChat Pay, Alipay remains the default payment option on Taobao, and the scope of data interface access remains highly restricted. This selective openness reveals that platforms continue to maintain ecosystem dominance through differentiated data permissions.

Crucially, user data remains largely retained within the WeChat ecosystem, and Taobao remains unable to access granular social interaction data that could enhance its recommendation algorithms. This unidirectional flow of data has effectively transformed cross-platform network effects from mechanisms of innovation into instruments that reinforce monopoly power.

3.2. Legal Classification Controversies

The coordinated self-preferencing behavior of oligopolistic platforms, due to its reliance on exclusive control over data resources, presents significant challenges for classification under the traditional antitrust framework. The core legal controversy centers on whether such behavior constitutes a "monopoly agreement" as defined under Articles 17–19 of China's Anti-Monopoly Law, or an "abuse of market dominance" as prohibited by Article 22. This requires a contextualized analysis that considers both statutory elements and the distinctive features of data monopolies.

3.2.1. Whether It Constitutes a Monopoly Agreement

Traditionally, the core criterion for a monopoly agreement lies in the existence of explicit or tacit "meeting of minds" among business operators, focusing primarily on overt forms of coordination such as price-fixing and output restriction. In academic discourse, monopoly agreements are commonly classified into three categories: horizontal agreements (among competitors at the same level), vertical agreements (between upstream and downstream entities), and hub-and-spoke agreements (where a platform operator acts as a central "hub" coordinating collusion among competitors).

However, the algorithmic synchronization and data interface interconnectivity observed in digital oligopolies have extended beyond these traditional paradigms. Technically, such behavior may manifest as tacit collusion without an express meeting of minds, or even as autonomous algorithmic coordination capable of dynamic price-following without direct human involvement.

The key dispute concerning the illegality of coordinated self-preferencing revolves around whether data interoperability and algorithmic alignment fall under the catch-all clause of Article 17—"other concerted practices." Proponents argue that coordinated self-preferencing, facilitated by data and algorithmic mechanisms, constitutes a form of tacit collusion that satisfies the statutory conditions of "other monopoly agreements" under Article 17. They advocate for an effects-based presumption of illegality, aligning with the logic used by the European Commission in the Google Shopping case,

which found that Google's algorithmic prioritization of its own services constituted concerted behavior [5].

Opponents, however, emphasize the need for an efficiency defense. Some scholars argue that such behavior must be evaluated in light of Article 20's exemption provisions, requiring a balanced assessment between anticompetitive harm and efficiency gains. They propose applying the essential facilities doctrine to mandate data sharing where market foreclosure effects are present. Conversely, if the behavior merely enhances operational efficiency, it may qualify for exemption under the principle of proportionality.

In the author's view, where multiple platforms, through explicit or implicit coordination, engage in self-preferencing via algorithmic alignment or data interconnectivity, such conduct may meet the elements of horizontal monopoly agreements under Article 17. Notably, Article 7 of the 2022 revised Provisions on the Prohibition of Monopoly Agreements explicitly extends antitrust scrutiny to digital forms of coordination, breaking the reliance on formal written agreements. For instance, the European Commission's investigation into the "non-aggression pact" between Meta and Google suggests that technological coordination of market strategies between platforms can be deemed a monopoly agreement. This logic can likewise apply to self-preferencing scenarios, such as jointly demoting third-party services in search rankings.

In conclusion, provided there is sufficient circumstantial evidence, courts and enforcement agencies may apply the monopoly agreement doctrine to regulate coordinated self-preferencing by dominant platforms. However, the evidentiary challenge of proving collusion through indirect means remains a significant issue for both scholars and practitioners[6].

3.2.2. Whether It Constitutes an Abuse of Market Dominance

As a novel form of abusive conduct in the digital era, self-preferencing behavior must be evaluated under Article 22 of China's Anti-Monopoly Law, with particular attention to three core elements: dominant market status, the nature of the conduct, and competitive harm. According to the theory of constituent elements, the determination of self-preferencing as abusive requires that: (1) the operator holds market dominance; (2) engages in technical or structural forms of self-preferencing; and (3) lacks legitimate justification. Distinct from traditional abuse categories, this type of conduct is characterized by its reliance on data monopolies and algorithmic power to form closed digital ecosystems.

With respect to the criteria and forms of self-preferencing, it has been noted that:
"To determine whether self-preferencing constitutes an abuse of market dominance, the following three conditions must be met: the actor must be a dominant operator, must engage in specific conduct, and such conduct must lack objective justification. In addition, it is essential to assess whether the behavior in question has the effect of excluding or restricting competition" [7].

Other scholars argue that China's Anti-Monopoly Law is applicable to self-preferencing by digital advertising platforms, but that enforcement must meet two restrictive conditions:
(1) The data in question must constitute an essential facility, and
(2) The self-preferencing conduct must lack reasonable justification[8].

