THE APPLICATION AND LIMITS OF ANTITRUST INTEROPERABILITY REMEDIES FOR DIGITAL PLATFORMS IN CHINA

Yuan Bo

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Antitrust interoperability issues concerning China's digital platforms have attracted widespread attention and have become an important topic in promoting high-quality development of the digital economy. A review of relevant domestic and international legislation and practices reveals that the refusal to deal doctrine serves as the legal basis for antitrust interoperability remedies. However, its specific implementation still faces challenges that need to be addressed, including the assessment of competitive harm and the justification of legitimate defenses. To advance the implementation of antitrust interoperability remedies for digital platforms, it is essential to comprehensively assess the impact of interoperability on cross-market competition, consumer welfare, and technological and commercial innovation, while fully considering the defenses raised by digital platforms, such as privacy protection, innovation, and investment incentives.

I. INTRODUCTION

As competition in the digital economy market intensifies, cross-border rivalry among digital platforms has become pervasive. Centralized traffic platforms play a pivotal role in China's Internet traffic landscape driven by traffic and data economies. However, major digital platforms are often reluctant to open their platforms to competitors in their efforts to safeguard centralized traffic hubs to acquire traffic and new customers. This reluctance has engendered the problem of antitrust interoperability in digital platforms. The concept of mandatory interoperability of digital platforms, as proposed by the essential facilities doctrine or refusal-to-deal legal principles in antitrust law, is intended to address this challenge. According to this concept, digital platforms must open up relevant facilities to competitors to prevent exclusion or restriction of competition. This ensures that these

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facilities can be used to prevent or mitigate limitations on competition. Implementing such measures restrains dominant digital platforms from engaging in anticompetitive practices and facilitates open sharing of relevant facilities.

The earliest platform exclusion incident occurred in China was Alibaba's blocking of Baidu in 2008. Events such as the 3Q War[1] in 2010 and the 3B War[2] in 2012 highlighted the problem of interoperability denial. The frequency of interoperability denials has increased in recent years. Chinese regulators have responded to the increasing frequency of the denial of interoperability through major digital platforms.[3] In September 2021, the Ministry of Industry and Information Technology issued a directive during the administrative guidance meeting on the blocking of links, urging platforms to adhere to standard practices and lift the blocking of links by a specified deadline. This action signified China's move towards a more proactive and prudent regulatory approach to platform enterprises.

The ongoing discourse surrounding the application of the essential facilities doctrine in antitrust law parallels unresolved inquiry into antitrust interoperability remedies for digital platforms. Scholarly perspectives on this problem have diverged from one another. According to *Herbert Hovenkamp*[4] and *Nikolas Guggenberger*,[5] mandatory interoperability is a potential remedy for violations of antitrust laws by dominant firms, including large digital platforms. They suggest that such a measure could effectively address competition-related concerns without unduly disrupting the fundamental structures that make digital platforms valuable for economic progress. *Erik Hovenkamp* classifies refusals to deal as primary or secondary, based on their impact on market competition.[6] Simultaneously, some scholars have questioned the effectiveness of antitrust interoperability remedies for digital platforms, arguing that the doctrinal approach to addressing unilateral acts remains disconnected from contemporary economic realities and theories.[7]

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1 3Q War refers to a dispute between two Chinese IT companies, Tencent and Qihoo.

2 3B War refers to a dispute between two Chinese IT companies, Qihoo and Baidu.

3 *See* 'OPENNESS AND CLOSURE IN INTERNET GOVERNANCE' SEMINAR: SERVING THE CONSTRUCTION OF A NATIONAL UNIFIED MARKET THROUGH PLATFORM INTERCONNECTION, at https://news.sina.com.cn/sx/2022-08-26/detail-imizmscv7858908.shtml (Last visited on April 28, 2025).

4 *See* Herbert J. Hovenkamp, *Antitrust Interoperability Remedies*, 123 Columbia Law Review Forum 3 (2023).

5 *See* Nikolas Guggenberger, *Essential Platforms*, 24(2) Stanford Technology Law Review 250 (2021).

6 *See* Erik Hovenkamp, *The Antitrust Duty to Deal in the Age of Big Tech*, 131(5) Yale Law Journal 1491 (2022).

7 *See* Lina M. Khan, *The Separation of Platforms and Commerce*, 119(4) Columbia Law Review 983 (2019); Tim Wu, *The American Express Opinion, the Rule of Reason, and Tech Platforms*, 7(1) Journal of Antitrust Enforcement 117 (2019); Hou Liyang, *The Limitation and Breakthrough of Anti-Monopoly Enforcement on Internet Platforms: Reflections on Tencent's Suspension of Douyin Weblinks*, 4 Journal of Business Economics 95 (2021).

Despite a lack of consensus among scholars regarding antitrust interoperability remedies for digital platforms, the potential benefits of interoperability in ensuring the competitiveness and fairness of the digital economy are widely recognized within the international community. The Organization for Economic Cooperation and Development (OECD) has emphasized that interoperability can reduce market power concentration among digital platforms by enabling the sharing of direct network effects. This promotes competition within the marketplace while reducing user switching costs, addressing user lock-in problems, and enabling multihoming.[8] The European Union (EU) maintains that interoperability in the digital economy can be improved on three levels: protocol, data, and full protocol interoperability.[9] However, the theoretical and practical perspectives differ in terms of how to achieve the interoperability of digital platforms. Many scholars argue that interoperability lends itself to regulatory mandates. Rather than relying on remedies such as the divestiture of antitrust laws to indirectly ensure interoperability,[10] the practical application of antitrust remedies for interoperability in the digital economy constitutes challenges in fact-finding and legal analysis. Therefore, jurisdictions such as the EU and the US are proactively exploring alternative remedies. For example, the EU's *Digital Markets Act* (DMA) mandates the 'maintenance of interoperability' as an obligation of gatekeepers,[11] whereas the *Augmenting Compatibility and Competition by Enabling Service Switching Act of 2021* (hereinafter referred to as the ACCESS Act of 2021) in the US requires regulated platforms to provide transparent interfaces accessible to competing companies through third-party channels.[12]

The issue of non-interoperability between Chinese Internet platforms has manifested in conflicts between major tech companies such as Tencent, Alibaba, and ByteDance. Consequently, China's antitrust law remains a critical institutional tool for promoting interoperability in the digital economy. Exploration of the implementation of antitrust remedies for interoperability in China's digital economy is urgently required. Therefore, this paper is organized as follows. The first section describes the legislative and

8 *See* OECD, DATA PORTABILITY, INTEROPERABILITY AND DIGITAL PLATFORM COMPETITION, at https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/10/data-portability-interoperability-and-competition_f09a402e/73a083a9-en.pdf (Last visited on April 28, 2025).

9 *See* EUROPEAN COMMISSION, DIRECTORATE-GENERAL FOR COMPETITION & JACQUES CRÉMER ET AL., COMPETITION POLICY FOR THE DIGITAL ERA, at 6 (Publications Office, 2019).

10 *See* FIONA SCOTT MORTON & MICHAEL KADES, INTEROPERABILITY AS A COMPETITION REMEDY FOR DIGITAL NETWORKS, at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3808372 (Last visited on April 28, 2025).

11 Articles 5 and 6 of the *Digital Markets Act of 2022*.

12 Article 4 of the *H.R. 3849 of 2021*.

practical changes in China's antitrust interoperability remedies in the digital economy and analyzes the practical significance of antitrust interoperability remedies. The second section conducts a comparative analysis of antitrust interoperability remedies for digital platforms in key jurisdictions, identifying their patterns and differences. The third section provides specific suggestions for promoting China's antitrust interoperability remedies in the digital economy from the perspective of the interpretation and application of antitrust laws. The last section provides concluding remarks.

