

# *The Dilemma and Practice of Anti-monopoly Law Regulation in the Digital Economy Era*

Yiwen Wang<sup>1,a,\*</sup>

<sup>1</sup>*School of Social and Public Administration, East China University of Science and Technology, Shanghai, 200237, China*

*a. 18221739731@163.com*

*\*corresponding author*

**Abstract:** The digital economy has emerged as a significant catalyst for worldwide economic expansion. Nevertheless, as the digital economy continues to flourish, the issue of monopoly it brings is becoming more and more important. Certain online platforms engage in predatory pricing and discriminatory practices, undermining fair competition in the market, harming consumer rights and interests, and impeding the healthy growth of the economy. This paper uses the research methods of literature analysis and literature review to explore the theoretical and technical challenges encountered by the anti-monopoly law in the context of the digital economy era, and puts forward proper recommendations for improvement according to its limitations by analyzing the existing anti-monopoly case practices. This study aims to identify effective regulatory measures and recommendations that can offer robust legal protection for the sustainable growth of the digital economy. At the same time, it is anticipated that this study will promote the improvement and development of the anti-monopoly law in the field of digital economy, and contribute wisdom and strength to the construction of a more fair, open and orderly market competition environment.

**Keywords:** Digital economy era, anti-monopoly law, data monopoly, anti-monopoly practice

## 1. Introduction

In the digital economy era, data holds immense value and is used as a new factor of production. However, while promoting the development of digital economy, data has also triggered people's concerns about the issue of "data monopoly". The problems of "big data discriminatory pricing" and the consolidation of platforms have become more noticeable, resulting in the disruption of fair market competition, impeding innovation, and compromising consumer rights and interests. This situation is detrimental to the advancement of the digital economy. The anti-monopoly law is currently confronted with the novel issues of effectively regulating the monopolistic control of dynamic data and upholding a fair competitive environment in the market.

Scholars argue that in the digital economy, where markets have zero prices, data, and innovation play a crucial role in defining market boundaries. Therefore, enforcement of anti-monopoly laws should focus on improving coordination between data interoperability and privacy protection regulations [1]. Chen Bing and Xu Wenxian suggest that regulating the abuse of market dominance in the platform economy should shift from cautious regulation to inclusive, open, and cooperative

regulation. This approach aims to achieve fair competition and promote innovation in the platform economy [2].

This paper primarily utilizes the research methodology of literature review and literature analysis to organize and elucidate the fundamental principles and objectives of the anti-monopoly law. It examines the challenges encountered by the traditional anti-monopoly law in the digital economy era and proposes recommendations and measures for enhancing the anti-monopoly law in terms of market definition and algorithm supervision.

Currently, the digital economy has emerged as a crucial catalyst for global economic growth. Monopolistic behavior is a barrier to innovation and technical advancement, and has a negative impact on the long-term growth of the digital economy. Studying the regulation challenges of anti-monopoly law in the digital era helps to gain a thorough understanding of the nature and negative impact of monopolistic behaviors. This knowledge provides theoretical background for the development of effective anti-monopoly policies. These policies aim to ensure fair competition in the market, protect consumer rights, and promote the sustainable growth of the digital economy.

## **2. Basic principles and dilemmas**

### **2.1. Basic Principles and Objectives**

The world's first anti-monopoly law, the Sherman Act, was born in the United States in 1890, aiming to oppose the high concentration of market power and promote market diversity and market accessibility. Due to the short development history of market economy, China has absorbed the experience of developed countries in the theoretical basis and legislation of anti-monopoly, and has the characteristics of both the mainland law system and the anti-monopoly law system of the United States. Article 1 of China's Anti-Monopoly Law states that the purpose of this law is to prevent monopoly, promote fair competition, safeguard the rights and interests of businesses, consumers, and the public, and ensure the healthy growth of the socialist market economy[3].” In the specific judicial practice, deeply influenced by the economic analysis method of the Chicago School in the United States, takes consumer welfare as the main goal, and using the price theory analysis method to determine whether it damage the competitive order and occupy the dominant position [4].