There is a growing consensus that self-preferencing is not merely a variation of existing forms of abuse of dominance, but rather an independent category of abuse that emerges once platform economies reach a level of maturity sufficient to produce "super platforms."

Supporters of applying the abuse of dominance doctrine to coordinated self-preferencing argue that the exclusive control over critical data by oligopolistic platforms constitutes a core manifestation of market power abuse. Opponents, however, favor the efficiency defense, akin to that used in monopoly agreement cases. They argue for a strict distinction between technological innovation and data misuse. A key point of contention in the academic literature is whether closed data interfaces inherently cause competitive harm. Some scholars contend that if the data is inherently exclusive (e.g., user ratings available only within the platform), then such exclusivity should not automatically be construed as abusive [9].

In the author's view, under the abuse of dominance framework, unilateral conduct by a dominant platform—such as imposing a forced "choose one out of two" arrangement or demoting rival services in search rankings—may fall under Article 22's prohibitions against "restrictive dealing" or "imposing unreasonable trading conditions." When such conduct is jointly undertaken by multiple platforms, it may invoke the doctrine of collective market dominance.

According to Article 14 of the Provisions on Prohibiting Abuse of Market Dominance, if platforms exhibit structural interdependence, behavioral consistency, and market foreclosure effects, a finding of collective dominance is possible—even in the absence of explicit collusion. In the digital age, the recognition of collective dominance must move beyond the traditional requirement of a "meeting of minds," focusing instead on the technical features of algorithmic collusion [10].

In such cases, it is necessary to define the relevant market with precision and use a combination of market share presumptions and actual harm to competition to make a determination. The more complex scenario arises in oligopolistic markets, where several platforms jointly possess market power and engage in conduct with coordinated effects. Here, Article 14 may be invoked to establish joint liability for coordinated abuse, but this requires moving beyond traditional evidentiary standards based on express agreement and instead embracing behavioral and technical indicators of coordination.

3.2.3. Summary

Due to their complexity and opacity, coordinated self-preferencing behaviors among oligopolistic platforms face significant challenges in legal classification, caught in the institutional overlap between "monopoly agreements" and "abuse of market dominance." These behaviors often exhibit both horizontal coordination and vertical exclusion. For example, food delivery platforms may synchronize commission rates through shared data interfaces (horizontal coordination), while simultaneously leveraging market dominance to restrict access to real-time delivery APIs for their own logistics services (vertical exclusion).

The unique nature of data monopolies further exacerbates legal ambiguity. Algorithmic coordination can occur through parameter synchronization without formal agreements, and the competitive harms often emerge only after a closed ecosystem has been fully established. To address this ambiguity, scholars have proposed adopting an "absorption principle"—that is, prioritizing the application of the more severe abuse of dominance provisions. However, this approach must account for the fundamental differences between the two types of harm: monopoly agreements primarily undermine market structure through collusion, whereas abuse of dominance distorts the competitive process via unilateral power [11].

From a functional perspective, the abuse of dominance framework presents notable limitations in addressing these behaviors. First, Article 24 of China's Anti-Monopoly Law restricts collective dominance to horizontal operators, whereas coordinated self-preferencing often involves vertical relationships between platforms and their affiliated or self-operated businesses. While the EU has broadened this concept to include vertical integration using the "single economic entity" doctrine, as in the T-Mobile case, Chinese judicial practice lacks such precedents. Second, current rules lack effective tools to address dynamic pricing and algorithmic collusion, which are prevalent in digital markets. Third, enforcement under this regime incurs high procedural costs, requiring regulators to prove the entire chain of "relevant market definition – collective dominance – competitive harm," thus hampering enforcement efficiency.

In contrast, the monopoly agreement framework demonstrates greater adaptability and institutional efficacy in regulating coordinated self-preferencing: Broader scope of application: It encompasses both vertical exclusionary agreements and, since the 2023 revision of the Provisions on the Prohibition of Monopoly Agreements, includes tacit algorithmic collusion, thereby breaking the constraint of traditional horizontal relationships. More efficient enforcement tools: The leniency program incentivizes internal whistleblowing by reducing or waiving penalties, while the dual penalty mechanism—targeting both organizations and individuals—enhances deterrence. Lower evidentiary burden: Enforcement requires only proof of behavioral consistency and competitive harm, without

the need to precisely define the relevant market. The EU's Digital Markets Act, which directly prohibits specific forms of conduct via a "blacklist" approach, reflects this logic. In light of this institutional dilemma, a dual-track regulatory strategy is recommended: prioritize the monopoly agreement framework as the main tool, with the abuse of dominance regime playing a supplementary role. For covert collusion involving algorithmic coordination and data sharing, swift intervention under the monopoly agreement regime—bolstered by leniency mechanisms—can help overcome evidentiary challenges. For super-platforms that have established closed digital ecosystems, the abuse of dominance framework may be invoked to hold them accountable for systematic exclusionary practices.