II. CHINA'S LEGISLATION AND PRACTICE OF ANTITRUST INTEROPERABILITY REMEDIES IN THE DIGITAL ECONOMY

A. Legal Provisions for Antitrust Interoperability Remedies in China's Digital Economy

Article 22(3) of the *Anti-Monopoly Law of the People's Republic of China* (amended in 2022) provides the legal basis for antitrust interoperability remedies in China. It provides that 'an undertaking holding a dominant market position is prohibited from abusing such a position by engaging in refusing to deal with trading counterparties without justifiable reasons.'[13] Additionally, the rules promulgated by departments under the State Council have further clarified and enhanced these laws. Notably, article 16 of the *Provisions on Prohibiting Abuse of Dominant Market Positions* promulgated by the State Administration for Market Regulation (SAMR) in 2023 delineates specific cases of refusals to deal, introduces the concept of essential facilities, and outlines justifiable reasons that business operators may cite for refusing to deal.[14]

As antitrust concerns surrounding digital platforms in China receive significant attention and regulatory scrutiny, recent amendments to the *Anti-Monopoly Law of China* and related rules and regulations have outlined antitrust remedies for interoperability in the digital economy. First, article 22 of the *Anti-Monopoly Law of China* emphasizes that 'an undertaking holding a dominant market position shall not engage in any practice of abuse of such a position as prescribed in the preceding paragraph by taking advantage of data, algorithms, technologies and platform rules, etc.' This article reflects legislative and regulatory concerns about antitrust problems in the digital

13 *See* Article 22(3) of the *Anti-Monopoly Law of China*.

14 *See* Article 16 of the *Provisions on Prohibiting Abuse of Dominant Market Positions of 2023*.

economy and reaffirms that the digital realm is not beyond the scope of antitrust regulation. Second, article 14 of the *2021 Guidelines of the Anti-Monopoly Commission of the State Council for Anti-Monopoly in the Field of Platform Economy* provides specific provisions on refusals to deal.[15]

B. Interoperability Challenges and Antitrust Practices in China's Digital Economy

As mentioned above, China has a well-defined legal framework for antitrust interoperability. In practice, cases of the denial of interoperability have emerged in the digital economy. However, to date, no digital platform has been mandated to bear interoperability obligations under the antitrust law.

The issue of antitrust interoperability in China's digital economy has intensified, spurred in particular by the emergence of the 'walled garden' of the Chinese Internet, which resulted from Alibaba's initial blocking of Baidu. On September 8, 2008, Taobao formally restricted access to Baidu's search service, effectively preventing users from accessing Taobao-related content through Baidu. Subsequently, the BAT[16] giants have engaged in blocking actions against each other, drawing the entire Internet industry into the vortex of the 'walled garden' phenomenon.[17] Following the 3Q War in 2010 and the 3B War in 2012, the walled garden phenomenon has attracted widespread attention and concern.[18] The most notable example of this trend is the intensifying blocking conflict between Alibaba and Tencent. In August 2013, Taobao claimed that WeChat had suspended the operation of its public accounts related to Taobao products and merchant marketing, disconnecting Taobao's data interface from WeChat. Tencent's subsequent actions to block ByteDance further intensified China's walled garden problem.[19] The emergence of short-form video platforms such as ByteDance posed a significant challenge to Tencent ecosystems. On April 11, 2018, Tencent officially blocked the sharing of links associated with Douyin, Xigua Video and Vigo Video, making them inaccessible for normal

15 *See* Article 14 of the *Guidelines of the Anti-Monopoly Commission of the State Council for Anti-Monopoly in the Field of Platform Economy of 2021*.

16 BAT refers to Baidu, Alibaba, and Tencent.

17 *See* Hao Junqi & Hu Jingjie, *The Mechanism and Regulatory Considerations of Internet Platform Prohibitions*, 7 Price: Theory & Practice 25-27 (2015).

18 *See* Zhang Jiangli, *Antimonopoly Regulation of Internet Platform Competition Analysis of 3Q War and Action*, 1 Peking University Law Journal 265-267 (2015).

19 *See* Zhong Xiangming & Fang Xingdong, *'Walled Garden' Demolished: The Key Problem of Internet Platform Governance*, 5 Modern Publishing 64-65 (2021).

viewing within WeChat and Tencent QQ. Subsequently, on April 18, 2018, Tencent introduced stricter regulations on the sharing of external links, stipulating that only short-form video products with audiovisual licenses issued by regulatory authorities could be distributed on WeChat, which affected the sharing and distribution capabilities of over 30 short-form video applications. On February 28, 2020, Tencent further expanded its restrictions on ByteDance's cloud office software, Feishu, known as 'Lark' overseas, including disapproving a WeChat miniprogram of the 'Feishu Document'.[20] During the escalating refusal to interoperate, Douyin filed a lawsuit against Tencent for alleged monopolization on February 2, 2021. This litigation is considered to be 'the first case of antitrust interoperability remedy involving digital platforms in China' and is expected to establish an important precedent for antitrust interoperability remedies in the digital economy.

Chinese regulators have responded to antitrust interoperability disputes in the digital economy primarily by offering administrative guidance. In particular, on November 3, 2010, Tencent declared that it would cease operating QQ on computers with software developed by 360 Security Technology Inc. and that 360's software was incompatible. On November 4, 2010, the Ministry of Industry and Information Technology responded by initiating an investigation and issuing an administrative order that required the two companies to resolve their disputes. Consequently, 360 software and Tencent QQ were made compatible on November 10, 2020.[21] In October 2015, WeChat imposed a ban on NetEase Cloud Music but lifted this ban after an administrative guidance meeting convened by the Ministry of Industry and Information Technology in September 2021.[22] In April 2018, Tencent blocked links related to Douyin, Xigua Video and Vigo Video, informing users via a pop-up window that 'during the correction of short videos, the platform will uniformly suspend direct playback.' After Jinri Toutiao[23] filed a complaint alleging commercial defamation in the pop-up window prompt, the Ministry of Industry and Information Technology concluded that Tencent's pop-up window prompts violated Order No. 20 of the Ministry of Industry and Information Technology and ordered Tencent to rectify the situation.

20 *See* BYTEDANCE'S OFFICE SUITE, FEISHU RELEASES ANNOUNCEMENT THAT WECHAT HAS BLOCKED IT COMPLETELY, at https://m.chinanews.com/wap/detail/zw/kong/2020/02-29/9109146.shtml (Last visited on April 28, 2025).

21 *See* CIRCULAR OF THE TELECOMMUNICATIONS ADMINISTRATION ON CRITICIZING BEIJING QIHOO TECHNOLOGY CORPORATION AND SHENZHEN TENCENT COMPUTER SYSTEM CORPORATION, at https://www.gov.cn/gzdt/2010-11/21/content_1750046.htm (Last visited on April 28, 2025).

22 *See* LI QIAOCHU, THE MINISTRY OF INDUSTRY AND INFORMATION TECHNOLOGY DEEPENS THE PROMOTION OF INTERCONNECTION: SHARING LINKS MAY BID FAREWELL TO MOJIBAKE, at http://finance.people.com.cn/n1/2021/0914/c1004-32227032.html (Last visited on April 28, 2025).

23 Jinri Toutiao, also called Today's Headlines, refers to a Chinese news and information content platform.

Consequently, Tencent modified pop-up window prompts and stopped blocking additional links under the aforementioned pretext. However, the block is not completely lifted.[24] In September 2021, the Ministry of Industry and Information Technology convened an administrative guidance meeting to address the link blocking. During this meeting, the platforms were instructed to unblock the links according to predefined standards by a certain deadline.[25] Thus, antitrust enforcers and industry regulators effectively address disputes and promote interoperability between relevant platforms to a certain extent. Although judicial litigation and administrative mediation can resolve interoperability disputes between individual companies, these regulatory measures are insufficient to meet the practical demands for interoperability across the entire digital economy in light of frequent and ongoing disputes. Therefore, a framework is urgently needed to analyze antitrust remedies for interoperability in China's digital economy.