### **2.2. Challenges in the Era of digital economy**

In the digital economy era, big data plays a crucial role, and the collection, analysis and use of big data has become a new form of business. The platform operators adjust the price based on an analysis of consumers' payment capacity using big data, thereby strengthening the operators' competitive edge in the market. The problem of "big data discriminatory pricing" arises accordingly, which causes great damage to the rights and interests of consumers.

Moreover, in the digital economy age, several Internet firms have successfully infiltrated every part of customers' economic lives due to their exceptional capacity to integrate various services. Alibaba's e-commerce platforms, including Taobao, Xianyu, Youku Tudou, Aliyun, Flying Travel, Dingding, etc., integrates several activities such as shopping, entertainment, sports, education, tourism and social networking. These platforms go beyond traditional market entities and aim to generate economic efficiency and promote consumer welfare[5].

Hence, within the framework of the digital economy era, it becomes challenging for the conventional anti-monopoly legislation to determine whether the control of extensive data constitutes an abuse of the market, and it is equally challenging to ascertain whether dominant players in the online realm, such as Alibaba, possess a monopoly according to traditional notions.

## **2.3. The legal regulation dilemma for data monopoly**

### **2.3.1. Definition of market share**

In the process of traditional anti-monopoly law theory and practice, the dominant school of thought has consistently been centered around “price theory.” This theory holds that the anti-monopoly law is to regulate the damage to consumers, and the identification of the damage to consumers can be analyzed by quantifiable data such as the rise and fall of the price, the total amount of sales, and the amount that consumers actually pay for the goods.

The value of data in the digital economy often lies not in its direct sales revenue, but in the potential commercial value and competitive advantage it can bring, which is reflected in the user frequency, data scale, platform activity and other aspects. The traditional definition of market share is usually measured based on static and unilateral sales or sales volume, which is powerless to do dynamic and multilateral damage, let alone unable to identify that potentially hinder competition and slow down innovation [6-7]. In addition, operators in the Internet economy often introduce complex products to gain a competitive edge, resulting in a product market that exhibits overlapping functionalities and indistinct borders [8].

### **2.3.2. proof of data monopoly**

First, the algorithm's collusion is hidden, making it difficult to monitor its collusion behavior. On the one hand, the algorithm conspired to realize the coordination of price and production among the market subjects through the algorithm code, which is difficult to obtain and analyze by the outside world. It is also difficult for ordinary consumers and ordinary market players to understand the operation mechanism and decision logic of the algorithm, which are difficult to detect and identify. On the other hand, the algorithm has a powerful autonomous learning function and can automatically adjust the collusion strategies to maximize the interests of participants. This kind of automatic optimization may not be in an artificial setting, and the operator himself may not realize the autonomous learning ability of the algorithm, and it is difficult to identify and pursue the algorithm because of the lack of subjective monopoly intention of the algorithm.

Secondly, the liquidity and sharing of data promote the cross-border flow of data in multiple industries and fields and promote the generation of super Internet enterprises. For example, Alibaba, as mentioned above, integrates the upstream and downstream resources of the industrial chain through data to build an ecosystem that covers all aspects of economic life. These massive and high-dimensional data bring new challenges to analysis technology.

## **3. Antitrust practices in the digital economy era**

### **3.1. Antitrust investigation and litigation in the digital platform market**

At present, European and American countries have launched a number of investigations and lawsuits against the monopoly phenomenon of digital platforms. Regulators such as the Justice Department and the Federal Trade Commission have launched in-depth antitrust investigations and hearings into large digital platform companies such as Apple, Google, Amazon and Meta (former Facebook). The surveys involve the marketing behavior of digital platforms in search engines, online advertising, e-commerce, app stores, and more. In October 2020, the U. S. Justice Department filed a lawsuit against Google, accusing it of being an alleged monopoly in the Internet search and advertising markets. An investigation into the Justice Department determined that Google abused its technological advantages by preinstalling its own services in the Android

operating system to delete, harming the interests of industry competitors and consumers. The lawsuit is also seen as the largest antitrust lawsuit by the U. S. government in 20 years.