3.3. Dual Forms of Harm

3.3.1. Horizontal Harm: Hindering Market Entry for New Competitors

The collusive self-preferential behaviors of oligopolistic platforms infringe upon the right to fair competition and undermine the integrity of market order. Although China's competition law does not explicitly define the right to fair competition, both the Anti-Monopoly Law and the Anti-Unfair Competition Law establish "the protection of fair market competition" as a core legislative objective. Accordingly, business operators are effectively entitled to participate in fair market competition.

The underlying logic of data monopolies lies in the creation of market entry barriers and the ossification of the competitive ecosystem. The cost structure of the big data market features two key characteristics: (1) high sunk costs in the initial stage, and (2) near-zero marginal costs . These structural traits naturally foster formidable barriers to entry. New market entrants must bear enormous upfront costs in data collection and algorithm development, while incumbent oligopolistic platforms can replicate data value at negligible marginal cost due to their established scale. This dynamic leads to entrenched market structures and exclusionary competition.

The horizontal competitive harm caused by such self-preferential practices of dominant platforms manifests in three primary ways:

First, they produce market exclusion effects. Potential competitors are forced into asymmetric competition against oligopolistic platforms across dimensions such as data resources, traffic distribution, and algorithmic capabilities. These dominant platforms exploit their upstream data advantages to suppress downstream competitors by downgrading traffic, restricting interface access, or implementing algorithmic discrimination—ultimately driving rivals out of the market and reinforcing monopolistic dominance.

Second, they suppress innovation. Technological breakthroughs or novel business models introduced by downstream competitors are often expropriated through data surveillance and algorithmic replication. For instance, when an emerging enterprise gains market traction through dynamic pricing or precision marketing, the platform can extract its transaction data in real-time and use machine learning models to imitate these strategies in its own services. This "innovation harvesting" mechanism delivers a fatal blow to innovators: their first-mover advantage is eroded by the platform's rapid algorithmic iteration, and their R&D investment cannot be recuperated during the market exclusivity period, resulting in a paradox of "innovation leading to loss."

Third, cross-ecosystem integration by platforms creates insurmountable competitive barriers. Oligopolistic platforms consolidate user lock-in through data sharing, unified account systems, and embedded services [12], thereby constructing a "cross-market collaborative exclusion" barrier. Social platforms deeply intertwine payment, e-commerce, and entertainment services, such that once users are embedded in the ecosystem, the switching cost becomes prohibitively high—social networks, payment histories, membership benefits, and other data assets are non-transferable across platforms. When competitors attempt to enter niche markets, dominant platforms can deploy ecosystem-based defense strategies: they redirect traffic from foundational services (e.g., search engines prioritizing in-house e-commerce content) and block external competition through data closure.

These three mechanisms of harm are mutually reinforcing, leading to severe disruption of market competition. For the platforms, short-term monopoly gains mask the long-term decline in competitiveness due to innovation inertia. For competitors, data surveillance and ecological enclosure deprive them of survival space. More profoundly, when a market loses its capacity for self-renewal, new entrants must not only confront commercial competition but also dismantle institutionalized exclusion mechanisms erected by entrenched interests.

3.3.2. Vertical Harm: Infringement on Consumer Choice

Vertical harm is primarily manifested in the erosion of consumers' autonomous choice by algorithmic power and the deeper disruption of fair market competition [12]. According to Article 17, Paragraph 1 of the Anti-Monopoly Guidelines on the Platform Economy issued by the State Council Anti-Monopoly Commission, discriminatory treatment based on data profiling constitutes a regulated activity under anti-monopoly law. However, in practice, legal identification of such vertically damaging conduct remains challenging [13].

The vertical harms can be categorized into two types: those arising from algorithmic collusion and those resulting from the combination of collusion and abuse of market dominance.

First, algorithmic collusion undermines consumers' autonomous decision-making and constitutes a covert infringement on their personal information. Discriminatory practices driven by self-preferential behavior are often concealed, rendering conventional consumer protection mechanisms ineffective. Article 9 of the Law on the Protection of Consumer Rights and Interests grants consumers the right to freely choose products or services. This right encompasses subjective voluntariness, objective freedom, and the legality of its exercise. However, oligopolistic platforms construct algorithm-driven data loops through implicit collusion, effectively depriving consumers of genuine choice. Consequently, consumers are subjected to discriminatory transaction conditions without being aware of such manipulation. Although these algorithmic practices do not explicitly restrict the choice of transaction partners, they distort price transparency, thereby nullifying the right to autonomous choice as protected under Article 9. This creates a novel form of "technologically enforced transactions" that constitutes a new type of infringement.