Previous antitrust court cases involved refusals to deal with digital platforms. However, a significant disparity between the economic strength and litigation capacity of plaintiffs and defendants has often resulted in plaintiffs, typically natural persons or small businesses, losing their cases. This is primarily because they are unable to prove the dominant position of the defendant in the relevant market. For example, in the case of *Xu Shuqing v. Tencent*, the plaintiff *Xu Shuqing* sued Tencent for rejecting the emoji packages he uploaded to WeChat, arguing that WeChat had used its dominant market position to exclude or restrict competition. The court found *Xu Shuqing*'s evidence insufficient to prove various factors. These factors include the defendant's market share and competitive status, control over the market, financial and technical capabilities, the extent to which other operators rely on it for transactions, and barriers to entry into the relevant market. Thus, the court ruled against plaintiffs.[26] Similarly, in the case of *Shenzhen Micro Source Code Development v. Tencent Technology (Shenzhen) Co. Ltd*, Micro Source Code Development (MSCD) filed a lawsuit against Tencent, the operator of the WeChat official account, alleging that Tencent had prevented 26 WeChat official accounts from operating on the MSCD platform without authorization. The MSCD argued that Tencent had abused its dominant market position, which constituted a monopoly. However, the

24 *See* ZHANG YING & DENG CONG, COULD TIKTOK'S EXPANSION INTO THE SOCIAL MEDIA REALM SIGNIFICANTLY INFLUENCE THE BALANCE IN FAVOR OF ONE DOMINANT PLAYER?, at https://mp.weixin.qq.com/s/zFmUMA3JsQ0oyUb44loPeQ (Last visited on April 28, 2025).

25 *See* LI QIAOCHU, *supra* note 22.

26 *See* (2018) No. 4955 Civil Ruling of Civil Petition of the Supreme People's Court of China.

Shenzhen Intermediate People's Court ruled that the plaintiff had failed to prove the defendant's dominant market position and abusive conduct as required by law. Consequently, the court dismissed plaintiffs' lawsuits.[27]

C. The Evolution of Antitrust Interoperability Remedies in China's Digital Platforms Governance

Closely related to the comprehensive and prudent regulatory approach, China advances progress on antitrust interoperability remedies for digital platforms. This approach constitutes inclusiveness for emerging economic paradigms and allows adequate time and space for their development and experimentation. Moreover, it represents an innovative regulatory strategy that requires timely and proportionate government intervention tailored to the level of public risk to address the challenges posed by conventional regulatory frameworks effectively.[28] For instance, article 55 of the *Regulation on Optimizing the Business Environment*, enacted and implemented in 2019, states the following: 'The government and its relevant departments shall, under the principle of encouraging innovation, implement tolerant and prudent regulation of new technologies, industries, business forms, and models, among others, formulate and implement corresponding regulatory rules and standards by classifying them according to their nature and characteristics, and leave room for their development while ensuring quality and safety, and shall not simply prohibit or deny regulation.'

Similarly, article 35 of the *Law of the People's Republic of China on Scientific and Technological Progress*, as amended in 2021, stipulates that 'the state shall encourage the application of new technologies, promote trials for the application of new technologies, products, services, and models under the principle of inclusiveness and prudence, and create conditions for the application of new technologies and products.' Aligned with this stance, China's anti-monopoly legislation has adopted a prudent approach since its inception. The Internet industry has experienced substantial growth and global prominence, and has been characterized by fierce competition in areas such as search engines, e-commerce, mobile social networking, and digital content, as well as the rise of influential multinational corporations such as Baidu, Alibaba, Tencent, and ByteDance.

As the digital economy grows, competition among digital platforms has

27 *See* (2018) No. 1938 Final Civil Judgment of Shenzhen Intermediate People's Court of Guangdong Province.

28 *See* Liu Quan, *The Rule-of-Law Logic of Inclusive and Prudential Regulation from the Perspective of the Digital Economy*, 4 Chinese Journal of Law 38 (2022).

intensified, with monopolistic practices such as the ‘either-or’ requirement, platform blocking, and big data-driven price discrimination emerging. These practices disrupt the competitive order of the digital market and harm the legitimate rights of businesses and consumers. In response, China has strengthened its antitrust oversight of digital platforms.

The 2020 Central Economic Work Conference identified eight key tasks for economic endeavors in 2021, including a prominent focus on ‘strengthening antitrust measures and preventing disorderly capital expansion’. The conference advocated stronger legal standards for determining monopolies among platform enterprises, data management and utilization, and consumer rights protection. It emphasized the need to fortify regulatory oversight and capabilities and oppose monopolistic and unfair competitive practices. In 2021, the SAMR imposed a record-breaking administrative fine of 18.228 billion yuan on Alibaba for anticompetitive behavior. In 2022, the National Development and Reform Commission, along with other relevant bodies, jointly issued the *Opinions on Promoting Standardized, Healthy, and Sustainable Development of the Platform Economy*, which advocates for strict investigation and handling of monopoly agreements, abuse of market dominance, and illegal concentration of operators in the platform economy.

The landscape of fair competition within China’s digital market has improved, safeguarding the interests of business entities and consumers. Antitrust measures in the digital economy have shifted toward normalized regulation with a dual commitment to regulation and development. Antimonopoly regulation now prioritizes investigating and sanctioning monopoly violations according to legal statutes, thereby fostering fair competition through equitable regulation. It also recognizes and harnesses the positive contributions of digital platforms in driving development, fostering employment, and enhancing international competitiveness. In contrast, refinement of the regulatory framework is ongoing and innovative tools are being introduced to augment regulatory efficacy, which can facilitate the standardized, healthy, and sustainable growth of the digital economy. China’s antitrust regulation of tech giants has become increasingly specialized and precise, reflecting a rational approach. Meanwhile, Chinese regulators are actively exploring the introduction of other policy tools to promote interoperability among digital platforms. For instance, the SAMR drafted the *Guidelines for Internet Platform Categorization and Grading (Draft for Comment)* and the *Guidelines for Implementing the Primary Responsibility of Internet Platforms (Draft for Comment)* in 2021. These guidelines classify digital platforms into six categories at three levels. They impose obligations on mega-platforms by ensuring interoperability, safeguarding the security of users' personal information and data, and regularly assessing the risks related to the infringement of consumers' legitimate rights and interests.[29]

China is currently working to advance network connectivity. The *14th Five-Year Plan for the Development of Digital Economy* calls for accelerating compatibility and standardizing communication protocols across sectors. This initiative removes technical and protocol barriers and strives to achieve interoperability and seamless connectivity to establish a comprehensive and cohesive data chain. The *2022 Work Plan of the Industrial Internet Special Working Group of the Ministry of Industry and Information Technology* outlines initiatives to facilitate data interconnection among platforms and develops a standardized data dictionary for interoperability.[30] As mentioned previously, China's digital platforms are currently interconnected and interoperable mainly through administrative guidance from competition and industry regulators. This is because written law provides general principles to regulate competition in the digital market without specifically addressing interoperability issues, thus leaving room for administrative regulators to issue guidance. Furthermore, it is challenging to impose interoperability either as an obligation or a remedy *ex post* due to the complexity of determining facts and applying the law in various cases. Although administrative guidance lacks a mandatory legal effect, it serves as a soft suggestion for the market players.[31] In contrast, article 9 of the *Anti-Monopoly Law of China* stipulates that 'an undertaking shall not engage in any of the monopolistic practices prohibited by this Law by taking advantage of data, algorithms, technologies, capital advantages or platform rules, etc.' This requirement provides a concrete legal foundation for enforcing antitrust interoperability remedies, thereby making interoperability more feasible. Antitrust measures are more authoritative, mandatory, and stable than administrative directives, which previously framed the interoperability practices.