China's regulatory authorities have also conducted in-depth investigations into the digital platform market, and formulated corresponding laws and regulations to effectively crack down on illegal activities such as abuse of dominant market position and elimination and restriction of competition. In 2021, the Anti-monopoly Committee of the State Council issued the Anti-monopoly Guidelines in the Field of Platform Economy, and Article 17 "differential treatment" clearly states that "big data discriminatory pricing" may constitute the abuse of dominant market position differential treatment [9]. In January 2022, the four departments jointly issued the "Regulations on the Recommendation and Management of Internet Information Service Algorithm," prohibiting "big data discriminatory pricing" in the transaction price and other trading conditions [10].

### **3.2. Measures to protect data privacy and personal rights and interests**

In June 2020, a German federal court ruled [11] on allegations that Facebook had abused its dominant market position and illegally collected user data. The German Federal Cartel Bureau determined that Facebook, through its user agreement, forced users to agree to collect and use data on other platforms (including WhatsApp, Instagram and third-party network platforms or mobile APP embedded with Facebook plug-ins), which constituted the German Facebook case. For the first time, the personal information protection law and the anti-monopoly law were connected through the entry point of exploitative abuse, effectively protecting the legitimate rights and interests of users of the digital platform.

### **3.3. Effectiveness and limitations of anti-monopoly practice**

It is positive that, in the digital economy era, the abuse of digital platform enterprises provides a fairer playing field for SMEs, helps stimulate the innovation vitality of market players and promotes the healthy development of the digital economy. At the same time, the crackdown on unfair pricing and supply restrictions effectively protects the legitimate rights and interests of consumers, enabling them to provide more diversified and high-quality products and services.

Nevertheless, the expenses associated with conducting antitrust investigations and gathering evidence are substantial, requiring regulators to allocate significant human and material resources in order to establish its presence. Conducting complex empirical research requires a significant amount of human resources and materials [12]. Additionally, the majority of present antitrust supervision focuses on regulating events that have already occurred, resulting in minimal influence on law enforcement. The concept of timing also poses difficulties. The regulation of post-event activities not only falls behind in terms of timing, but is also characterized by a more passive approach in terms of methods [13]. Operators may see the penalty of violating the law as being relatively low and the expense of law enforcement as being high, leading them to take risky actions. However, this behavior is not beneficial for sustaining a competitive order in the digital platform market.

## **4. Improvement of anti-monopoly law regulation in the digital economy era**

Based on the dynamic, multilateral and diversified digital economy platform, monopoly supervision should also keep up with the development of The Times and adjust and improve it over time.

Market definition is the first step in judging whether there is a monopoly. The evaluation of the traditional price theory is no longer applicable, and market forces should be comprehensively evaluated from multiple dimensions such as data scale, data quality and data liquidity. For example, the larger the amount of data a platform has, the greater its market influence is, and at the same time,

if the data is exclusive, which is difficult for other competitors to obtain or copy, then the monopoly of the platform in the market is more obvious. In order to more accurately judge the possible monopolistic behavior of the digital platform subject, we also need to adopt diversified and dynamic definition methods that not only pay attention to the static market structure but also pay close attention to the dynamic changes of the market, including the impact of technological innovation, consumer behavior changes, and other factors on the market pattern.

Algorithms play an important role on digital platforms. It is like the "brain" of the platform, guiding the operation and decision-making of the platform. Nowadays, more and more operators rely on algorithms for automated decisions, which involve user experience, product recommendation, price making and many other aspects. In order to ensure fairness, transparency and compliance, operators using automated decision-making algorithms shall assume the obligation to explain the operation principle of the algorithm and its decision results.