Second, vertical harm resulting from the abuse of market dominance and implicit collusion by oligopolistic platforms manifests as dual damage to both market competition order and consumer rights. There is a dialectical relationship between the operator's right to autonomous management and the consumer's right to autonomous choice. Dominant platforms frequently invoke the justification of "algorithmic optimization" to defend their discriminatory practices under the guise of business autonomy. In practice, however, dynamic pricing algorithms—when coupled with market dominance—tend to result in systemic price discrimination that undermines consumers' right to fair transactions. Moreover, the increasing misuse of sensitive data exacerbates the risk of vertical discrimination. Although Article 24 of the Personal Information Protection Law explicitly prohibits unreasonable discriminatory treatment through automated decision-making, dominant platforms may circumvent such legal constraints through data aggregation and indirect inference. For example, by using non-sensitive attributes such as geographic location or spending habits, platforms can construct user profiles and implement concealed price discrimination.

3.4. Challenges and Dilemmas

3.4.1. legal Uncertainty in Application

The coordinated self-preferencing behaviors of oligopolistic platforms pose fundamental legal challenges, primarily due to the opacity of algorithmic mechanisms and the secrecy of data ecosystems, which collectively undermine the applicability of traditional antitrust rules. Under Article 17 of China's Anti-Monopoly Law, a core requirement for establishing the illegality of concerted practices is the existence of a "meeting of minds" among business operators [14].However, the algorithmic black box and data enclosure practices of digital platforms have substantially eroded the evidentiary foundation of this doctrine.

First, the technical nature of algorithmic coordination disrupts traditional evidentiary logic related to intentionality. Oligopolistic platforms use machine learning models to synchronize pricing strategies and optimize traffic distribution, with coordination intentions embedded in algorithmic parameter adjustments and API calls. There are no written agreements or observable communications. Moreover, the current legal system lacks standards for the interpretability of algorithmic decision-making, making it difficult to bring such technical coordination under the scope of anti-collusion provisions [15].

Second, closed data ecosystems create structural barriers to evidence collection. Platforms exercise de facto sovereignty over data, resulting in the privatization of critical competitive resources such as pricing logs and user profiles. Even when enforcement agencies invoke their investigatory powers under Article 44 of the Anti-Monopoly Law, technical barriers like encryption and distributed storage often prevent the extraction of a complete chain of digital evidence. Complicating matters further, China's Data Security Law and Personal Information Protection Law impose localization and anonymization requirements that, while enhancing privacy protection, also intensify the tension between public data access and antitrust enforcement. Enforcement agencies must weigh privacy compliance against evidentiary completeness, which often weakens the probative value of critical data.

At a deeper level, the lack of a clearly defined data governance framework exacerbates institutional deficiencies. The current legal regime does not yet define data ownership boundaries or legitimate usage limits. Dominant platforms, by virtue of user agreements, acquire control over data that can be weaponized to exclude competitors—yet these actions are often justified under the guise of "autonomous management of data assets." China's Anti-Monopoly Law still treats data monopoly as a subset of abuse of market dominance, without establishing a standalone prohibition for data foreclosure. This legislative gap leads to blurred categorization and mixed legal interpretations in enforcement practice.

3.4.2. Obsolescence of Market Dominance Assessment Standards

The traditional criteria for assessing market dominance are increasingly outdated in the context of digital markets. Under Article 18 of the Anti-Monopoly Law, market share serves as the presumptive benchmark. However, this standard is poorly suited to multi-sided markets, zero marginal cost models, and strong network effects—all defining characteristics of the digital economy.

First, the cross-subsidization logic in platform businesses separates the free-service market from the profit-generating market. Traditional indicators like sales revenue no longer accurately reflect true market power. For instance, in the mobile operating system market, platforms like Google Android and Apple iOS leverage first-mover advantages to build developer ecosystems. Their dominance arises from the feedback loop between user base and developer resources—factors not captured by conventional installation metrics.

Second, the near-zero marginal cost structure of digital services undermines traditional theories of capacity expansion. Platforms can achieve exponential user growth without significant capital investment. Consequently, metrics used to assess the stability of market share are no longer valid: platforms can maintain effective control under the illusion of dynamic competition through data-based strategies and user lock-in effects. Yet, the current Anti-Monopoly Law lacks a dedicated analytical framework for data-driven dominance, instead subsuming it under outdated market share calculations.

Additionally, the "winner-takes-all" dynamics of digital markets challenge the temporal relevance of dominance indicators. Traditional standards require sustained market share above 50% for three consecutive years. In contrast, data monopolies can capture markets rapidly via data barriers. For example, in 2021, Douyin's market share surged from 12% to 58% within a year, demonstrating the unmatched speed of data-driven market penetration. This calls for the establishment of real-time market monitoring mechanisms, integrating metrics such as data activity levels and API call frequencies into the market share assessment toolkit.