29 *See* ANNOUNCEMENT OF THE STATE ADMINISTRATION FOR MARKET REGULATION ON THE GUIDELINES FOR INTERNET PLATFORM CATEGORIZATION AND GRADING (DRAFT FOR COMMENT) AND GUIDELINES FOR IMPLEMENTING THE PRIMARY RESPONSIBILITY OF INTERNET PLATFORMS (DRAFT FOR COMMENT), at https://www.samr.gov.cn/hd/zjdc/art/2023/art_c0086d02fcc544ea9506c997b3ac93c1.html (Last visited on April 28, 2025).

30 *See* OFFICE OF THE SPECIAL WORKING GROUP ON INDUSTRIAL INTERNET ON THE ISSUANCE OF THE WORK PLAN OF THE SPECIAL WORKING GROUP ON INDUSTRIAL INTERNET FOR 2022, at https://www.miit.gov.cn/cms_files/filemanager/1226211233/attach/202112/45b493a015194346bea6e4d1433ea465.pdf (Last visited on April 28, 2025).

31 *See* Fei Lanfang, *Regulation Under Administrative Guidance: The Case of China's Forcing Interoperability on Digital Platforms*, 48 Computer Law & Security Review 1, 7 (2023).

III. RECONSIDERING ANTITRUST INTEROPERABILITY REMEDIES IN THE DIGITAL ECONOMY

A. Exploration into the Application of Relevant Legal Rules Within the Antitrust Regulatory Framework

1. Evolution of Antitrust Interoperability Remedies: From Leniency to Prudence. — In US antitrust law, enforcement of antitrust interoperability remedies often relies on the doctrine of essential facilities. This doctrine originated in the landmark 1912 ruling of the US Supreme Court in the case of *United States v. Terminal Railroad Association of St. Louis (Terminal Railroad Association)*.[32] The Supreme Court ruled that the association's refusal to grant access to other railroads constituted monopolistic behavior. Therefore, the court mandated the opening of its facilities to other competitors. In the case of *MCI Telecommunications v. American Telephone & Telegraph*,[33] the US Court of Appeals for the Seventh Circuit set forth a leading formulation of the doctrine. According to the court, a plaintiff must prove four elements to establish the defendant's liability and obligation to provide access: (i) control of the essential facility by a monopolist; (ii) a competitor's practical or reasonable inability to duplicate the essential facility; (iii) the denial of the use of the facility to a competitor; and (iv) the feasibility of providing the facility.[34] Subsequently, legal principles governing antitrust interoperability remedies have been developed. The telecommunications sector is a prime example. Although these cases do not directly pertain to the digital economy or network platforms, they involve electric power utilities and communication networks that exhibit network effects similar to those of digital platforms. To a large extent, these cases have influenced substantive regulations regarding antitrust interoperability remedies in the United States.

However, the 2004 case of *Verizon Communications v. Law Offices of Curtis v. Trinko, LLP*[35] marked a significant setback for antitrust interoperability remedies practiced in the United States. The controversy in this case centered on whether Trinko's claim that Verizon had violated its obligation under the *Telecommunications Act of 1996* to share network

32 *See United States v. Terminal Railroad Association of Saint Louis* [1912] 224 US 383.

33 *See MCI Telecommunications Corp. v. American Telephone & Telegraph Company* [1994] 512 US 218.

34 ALI A. MASSADEH, THE ESSENTIAL FACILITIES DOCTRINE UNDER SCRUTINY: EU AND US PERSPECTIVE, at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1738326 (Last visited on April 28, 2025).

35 *See Verizon Communications Incorporated v. Law Offices of Curtis v. Trinko, LLP* [2004] 540 US 398.

services with competitors constituted monopolization, which was prohibited by section 2 of the *Sherman Act*. The US Supreme Court overturned the Circuit Court's decision on appeal, ruling that Trinko did not fall within the exception to the application of section 2 of the *Sherman Act* established in the *Aspen Case*.[36] The court also ruled that Verizon was not obligated to assist its competitors. Additionally, the US Supreme Court outlined its fundamental stance on antitrust interoperability remedies, emphasizing that the mere possession of monopoly power and the concomitant charging of monopoly prices were not only legal matters but also important elements of the free-market system. According to the court, the opportunity to charge monopoly prices, at least for a short period, attracted business acumen and induced risk-taking, which produced innovation and economic growth. To preserve the motivation to innovate, the possession of monopoly power would not be deemed illegal unless it was accompanied by anticompetitive behavior.

2. The Initiation of Antitrust Investigations and Litigation Against Digital Platforms' Refusal to Interoperate. — The ruling of the *Trinko Case* highlighted the US Supreme Court's careful approach to antitrust interoperability remedies, reducing lawsuits and cases in this area. However, the recent increase in antitrust investigations against major technology companies such as Apple, Google, Amazon, and Facebook has renewed interest in antitrust interoperability remedies in the digital economy. Individual representative litigation cases have emerged, underscoring the renewed attention and scrutiny of antitrust interoperability problems.

In *FTC v. Facebook*,[37] the FTC alleged that Facebook strengthened its monopoly by denying its competitor access to platform APIs. However, the US District Court for the District of Columbia ruled that Facebook's refusal to open its APIs to competitors did not amount to unfair competitive exclusion. Citing the precedent of Aspen, the court emphasized that anticompetitive violations could not be established solely based on intent to harm or failure to assist a competitor. The court asserted that, in a concentrated market, maintaining or improving one's position inherently involved rival companies experiencing losses. Therefore, if every action taken by a monopolist to restrict competition was condemned, there would be little room to uphold the monopolist's freedom to compete in

36 *See Aspen Skiing Company v. Aspen Highlands Skiing Corp.* [1985] 472 US 585.

37 *See* INVESTIGATION OF COMPETITION IN DIGITAL MARKETS, at https://democrats-judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf (Last visited on April 28, 2025); *see* also *Federal Trade Commission v. Facebook, Incorporated* [2021] 560 F. Supp. 3d 1.

the marketplace. The court concluded that Facebook's actions were lawful because they did not prohibit third parties from developing similar products against competitors. They only restricted the use of data to aid competitors. Therefore, Facebook had no obligation to assist its competitors and had the right to protect its interests within the bounds of the law.

In October 2020, the US House Judiciary Committee released a report titled *Investigation of Competition in Digital Markets*. The companies investigated by the Subcommittee—Amazon, Apple, Facebook, and Google—have captured control over key distribution channels and have come to function as gatekeepers. The investigation uncovered several instances in which a dominant platform used the threat of delisting or refusing services to a third party as leverage to extract greater value or more data or to secure an advantage in a distinct market. To address this concern, the Subcommittee recommended that the Congress revitalize the essential facilities doctrine, which is the legal requirement that dominant firms provide access to their infrastructural services or facilities on a non-discriminatory basis.[38]

3. Summary: Striking a Balance Between Government Intervention and Market Regulation. — Before the *Trinko Case*, US courts used the essential facilities doctrine to require companies in industries such as railroads, electric power, and telecommunications networks to provide competitors with access to their facilities. However, because of the *Trinko Case*, the courts have adopted a more careful approach, weighing the promotion of entrepreneurial freedom to preserve the integrity of market competition. This change in attitudes can be attributed to several factors. Regarding their impact on market competition, antitrust laws should prioritize fostering the innovative capacity of enterprises, as emphasized in the *Trinko Case*. The *MCI Case* established four elements for determining essential facilities. However, courts have encountered difficulties in adjudicating details. In response, five significant bills were introduced in 2021, including the ACCESS Act of 2021 and the *Ending Platform Monopolies Act*. The ACCESS Act of 2021 requires platform enterprises to meet regulatory criteria to adhere to interoperability requirements, which ensures accessibility, openness, and transparency of platform services and operating systems. Furthermore, the regulatory process no longer begins with an assessment of whether the refusal to engage in interoperability constitutes exclusion or restriction of competition. Instead,

38 *See* INVESTIGATION OF COMPETITION IN DIGITAL MARKETS, at https://democrats-judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf (Last visited on April 28, 2025).

it presumes that such behavior excludes or restricts competition, thereby presupposing interoperability obligations and ensuring fair competition in the digital economy.[39] The ACCESS Act of 2021 has not been formally adopted, but it indicates the direction of the US policy on interoperability in the digital economy. However, scholars have criticized this approach, arguing that mandating interoperability for ordinary competitive products without evaluating market power could result in significant private and enforcement costs, as well as extensive free-riding, without providing competitive advantages.[40]

B. Flexible Application of the Essential Facilities Doctrine or the Exploration of Alternative Interoperability Remedies

The EU's antitrust interoperability framework anchors on the essential facilities doctrine, now encompassing both physical infrastructure (ports/railways) and IP-protected intangibles. Enforcement history reveals three systemic constraints: prolonged case-by-case analyses under EU competition law, disproportionate resource consumption, and diminishing effectiveness against digital market failures. This paradigm shift prompted legislative innovation. The *Digital Markets Act* replaces remedial approaches with *ex-ante* gatekeeper obligations mandating platform interoperability.