At the same time, it is difficult to detect the backwardness of supervision means, so it is urgent to establish a special algorithm supervision department to conduct professional supervision on the utilization of operator algorithm technology, strengthen the coordination between relevant administrative departments, refine the supervision responsibilities, and improve the law enforcement basis. In addition, we should strengthen supervision over the application of algorithms involving public interests, life and health, and other important areas of property rights. The application of algorithms in these fields is directly related to the interests and security of the public. Once a problem arises, the consequences will be unimaginable. Therefore, we need to take stricter and more meticulous regulatory measures to ensure the compliance and security of the application of these algorithms.

## 5. Conclusion

This paper utilizes the research methods of literature review and literature analysis to summarize the challenges faced in analyzing the practice of data monopoly at this stage. It identifies the limitations of evidence cost and regulatory delays and suggests the adoption of diverse and dynamic market definition standards. Furthermore, it recommends the establishment of a specialized supervision department and the enhancement of cooperation among various administrative departments to implement rigorous supervision measures.

This study mostly relies on the process of literature analysis, however, it lacks empirical investigation and analysis. In the future, there will be an increase in comprehensive empirical study on the current state of anti-monopoly regulations and associated cases in China's digital economy platform.

Given the swift advancement of the digital economy and the global trend towards globalization, the role of anti-monopoly law in ensuring a fair competitive market, safeguarding consumer rights and interests, and promoting innovation has become increasingly significant. In the future, it is necessary to enhance antitrust law and establish stronger coordination and cooperation with data protection law, intellectual property law, and other related laws to construct a more comprehensive legal system for the digital economy.

## References

- [1] Middle of spring.(2023) *Research on the relevant market definition of digital economy platform. Studies on the Rule of Law*, 2:45-59
- [2] Chen Bing, Xu Wen.(2021) *The jurisprudence and practice of the abuse of dominant market position in the field of regulation platform economy. Study and Practice*, 2:87-96
- [3] *Article 1 of the Anti-Monopoly Law of the People's Republic of China: " This Law is formulated in order to prevent and stop monopoly behaviors, protect fair market competition, encourage innovation, improve the efficiency of*

*economic operation, safeguard the interests of consumers and social public interests, and promote the healthy development of the socialist market economy.”*

- [4] Wang Wei, Zhang Junjie.(2006) *On the legislative purpose of China's anti-monopoly law*. Hunan Social Science, 1:63-67
- [5] Guo Yonghui, Fan Huazhong.(2023) *Deconstruct and correction of anti-monopoly basis in the era of data economy — Based on the perspective of abuse of dominant market position in the field of big data*. Judicial Think Tank, 8 (01): 23-44
- [6] Sun Jin.(2021) *Anti-monopoly supervision of digital platform*. Social Sciences of China, 5:101-127 + 206-207
- [7] Ye canoe.(2023) *Multiple dimensions of platform economy related markets and their selection path — From the perspective of "Epic Games v. Apple"*. China price regulation and anti-monopoly, 7:52-56
- [8] Song Lijie, Lu Fan, Yang Shuangyu, Gao Bin.(2023) *Research on the regulation path of "killing" with big data*. China Price Regulation and Anti-monopoly, 12:37-39
- [9] Fan Xuefei, Tian Xiangyu.(2024) *Anti-monopoly regulation dilemma and path optimization of platform big data "killing"*. Competition Policy Research, 1:61-72
- [10] The Central People's Government of the People's Republic of China.(2022) *Internet information service algorithm recommendation management regulations*. [https://www.gov.cn/zhengce/2022-11/26/content\\_5728941.htm](https://www.gov.cn/zhengce/2022-11/26/content_5728941.htm)
- [11] Jiang Lin.(2020) *Facebook loses the case! German Supreme Court: abusing using dominant market position and illegally integrate platform data*. [https://www.sohu.com/a/403946022\\_161795](https://www.sohu.com/a/403946022_161795)
- [12] Yan Jianye, Zhang Yue.(2024) *Anti-monopoly regulation of digital platform economy: current situation, challenge and prospect*. Industrial Economic Review, 3:15
- [13] Sun Haitao, Zhou Qi Qi.(2023) *Analysis of the regulatory dilemma and sharing mechanism of platform data monopoly*. Jiangsu Social Science, 3:131-139 + 243