In summary, the current legal framework faces a dual dilemma in recognizing market dominance:On one hand, the lack of standards for defining non-monetized (free) markets renders the delineation of relevant markets imprecise.On the other, the existing dominance criteria fail to capture monopolistic behaviors rooted in data leverage and platform scale, thus weakening the effectiveness of antitrust enforcement in digital contexts.

3.4.3. Obstacles in Recognizing Cross-Market Monopoly Effects and Joint Market Dominance

Cross-market monopolistic effects arising from data reuse and ecosystem expansion by oligopolistic platforms have exceeded the regulatory reach of traditional antitrust law and classical leveraging theory. When platforms use algorithms to convert user stickiness in a primary market into traffic advantages in adjacent markets, antitrust authorities often lack both the econometric tools to quantify such "data leverage ratios" and the legal standards to determine the threshold for competitive harm resulting from such transmission.

First, traditional definitions of the “relevant market” become inapplicable in multi-market platform ecosystems. Article 22 of China’s Anti-Monopoly Law requires that the abuse of dominance and the market in which the operator holds dominance exist within the same product or geographic market. However, in platform economies, the reusability of data elements enables operators to create a positive feedback loop between foundational and adjacent markets. Through data collection and personalized services, platforms deepen user engagement, thereby enabling the collection of even more critical behavioral data. This cycle strengthens the platform’s grip on users, allowing it to promote affiliated products or services in adjacent sectors. Although such behavior has the effect of excluding or restricting competition, it often cannot be legally classified as tying or bundling, since it does not occur within a single market.

While the Antitrust Guidelines for the Platform Economy (Article 12) introduce the concept of cross-market effects, they fail to articulate quantifiable standards for competitive advantage transmission or legal criteria for determining the illegality of such conduct. As a result, judicial practice faces substantial challenges. For instance, in the 2022 WeChat Mini-Program case, the Shenzhen Intermediate People’s Court dismissed the plaintiff’s cross-market monopoly claim on the grounds that it could not establish a clear causal link between competition harm in the social networking market and the e-commerce market.

Second, the current review mechanisms remain static and structurally rigid. Although Article 17 of the Anti-Monopoly Law allows for the recognition of joint market dominance, it still relies heavily on the aggregation of market shares as the primary standard. In digital ecosystems, however, oligopolistic platforms often form invisible alliances through API sharing and co-built data pools. Their dominance does not result from the simple addition of market shares but from multiplicative effects generated through data synergy. Nonetheless, the existing antitrust review framework continues to rely on traditional structural indicators, which are incapable of detecting the leverage effect of data as a production factor, and fail to identify the entry barriers arising from ecosystem closures. This regulatory lag undermines the ability of competition authorities to assess and remedy the unique and complex forms of dominance in data-driven markets.

3.5. Regulatory Pathways

In the face of the dual harms and regulatory challenges posed by data monopolies, traditional antitrust tools have proven increasingly inadequate in addressing emerging forms of monopolistic behavior, such as algorithmic black boxes and ecological barriers. There is an urgent need to establish a regulatory system that aligns with the developmental logic of the digital economy. The governance of collusive self-preferencing behavior by oligopolistic platforms must seek a dynamic balance between technological neutrality and competitive justice, and between innovation incentives and market fairness. Legal deconstruction of algorithmic collusion should serve as the starting point for constructing a four-dimensional regulatory system encompassing rule restructuring, standard

innovation, enhanced accountability, and localized institutional adaptation, thereby providing a systematic solution to the predicament of data monopolies.

3.5.1. build a regulatable framework for algorithmic collusion

To build a regulatable framework for algorithmic collusion, China currently relies primarily on the provisions against "abuse of market dominance" and "collusion" under the Anti-Monopoly Law to regulate coordinated self-preferencing by super-large internet platforms. However, the overlapping applicability of these provisions has led to confusion in the logic of legal attribution. Coordinated self-preferencing may simultaneously meet the criteria for both abuse of dominance and collusion, yet the two rely on different standards for identifying responsible parties and proving intent. Therefore, it is necessary to construct a systematized legislative framework centered on the integration of dedicated clauses, interpretive guidance, and standard-setting instructions, thereby forming a three-tier regulatory structure that achieves a closed-loop transition from principles to enforceable rules. At the legislative level, a dedicated chapter on "abusive conduct by digital platforms" should be established within the Anti-Monopoly Law, explicitly identifying coordinated self-preferencing as a distinct type of unlawful behavior. Its core elements should include three dimensions: first, the use of technical means such as algorithmic parameter synchronization and data interface control to systematically favor self-operated businesses; second, the implementation of behavioral coordination through shared machine learning models and cross-platform data flows; and third, the substantial exclusion or restriction of market competition as a result. This definition draws from the regulatory essence of the European Union's Digital Markets Act concerning "gatekeeper" obligations, while also addressing the limitations of traditional typologies of abusive conduct. The accompanying liability framework should adopt a tiered penalty mechanism: at the foundational level, fines should be imposed based on a floating percentage (e.g., 5%–15%) of the firm's previous year's turnover; at the intermediate level, structural remedies such as data separation orders and open-sourcing of algorithms should be employed to eliminate anticompetitive roots; and at the final level, severely non-compliant enterprises should be included in industry credit blacklists and face restrictions on participation in government procurement and access to financial credit, forming a progressive system of "economic sanctions – behavioral correction – eligibility restrictions."