1. Proactive Promotion of the Implementation of the Essential Facilities Doctrine in the Field of Intangible Assets. — (1) *RTE and ITP v. Commission of the European Communities*.[41] Magill TV Guide Ltd. (Magill) sought to publish a comprehensive weekly television guide. However, RTE, ITP, and the British Broadcasting Corporation (BBC) obtained a court injunction to prevent this. In response, Magill complained to the Court of Justice of the European Union (CJEU) that RTE, ITP, and the BBC had abused their dominant market positions by refusing to grant licenses for publication of their respective weekly schedules. In this case, the CJEU suggested, for the first time, that a refusal to deal could be considered an abuse of dominant market power if three conditions were met: (i) there was a clear, consistent, and persistent demand from consumers for a new product, and the operator's service was the only source of essential information or raw materials for this

39 *See* Jiang Shan, *Reflection on the Methodology and Ideology of the US Anti-Monopoly Regulation in Digital Market*, 6 International Economic Review 39 (2021).

40 *See* Herbert J. Hovenkamp, *supra* note 4, 1.

41 *See Radio Telefis Eireann and Independent Television Publications Ltd v. Commission of the European Communities* [1995] 4 CMLR 718.

product; (ii) the refusal lacked justification within the relevant market; and (iii) the refusal resulted in the exclusion of all competition within the market, thereby safeguarding the enterprise's monopoly position in both the relevant market and its downstream market.

(2) *IMS Health GmbH v. NDC Health GmbH*.[42] IMS Health GmbH & Co. KG (IMS), a company specializing in pharmaceuticals and healthcare, provides sales data on pharmaceutical products in Germany. The data were organized into 1,860 blocks, each corresponding to a specific geographical area within Germany. NDC Health GmbH & Co. KG (NDC) filed a complaint with the CJEU alleging that the IMS's refusal to license its 1,860 blocks constituted an abuse of a dominant position. The CJEU stated that under certain conditions, a refusal to license intellectual property rights (IPRs) constituted an abuse of a dominant position. The following conditions had to be met: (i) the IPRs that were refused for licensing by the dominant firm were necessary for entry into the downstream market; (ii) the refusal would hinder the emergence of a new product or service; (iii) the refusal lacked reasonable justification; and (iv) the refusal would result in the elimination of all competition in the downstream market. The assessment of a dominant firm's refusal to license IPRs under EU law has been clarified.

(3) *Microsoft Corporation v. Commission of the European Communities*.[43] Sun Microsystems, Inc., filed a complaint with the European Commission alleging that Microsoft, a dominant player in the personal computer operating system market, withheld the necessary information for interoperability with its system. In February 2000, the European Commission initiated an investigation into Microsoft's alleged anticompetitive conduct, focusing on its behavior concerning the Windows Media Player product. In March 2004, the European Commission concluded its investigation and determined that Microsoft had abused its dominant position in the market. Microsoft was found to have refused to provide competitors in the workgroup server operating systems market with the essential interface information necessary for their products to effectively interoperate with Windows, thereby impeding competition. As a remedy, the European Commission mandated Microsoft to disclose comprehensive and accurate interface information within 120 days, thus facilitating interoperability with Windows, and to offer such information under reasonable terms. In June 2004, Microsoft appealed to the

42 *See IMS Health GmbH v. NDC Health GmbH* [2004] 2004-4(C) ECR I-5039.

43 *See Microsoft Corp. v. Commission of the European Communities* [2007] 2004-7/8(B) ECR II-2977.

EU's General Court, which upheld the European Commission's decision. In contrast to the four amended elements established in the case of IMS, the CJEU introduced additional refinements by incorporating the qualifications of 'dynamic competition' and 'effective competition', thereby enhancing the application of the essential facilities doctrine.

2. Regulation Through the Gatekeeper System of the DMA. — The failure of refusal-to-deal cases in the EU economic area since the CJEU established the new product rule in the *Microsoft Case* is possibly explained by the perceived lowering of the threshold for granting access requests under article 102 of the *Treaty on the Functioning of the European Union*. This adjustment may have caused ambiguity regarding the criteria for implementing the refusal-to-deal regime. This may, in turn, have made the European Commission reluctant to use the doctrine of essential facilities to promote the interoperability of digital platforms.[44] Conversely, in the ongoing evolution of antitrust enforcement in the digital economy, the European Commission has acknowledged that regulating tech giants' refusals to deal through competition law proceedings lacks efficiency and expediency, with most antitrust cases taking around three years to complete.[45] In this context, the EU has attempted to address platform interoperability by implementing alternative regulatory measures. In 2020, the European Commission published the DMA, an antitrust law designed to target digital platform enterprises.[46] This act establishes a new regulatory framework to address the monopolistic behaviors displayed by major digital platforms with entrenched market dominance.

The DMA promotes innovation, equity, and competition in digital markets by nurturing innovation within digital sectors and reshaping the platform ecosystem. Further, it seeks to shift focus away from short-term interests and maintain an open market conducive to long-term sustainability in order to promote competitiveness within the digital marketplace.[47] The DMA introduces the innovative concept of 'gatekeeper' platforms and establishes quantifiable metrics for identifying providers of 'core platform services' as gatekeepers. These quantifiable indicators are used to determine

44 *See* Inge Graef, *Rethinking the Essential Facilities Doctrine for the EU Digital Economy*, 53(1) Revue Juridique Themis 50 (2019).

45 *See* Friso Bostoen, *Understanding the Digital Markets Act*, 68(2) Antitrust Bulletin 271-272 (2023).

46 *See* Zhang Zhian & Li Hui, *Global Comparison of Anti-Monopoly on Internet Platforms and Its Path of Governance in China*, 2 News and Writing 85 (2021).

47 *See* Pierre Larouche & Alexandre de Streel, *The European Digital Markets Act: A Revolution Grounded on Traditions*, 12(7) Journal of European Competition Law & Practice 551 (2021).

whether a platform is a gatekeeper in the digital ecosystem.[48] This operational approach is more streamlined than the previous complex process of defining the relevant market and assessing elements such as market dominance. Providers of 'core platform services' are subject to specific obligations and responsibilities if they meet the criteria of a 'gatekeeper'. The DMA lists 18 platform obligations that 'gatekeepers' must follow, providing platforms with a clear understanding of their roles and responsibilities in the market, reducing ambiguity in identifying abusive behavior, and minimizing discretion between the platform and the judiciary. Regarding interoperability, article 6(7) of the DMA specifies the following: 'The gatekeeper shall allow providers of services and providers of hardware, free of charge, effective interoperability with, and access for the purposes of interoperability to, the same hardware and software features accessed or controlled via the operating system or virtual assistant listed in the designation decision pursuant to article 3(9) as are available to services or hardware provided by the gatekeeper. Furthermore, the gatekeeper shall allow business users and alternative providers of services provided together with, or in support of, core platform services, free of charge, effective interoperability with, and access for the purposes of interoperability to, the same operating system, hardware or software features, regardless of whether those features are part of the operating system, as are available to, or used by, that gatekeeper when providing such services. The gatekeeper shall not be prevented from taking strictly necessary and proportionate measures to ensure that interoperability does not compromise the integrity of the operating system, virtual assistant, hardware, or software features provided by the gatekeeper, provided that such measures are duly justified by the gatekeeper.'[49]

IV. SPECIFIC PROPOSALS TO PROMOTE ANTITRUST INTEROPERABILITY REMEDIES IN CHINA'S DIGITAL ECONOMY

Owing to differences in legal traditions and core principles, major jurisdictions have adopted different approaches to antitrust interoperability

48 The European Commission has established three major quantitative indicators in the *Digital Markets Act*, and providers of core platform services that meet all three conditions are generally defined as 'gatekeepers': (a) as regards paragraph 1, point (a), where it achieves an annual Union turnover equal to or above EUR 7.5 billion in each of the last three financial years, or where its average market capitalization or its equivalent fair market value amounted to at least EUR 75 billion in the last financial year, and it provides the same core platform service in at least three Member States; (b) as regards paragraph 1, point (b), where it provides a core platform service that in the last financial year has at least 45 million monthly active end users established or located in the Union and at least 10,000 yearly active business users established in the Union, identified and calculated in accordance with the methodology and indicators set out in the Annex; (c) as regards paragraph 1, point (c), where the thresholds in point (b) of this paragraph were met in each of the last three financial years. *Supra* note 11, article 3.

49 *Supra* note 12, article 6(7).

remedies for digital platforms. China has largely abandoned efforts to address interoperability concerns through mechanisms such as the DMA under its existing regulatory framework. Therefore, antitrust interoperability remedies have a stronger policy support and a more solid legal foundation in China. Progress in this area depends heavily on a comprehensive investigation of case-specific facts and an analysis of the corresponding legal principles.

A. Comprehensive Evaluation of Harms Resulting from Interoperability Denials in Market Competition

According to the traditional theories of competitive harm, a firm may increase the cost of a product by excluding or limiting competition, which can harm consumer welfare.[50] Nevertheless, digital platforms are characterized by zero-price competition, cross-border competition, and dynamic competition, which makes it difficult to detect the blocking effect or analyze the harmful effects of price increases on consumer welfare. To accurately evaluate the impact of interoperability refusal on competition exclusion and restraint, it is important to consider not only traditional theories of competition harm but also the double-round monopoly spillover effect on cross-market competition. In addition, it is necessary to move beyond the price-centric mechanism to assess harm to consumer welfare.

1. Emphasis on Double-Round Spillovers in Cross-Market Competition. — The analysis shows that digital platforms use walled gardens as strategic tools to create enclosed ecosystems, preventing competitors from developing substitute products or services and impeding potential competitors from establishing their position in the market. This strategic maneuver creates significant obstacles to entry for other platforms and establishes horizontal barriers, thus directly reducing competition within relevant markets and indirectly harming consumer interests. In addition, digital platforms use their strong appeal and user retention to gain advantages in new areas through leverage and cross-network effects. This allows them to expand their monopolistic foothold into other sectors, leading to a subsequent phase of monopoly and appropriation of monopoly gains. However, this behavior poses a competitive threat to other independent markets. It is important to highlight the anticompetitive effects of vertical spillovers that result from platform market power across markets. The leverage theory can help identify

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50 *See* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE, at 101-104 (West Academic Publishing, 2015).

the competitive harm of such conduct.[51] The misuse of leverage occurs when a platform enterprise attempts to expand its dominance into adjacent independent markets. In the case of *Epic Games v. Apple*, Epic noted that numerous consumers and application developers were trapped within the iOS ecosystem, highlighting Apple's gradual creation of its walled garden by restricting competitors over time. Apple's App Store can impose a 30 percent commission on software developers.[52] In the *Google Shopping Case*, the Google search engine served as a gateway to the Internet, holding a 90 percent market share in the general search engine services market. Google exploited its dominant position to exclude competitors in the comparison-shopping product market, which allowed Google to extend its dominance from the general search engine services market into the comparison-shopping market, thereby increasing its competitive influence across markets.[53] Furthermore, the digital industry operates in a rapidly evolving and uncertain landscape, which can engender an excessively concerned or irrationally fearful perspective regarding imminent disruptive innovations. A platform may refuse to share its assets with firms that are not yet direct competitors because of strategic intentions to enter a downstream market (future offensive leverage) or out of concern that a demander may pose a threat to its operations (defensive leverage). Therefore, the decision to refrain from participating in transactions may not always be considered exploitative but rather exclusionary, particularly if the platform is not currently involved in the downstream market.[54] In practice, leveraging appears to be successful only in a limited set of circumstances: (i) the dominant position must be practically unassailable; (ii) the services or products involved must be crucial for market access or account for a substantial part of the value of the downstream products or services; and (iii) the markets must be sufficiently interrelated to ensure acceptance from end users when the dominant undertaking tries to improve its position by nudging them in the direction of its services.[55]

2. Dismantling the Price-Centric Mechanism for Measuring Consumer

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51 *See* Yuan Bo, *Justification and Approach to Compulsory Sharing of 'Essential Data' Under the Anti-Monopoly Law*, 3 Oriental Law 157 (2023).

52 *See Epic Games, Incorporated v. Apple, Incorporated* [2023] 73 F.4th 785.

53 *See* CHRISTIAN BERGQVIST, GOOGLE SHOPPING AND SELF-FAVORING AS A SEPARATE ABUSE, at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4689773 (Last visited on April 28, 2025).

54 *See* INGE GRAEF, THOMAS TOMBAL & ALEXANDRE DE STREEL, LIMITS AND ENABLERS OF DATA SHARING: AN ANALYTICAL FRAMEWORK FOR EU COMPETITION, at https://ssrn.com/abstract=3494212 (Last visited on April 28, 2025).

55 *See* CHRISTIAN BERGQVIST & ELISA FAUSTINELLI, LEVERAGING CONDUCTS IN THE DIGITAL ECONOMY: A COMPETITION AND REGULATORY PERSPECTIVE, at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4148872 (Last visited on April 28, 2025).

Interests. — Platform-blocking behavior ultimately harms consumer welfare. Antitrust authorities have become entrenched in assessing consumer interests solely based on pricing.[56] However, the zero-price dynamics of the platform economy present a formidable challenge to this approach. Therefore, it is imperative to move beyond the price-centric approach for measuring consumer interests and consider factors such as hidden costs, independent choices, and trading opportunities for consumers while considering the unique characteristics of digital platforms.

First, the hidden costs incurred by consumers should be included in the assessment of user costs, which encompass factors such as user data, attention, and time. Zero-priced products on digital platforms are compensated with users' attention and data as payment. Platforms concentrate users' attention by refusing interoperability, thereby maximizing the value of attention. Concurrently, user data are collected and analyzed by using big data and cloud-computing techniques. The extended operation time attributable to the lack of interoperability, such as with respect to copying passwords or scanning QR codes, unnecessarily prolongs the process, wasting valuable and scarce resources of user time. This leads to increased user costs and unwarranted depletion of social resources.

Second, the framework for analyzing harm to consumer interests may embed the principle of the user's independent choice. This principle entails the right of consumers to actively select and disseminate specific products or links. From a theoretical standpoint, market competition facilitates and encourages consumers to choose products or services actively. Therefore, restrictions imposed by platforms that refuse to cooperate may limit consumers' right to choose legitimate products or links. Doing so may unreasonably curb consumer choice, undermine the healthy dynamics of market competition, and directly indicate anticompetitive behavior. From a practical standpoint, the refusal to interoperate, such as via link blocking and closed API policies, undermines the multihoming that should characterize the digital economy and significantly constrains users' right to autonomous choice within a platform. Moreover, the refusal of interoperability creates high entry barriers for potential competitors, thereby affecting the competitive dynamics between horizontal and vertical players. This ultimately influences consumers through transmission effects and indirectly compromises consumer interests.