Given that self-preferencing behavior is characterized by competition across multiple markets, China's current Anti-Monopoly Law lacks clear provisions addressing such conduct. Drawing on the legislative experience of Section 19a of Germany's Act Against Restraints of Competition, China could introduce specific clauses targeting self-preferencing that significantly affects cross-market competition. Although the finalized version of the Provisions on Prohibiting Abuse of Market Dominance did not incorporate the draft's detailed provisions on self-preferencing, future amendments to antitrust regulation could reference the notion of "cross-market competitive effects." For instance, Article 20, Paragraph 1 of the draft could be revised as follows: "Platform operators with a dominant market position are prohibited from granting preferential treatment to themselves or affiliated enterprises—without justifiable reasons—when competing with other businesses on the platform, by leveraging data, algorithms, technology, or platform rules, and exerting significant cross-market competitive influence." The term "cross-market competitive influence" should be assessed based on the following factors: (1) the existence of market dominance in one or more markets; (2) the ability to obtain and control key resources, including capital, data, and technology; (3) business activities in other related markets; (4) the acquisition and use of competitively sensitive data; and (5) the impact of such activities on the ability of third parties to participate in market competition. [16] Through such revisions, Chinese regulatory authorities would be empowered to effectively regulate self-preferencing behavior by platforms that exert significant cross-market influence.

In addition to specific legislative provisions, the regulation of digital platforms must also be supported by a corresponding system of judicial interpretations. In particular, the criteria for evaluating "cross-market dominance" need to be clarified and unified. Factors such as user conversion thresholds, ecosystem lock-in indices, and dynamic market shares should be incorporated into the assessment. For example, if the conversion rate of users from a foundational market (such as social networking)

to a derivative market (such as payments) reaches 50%, the platform may be presumed to hold a dominant position across markets. Furthermore, in regulating self-preferencing by digital platforms, a clear distinction must be made between legitimate and illegitimate forms of self-preferencing. Based on Article 20 of the Anti-Monopoly Law, judicial interpretations should define the scope of justifiable reasons that platforms may invoke, which may include three categories: technological innovation defenses, efficiency enhancement defenses, and public interest defenses.

3.5.2. Innovating the Standards for Determining Market Dominance

In the digital economy era, although factors such as high market share, high marginal profit, and high market concentration remain characteristic of certain industries, they are no longer the sole criteria for evaluating market power. A firm's possession of a large market share does not necessarily imply that it holds substantial market power. On the contrary, even when a firm does not occupy a dominant share, if it controls key resources such as data and algorithms, it may still possess significant market power in the relevant market. Therefore, the assessment of a firm's market power should no longer be confined to its ability to "raise prices above competitive levels." Instead, it must be based on a comprehensive evaluation that considers the firm's market position, control over critical resources, and the specific characteristics of market competition.

When regulating algorithmic monopolies, particular attention should be paid to analyzing the market power of algorithm operators. The antitrust analytical framework of "market power — market conduct — competitive harm" should be applied to assess the competitive damage caused by algorithmic monopolies. Article 17 of the Anti-Monopoly Law already includes "data control power" as a relevant evaluative criterion. In May 2016, the French Competition Authority and the German Federal Cartel Office jointly released a report titled Competition Law and Data, which emphasized that when assessing whether data contributes to the creation or maintenance of market power, competition authorities must evaluate the economic advantages conferred by the data. Two key factors are typically considered: first, the scarcity of data (i.e., the difficulty of replicating it); and second, the extent to which the scale and scope of data collection impact a firm's competitiveness.