Third, trading opportunities should be considered as being in the interest

56 *See* Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127(4) University of Pennsylvania Law Review 932 (1979).

of consumers. Under traditional market conditions, firms and consumers typically engage in indirect linear contact. However, the platform economy of the Internet era has increased direct transactions between consumers and enterprises. Consequently, platform rules and behaviors have become essential to consumer interests. Denial of interoperability can have a detrimental impact on competition, ultimately leading to reduced consumer benefits. Currently, end users face challenges in litigating against platforms in China due to insufficient evidence, both in proving market dominance and in assessing damage. Therefore, trading opportunities should be considered when evaluating consumer interests. Concerted efforts can be made to gauge the harm to consumer interests from diverse perspectives.

3. Cautious Assessment of the Damage to Technological and Industrial Innovation Caused by Interoperability Denials. — Innovation is crucial for platform companies to enhance their market positions and advance the digital economy. In the age of big data, leading Internet enterprises possess vast repositories of data resources that provide them with innovation tools that early monopolies such as Microsoft and IBM lacked. Historically, monopolies have had limited insights into the actions or intentions of their customers and competitors. Mega-platforms, which are armed with extensive data resources, have a significant advantage over other platforms in identifying competitive threats. This advantage is not available to all platforms.[57] Therefore, it is important to be cautious about platform firms that impede technological and industrial innovation by refusing to interoperate, which can eliminate potential competitors. By refusing interoperability, digital platforms can stifle the innovation drive of small and medium-sized enterprises (SMEs). Digital platforms are essential channels for SMEs and affiliated application developers to connect with users and transform product and service value. SMEs rely heavily on access to the platform's data market for traffic entry. The refusal of interoperability deprives SMEs of the opportunity to acquire user traffic and data, resulting in an imbalance in traffic resources and impeding their ability to implement disruptive innovation. Additionally, such refusal impedes demand-side innovation, which is a fundamental aspect of innovation driven by economic and user demand in the modern Internet market. Consumers experience this innovation while using products or services.[58] This innovation is driven by increasing time constraints on the public, which has spurred demand for efficient and convenient transportation

57 *See* Maurice E. Stucke, *Should We Be Concerned About Data-Opolies?*, 2(2) Georgetown Law Technology Review 305 (2018).

58 *See* Yin Jiguo, *Antitrust Law Regulation on Banned Behavior of Internet Platform*, 4 Modern Law 147 (2021).

solutions. The traditional taxi industry has struggled to meet this demand adequately. Thus, the rise of ride-hailing services, facilitated by digital platforms, is a manifestation of demand-side innovation. Demand-side innovation is an essential force that drives the evolution of the Internet economy. However, platforms that refuse to allow interoperability risk suppressing new enterprises and their potential competitors. This may prevent users from freely selecting new products or services based on their preferences, which not only stifles demand-side innovation in the Internet industry but also undermines the overall innovativeness of the sector. Finally, refusing to allow interoperability solely for self-interest without justifiable grounds reduces the innovation efficiency of other companies. This practice limits innovation and potential competition, disrupts the fair competitive landscape of the market, and promotes closed platform ecosystems, thereby reducing the innovation dynamism of Internet technology interoperability. Continued refusal for interoperability strengthens platform monopolies, solidifies the oligopoly structure, restricts social welfare, and hinders national development driven by innovation.

B. Full Consideration of Defenses to the Denial of Interoperability Raised by Digital Platforms

To regulate refusal for digital interoperability through antitrust law, the traditional approach is to analyze the abuse of market dominance. This approach typically involves several sequential steps: defining the relevant market, assessing market dominance, analyzing competitive harm, and demonstrating unjustified grounds for refusal to interoperate.[59] According to the ruling in *Intergraph Corp. v. Intel Corp.*,[60] the right to refuse to cooperate is valid only if there is legitimate competitive justification, which plays a crucial role in determining the legality of refusals to deal. Article 22(1) of the *Anti-Monopoly Law of China* specifies that 'without justifiable reasons' is a key element constituting a refusal to deal. Additionally, article 22 of the *Provisions on Prohibiting Abuse of Dominant Market Positions* issued by the SAMR outlines various factors that should be considered while evaluating the 'justification'. Article 14 of the *Guidelines of the Anti-Monopoly Commission of the State Council for Anti-Monopoly in the Field of Platform Economy* enumerates several justifiable reasons for refusal to deal. Considering the

59 *See* Yuan Bo, *Seven Misunderstandings in the Analysis of Antitrust Law in the Internet and Solutions: Focusing on the 'WeChat Block Lark' Event*, 1 Competition Policy Research 50 (2020).

60 *See Intergraph Corp. v. Intel Corp.* [1998] 3 F. Supp. 2d 1255.

provisions outlined above and relevant judicial precedents, the justification for refusal to interoperate can be analyzed from three perspectives. This analysis achieves a balance between the multiple values and objectives of antitrust law and the harmonization of antitrust regulations with other policies and rules.[61]

1. Defenses Raised by Platforms on the Basis That a Refusal to Deal Is an Important Element of Operational Autonomy. — Selecting a market strategy is a crucial aspect of business autonomy and a core interest for enterprises. This selection is influenced by various factors, including legal policies, market conditions, product attributes, and technological trends. The open-platform model has become the prevailing paradigm in the Internet industry and has been embraced by leading enterprises such as Google, Apple, Amazon, Tencent, and Alibaba. In a highly competitive and ever-changing market, Internet giants have set themselves apart through continuous innovation and long-term investments, marked by trial and error. Once they gain a significant user base and market advantage, enterprises can adopt open, closed, or hybrid market strategies. Enterprises must implement platform governance to ensure security, stability, and fair competition within a platform ecosystem. The platform economy model has facilitated the growth of eco-enterprises and improved user experiences. However, it has also led to illicit and criminal activities such as privacy violations, intellectual property infringements, illegal fundraising, rumor spreading, and threats to platform data security and core assets. Enterprises have the responsibility and duty to govern their platform ecosystems by leveraging platform technology, data, and other capabilities to establish a multiparty governance framework. This framework should involve government coordination, platform autonomy, third-party collaboration, and public participation. To leverage the commercial and social potential of open platforms, enterprises must be free to select platform partners based on objective measures such as access standards, qualification reviews, security assessments, and restricted access.

In antitrust cases, if a platform enterprise argues that its refusal to deal is crucial to managerial independence, the court must scrutinize and evaluate this assertion judiciously. In the case of *Xu Shuqing v. Tencent*, the Supreme People's Court emphasized the importance of regulating the behavior of platform users to prevent inappropriate actions with potential negative effects on the platform as a whole. This benefits the platform operator and users. Consequently, platform operators are free to establish reasonable

61 *See* Li Yang & Yuan Zhenzong, *Determination of Abuse of Dominant Position of Internet Platform Under the Background of the Digital Economy*, 4 Intellectual Property 101 (2023).

rules for platform management and discipline to achieve effective platform governance. Therefore, the Supreme People's Court determined that Tencent was justified in rejecting *Xu Shuqing*'s emoji pack submission on the grounds of noncompliance with Tencent's stipulated submission requirements and that such grounds constituted justifiable reasons.[62] Foreign courts have consistently upheld the right of online platforms to establish regulatory rules from the perspective of extraterritorial antitrust jurisprudence. For example, in *Sambreel v. Facebook*,[63] the US District Court for the Southern District of California cited cases such as *LiveUniverse v. MySpace*[64] and *Verizon v. Trinko*[65] to justify Facebook's control over the use of its open platform by application developers and the way users interact with its social network. The court ruled that Facebook had the right to control the content on its website by refusing to engage with Sambreel and demanding the removal of some of its other products before permitting their use. If the counterparty breaches the platform's rules and a substantial rationale exists for addressing such breaches, refusing interoperability can have a considerable positive impact that outweighs any negative consequences. In such a case, it can be acknowledged that the justification is established.