To better align with the characteristics of digital markets, it is essential to reconstruct the provisions on the identification of market dominance within the Anti-Monopoly Law to guide enforcement agencies in determining dominance in digital contexts. Specifically, the factors used to determine market dominance should be re-evaluated by incorporating switching costs and the strategic importance of data, while also fully accounting for the dynamism of the digital economy and the evolving nature of market power it entails. First, a multidimensional and dynamic evaluation system should be developed. This entails introducing alternative indicators, such as user activity and frequency of data access—metrics employed by the German Federal Cartel Office in the Facebook case [14]—as well as integrating ecosystem closure intensity and data control power into the market power assessment system under Article 18 of the Anti-Monopoly Law, alongside the "portfolio effects" model from the U.S. Horizontal Merger Guidelines. Additionally, timeliness should be emphasized by shortening the evaluation cycle for market share stability and establishing real-time monitoring mechanisms to address rapid market penetration phenomena, such as that seen in the case of TikTok.

Second, a comprehensive assessment of market power should be conducted. This involves evaluating a firm's ability to collect and process data, including factors such as data scarcity, the scale and scope of data collection, data quality, and data processing capabilities. It also includes assessing the firm's R&D capabilities, technological innovation, and application capacity, and how these contribute to business expansion or the reinforcement of market position. The degree to which other market participants depend on the dominant firm should be analyzed, including the nature of their trading relationships, transaction volumes, transaction durations, and the difficulty of switching to alternative trading partners. Furthermore, barriers faced by potential new entrants should be assessed, such as difficulties in market access, required capital investments, and technological thresholds.

3.5.3. Improving the Burden of Proof Allocation Mechanism and Strengthening Platform Accountability

Oligopolistic platforms, by leveraging data sovereignty, have erected digital barriers that lead to the privatized control of core competitive data—such as price logs and user profiles. As a result, both antitrust enforcement agencies and plaintiffs in civil litigation often face significant technological obstacles in obtaining a complete chain of electronic evidence. In light of the evidentiary challenges posed by the technical monopoly characteristics of digital platforms, it is essential to establish an adaptive mechanism for burden of proof allocation. At the evidentiary level, a dual-rule approach should be adopted: the combination of "simplified preliminary proof" and "reversed burden of proof." Plaintiffs need only provide preliminary evidence demonstrating that the platform holds a dominant market position and exhibits signs of opaque algorithmic logic or abnormal data interface usage. This fulfills their initial burden of proof. For core facts that fall under the exclusive control of the platform—such as the internal logic of algorithmic decision-making and the scope of data utilization—the burden of proof should be reversed, requiring the platform to prove the legitimacy of its own conduct. To ensure professionalism in the determination of technical facts, a third-party technical verification mechanism should also be introduced. Legally qualified and independent institutions should be authorized to conduct compliance audits of platform algorithms and issue legally binding assessment reports, thereby providing dual expert support for the verification of technical facts.

On the legal liability front, a "dual-penalty system" must be fully implemented and enforced. For corporate entities, in addition to monetary penalties calculated as a proportion of annual turnover, structural corrective measures should be prioritized. These may include the mandatory opening of core data interfaces, algorithmic transparency modifications, and the divestiture of self-operated businesses with significant anticompetitive effects. As for personal liability, the accountability chain should be extended to cover managers and technical personnel who knowingly or negligently authorize or engage in unlawful conduct. Penalties may include industry disqualification, disgorgement of illicit gains, and, in severe cases, criminal liability—thus forming a full-spectrum accountability regime. At the same time, incentive mechanisms should be established to reward platforms that proactively build compliance and internal control systems and make timely adjustments. Such platforms may be granted preferential treatment through refined discretion standards and streamlined review procedures. For automated decisions based on objective technical standards, a "technical necessity" defense may be permitted to grant exemptions from liability, thereby avoiding the suppression of technological innovation.

3.5.4. Localizing and Adapting the Digital Gatekeeper Regime

The European Union's Digital Markets Act (DMA) introduced the pioneering concept of digital "gatekeepers," defining super-large platforms that control core platform services as "gatekeepers" and directly prohibiting self-preferencing behaviors through ex ante regulation. The preamble to the DMA clearly states that such platforms, by virtue of controlling "key gateways" between users and businesses, effectively constitute digital market infrastructure and must therefore fulfill specific obligations related to data openness, algorithmic transparency, and more [15].

While many scholars have advocated for introducing the gatekeeper regime into China's digital antitrust framework, its limitations and incompatibilities necessitate localized adaptation. First, the current gatekeeper model fails to adequately address the fundamental question of whether contestable markets should be subject to economic regulation. Traditional regulatory theory holds that antitrust law should intervene only in cases of market failure, while economic regulation is reserved for natural monopolies or other inherently uncompetitive sectors. However, the DMA imposes regulatory obligations on potentially contestable digital markets, creating a conflict between antitrust principles and regulatory logic. These ex ante prohibitions risk dampening competitive vitality. Second, the gatekeeper model faces risks of vague obligation standards and regulatory overreach. While Article 6 of the DMA lists obligations such as prohibiting self-preferencing and ensuring data interoperability, it lacks clear quantitative thresholds for triggering those obligations. Similar legislation in the UK

and the US has also failed to resolve these issues, often relying on single indicators—such as over 45 million annual active users or a market capitalization exceeding €75 billion—to identify gatekeepers. Such one-size-fits-all criteria risk misclassification: large platforms' self-preferencing behavior may not necessarily be anticompetitive, and indiscriminate prohibitions could unjustly restrict platform autonomy or even generate a "chilling effect" on legitimate business activities.

China, therefore, must draw upon EU experience while constructing a localized framework that balances efficiency and fairness, with emphasis on resolving three key issues. First, a dynamic adjustment mechanism should be established for the catalog of "critical digital platforms," using composite metrics beyond user scale and market capitalization. An "ecosystem dependency index" should be introduced to quantify a platform's control over user and merchant data [17]. For example, in the WeChat mini-program ecosystem, where 90% of merchants depend on WeChat Pay and its user profiling capabilities, WeChat can reasonably be classified as having infrastructure-level significance. Second, a differentiated task list should be designed under the principle of proportionality. For platforms deemed irreplaceable digital infrastructure, mandatory interoperability and algorithm registration should be required. The principle of proportionality should also allow platforms to be partially exempted from such obligations if they can demonstrate that the conduct in question enhances consumer welfare or fosters innovation—e.g., by opening API access to support small and medium-sized developers. Third, incentive mechanisms should be introduced to promote compliance among oligopolistic platforms. Those that proactively open data interfaces and establish third-party audit mechanisms should be eligible for reduced antitrust penalties, thereby encouraging internalized governance and voluntary compliance.

To address the suppression of small and medium-sized enterprises (SMEs) by data monopolies, Professor Jiao Haitao's "data cooperation" theory offers a useful reference. This approach advocates for legislative mandates requiring platforms with access to core data to assist qualified SMEs. Specifically, such platforms should be obligated to open access to basic data interfaces or allow SMEs to connect to the ecosystem through application modules ("app segments"), enabling SMEs to quickly accumulate users and data. At the same time, appropriate thresholds and benefit-sharing mechanisms must be established—such as requiring payments or equity-based partnerships when data usage surpasses a certain scale—to ensure mutual benefit while preventing large firms from losing competitiveness due to excessive openness.

Furthermore, a localized gatekeeper regime should operate in coordination with laws such as the Anti-Monopoly Law and the Data Security Law. First, for platforms not explicitly designated as gatekeepers but that nonetheless engage in monopolistic conduct, Article 22 of the Anti-Monopoly Law—concerning abuse of market dominance—should remain applicable to prevent regulatory gaps. Second, Article 21 of the Data Security Law should be leveraged to require platforms to share encrypted data with third-party institutions under appropriate safeguards, while privacy-preserving computing standards should be established to ensure that public data access does not infringe upon individual rights.

3.6. Conclusion

Data monopolies and the collaborative self-preferencing behavior of oligopolistic platforms have posed a systemic threat to market competition and consumer interests. By deconstructing the behavioral characteristics and legal controversies of such practices, this study clarifies that collusive self-preferencing among oligopolistic platforms should primarily be regulated under the framework of anti-monopoly agreements, with supplementary application of the abuse of market dominance doctrine. It reveals a dual-damage mechanism: horizontally, such conduct results in exclusionary effects against new entrants and stifles innovation through data barriers and algorithmic collusion; vertically, it manifests as an implicit deprivation of consumer choice via algorithmic opacity and ecosystem closure. Existing antitrust law faces multiple challenges in regulating these behaviors, including the concealment of algorithmic collusion, the complexity of recognizing cross-market dominance, and conflicts arising from overlapping legal provisions.

To address these issues, adaptive reforms should be pursued along four dimensions. First, a dedicated legal framework targeting the abuse of digital platforms should be established, explicitly prohibiting data- and algorithm-driven self-preferencing practices. Second, the standards for determining market dominance should be reformed by replacing traditional static market share metrics with indicators such as data control power, user dependency, and dynamic market penetration. Third, the burden of proof allocation mechanism should be improved by shifting the obligation onto platforms to justify the legitimacy of their algorithmic decision-making, supported by third-party technical audits to strengthen factual verification. Fourth, drawing on the European Union's Digital Markets Act, a localized “digital gatekeeper” regime should be designed, featuring dynamic entry criteria and differentiated compliance obligations to avoid one-size-fits-all regulation that may hinder innovation.

Future research should further explore the interaction between data sovereignty and antitrust regulation. Policymakers are advised to strengthen platform interoperability requirements and algorithmic transparency mandates in order to foster a more open and innovative digital ecosystem. The deep integration of technological governance and institutional innovation offers a promising pathway to curb platform monopoly risks while providing institutional safeguards for the sustainable development of China’s digital economy.

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