2. Defenses Raised by Platforms on the Basis that a Refusal to Deal Is to Safeguard Users' Personal Information. — Whether it pertains to social networking sites, search engines, or e-commerce, digital platforms flourish by collecting and analyzing consumers' personal information in violation of their privacy. Consumers' personal information and privacy, which serve as vital business resources for digital platforms, are progressively integrated into the analytical framework of antitrust law.[66] For instance, the implementation of Apple's App Tracking Transparency feature within its privacy policy sparked an antitrust lawsuit initiated by German online advertisers.[67] This function allows Apple users to choose whether to share their personal information. If users opt out of allowing their advertising identifiers to be tracked, third-party advertisers will be unable to use other tracking methods. Consequently, this alteration to the privacy policy significantly affects the profitability of app developers who sell their products

62 *See* LI QIAOCHU, *supra* note 22.

63 *See Sambreel Holdings LLC v. Facebook, Incorporated* [2012] 906 F. Supp. 2d 1070.

64 *Supra* note 35.

65 *See LiveUniverse, Incorporated v. Myspace, Incorporated* [2008] 304 F. App'x 554.

66 *See* Zhou Wei & Huang Weiyi, *Contradiction and Relief Between Anti-Monopoly Law and Privacy Protection Law*, 1 Journal of Huazhong University of Science and Technology (Social Science Edition) 98 (2023).

67 *See* GERMANY LAUNCHES ANTITRUST PROBE INTO APPLE POINTING TO IOS, at https://m.mp.oeeee.com/oe/BAAFRD000020210622509764.html (Last visited on April 28, 2025).

on Apple devices. It also curtails competitors' efficacy in targeting users and diminishes the efficacy of their advertisements. This change makes it difficult for app developers to reach their target audiences. Apple states that the new privacy policy is designed to comply with the *EU's General Data Protection Regulation* and allow users more control over their personal information, thereby enhancing data protection. However, it remains unclear whether the changes to privacy policies violate the law. A party cannot justifiably block competitors under the guise of protecting users' rights and interests because such an action lacks subjective good faith and legitimate purposes. In the *hiQ v. LinkedIn Case*, the district court stated that although a defendant may want to safeguard user privacy and reliance on the platform, their refusal to access a downstream market instead of pursuing the stated purpose may negate claims of good faith.[68] However, in specific cases, a defendant may provide compelling evidence that their refusal to deal is driven by the imperative of safeguarding users' information and privacy and that this stance fosters competition within the market. Such a defense may be deemed justified. However, if the emphasis on privacy is considered distinct from competitive dynamics, it may not fall within the purview of antitrust laws.[69] In *Epic Games v. Apple*, the district court recognized Apple's defense based on data privacy and security concerns, justifying its limitations on consumer choice regarding payment methods. Apple argued that this practice improves data privacy and end-user security within the App Store, thus promoting a competitive environment between Apple and other mobile device operating systems.[70] By establishing a privacy-centric rationale, Apple successfully avoided antitrust culpability. This case sets a precedent in which competition based on protecting personal information and privacy is considered a justifiable defense.

3. Defenses Raised by Platforms on the Basis That a Refusal to Deal Is Necessary to Preserve the Incentives of Innovation. — In Chinese legislation, the impact of technological innovation is recognized as a legitimate reason for refusal to deal. The significance of innovation is highlighted by its inclusion among the value objectives outlined in article 1 of the *Anti-Monopoly Law of China*. Furthermore, the *EU's Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings* notes

68 *See hiQ Labs, Incorporated v. LinkedIn Corporation* [2022] 31 F. 4th 1180.

69 *See* Erika Douglas, *Data Privacy as a Procompetitive Justification: Antitrust Law and Economic Analysis*, 97(5) Notre Dame L. Rev. Reflection 463 (2022).

70 *Supra* note 52.

the following: 'The Commission, therefore, considers that intervention on competition law grounds requires careful consideration where the application of article 82 would lead to the imposition of an obligation to supply on the dominant undertaking. The existence of such an obligation—even for a fair remuneration—may undermine undertakings' incentives to invest and innovate and, thereby, possibly harm consumers.'[71]

In cases in which a dominant operator refuses to interoperate, the operator may argue that their actions are not intended as anticompetitive behavior but rather as a form of product or service improvement through innovation, thereby enhancing competition. Using the *Google Shopping Case*[72] as an example, the FTC considered whether Google's modifications to its search results were intended to exclude competitors and hinder competition or whether they were intended to improve the quality of its search service and enhance user experience. After a thorough investigation, Google's changes were found to adhere to the primary objective of promptly addressing and better catering to the search requirements of its users by providing them with directly relevant information. The FTC concluded that Google's presentation of its content could improve the overall quality of its search service. Although it could disadvantage competitors, the FTC determined that this measure did not harm competition or consumers.[73] Hence, it did not constitute an abuse of dominance. Enterprises may disguise exclusionary and restrictive practices as 'innovation', a phenomenon that opposes the essence of technological progress and is often referred to as 'predatory innovation'. Therefore, antitrust law should focus on protecting substantial innovation while regulating predatory innovation that obstructs competition.[74] In this context, substantive innovation alone may justify interventions under antitrust regulations.

V. CONCLUSION

The increasing competition in China's digital economy has made technology-giants reluctant to grant access to their core resources or facilities to competitors or downstream entities. This has brought significant attention to the problem of antitrust interoperability remedies for digital

71 *See* European Commission, *Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct*, February 2009, at 7, 75.

72 *See Commission Decision of 27 June, 2017, relating to proceedings under article 102 of the Treaty on the Functioning of the European Union and article 54 of the Agreement on the European Economic Area*.

73 *Id*.

74 *See* Wang Jiajia, *The Anti-Monopoly Regulation of Predatory Innovation*, 6 Electronics Intellectual Property 71 (2020).

platforms, which is a crucial challenge in the development and regulation of the digital economy. China's statutes provide a legal framework for addressing the antitrust interoperability related to digital platforms. Based on an international comparison of antitrust interoperability remedies for digital platforms, despite certain challenges in fact-finding and legal application, these measures remain crucial for promoting interoperability. Overall, the implementation of such remedies should adhere to the principle of balancing development and regulation, addressing exclusionary and restrictive practices of leading platforms that refuse to interoperate, while preventing excessive regulation from undermining market efficiency and innovation. In practice, Chinese regulators can evaluate the impact of digital platforms' refusal to interoperate on market competition by analyzing the specific effects of such conduct across relevant markets and assessing its adverse effects on consumers' privacy, security, user experience, and technological innovation. In particular, it is imperative to carefully evaluate the justification provided for digital platforms' refusal of the interoperability request, which is essential for safeguarding the production and operational order of the platform, protecting user data, and maintaining enterprises' incentives to innovate.

(Edited by Li Jiesi)

中国数字平台反垄断互操作救济的适用及其限度

内容提要 中国数字平台反垄断互操作问题引起广泛关注，成为促进数字经济高质量发展的重要议题。纵观国内外相关立法和实践，拒绝交易制度是反垄断互操作救济的法律依据，但其具体实施还面临诸多亟待解决的问题，包括竞争损害评估、正当理由抗辩等。为了更好地推进数字平台反垄断互操作救济的实施，需全面评估互操作对跨市场竞争、消费者福利、技术和商业创新的影响，并充分考量数字平台提出的个人隐私保护、创新和投资激励等抗辩理由。