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Research on the Regulation Path of Internet Enterprise Monopoly Behavior

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Abstract: At present, China has entered a new era of data economy, data contains huge value. Data has become the most characteristic factor of production and the core driving force for economic transformation and development. However, with the continuous growth of Internet enterprises, the negative externality effect on the data market has gradually emerged. The expansion of duopoly behavior, the difficulty of explicit implicit data and algorithm monopoly agreement, and the ambiguity of market dominance of Internet enterprises have intensified the harm of Internet enterprises' monopoly behavior and potential structural risks. In order to solve this problem with a targeted analysis, the regulations on the restriction of monopolistic behavior in the EU' s Data Market Law and Germany' s Restrictive Competition Law are analyzed for reference. In order to better regulate the monopoly behavior of Internet enterprises in our country, this paper puts forward a series of institutional design schemes, including improving the data sharing mechanism, training a group of professional and technical data anti-monopoly law enforcement team, setting up the market dynamic monitoring mechanism, and creating the algorithm analysis and control mode, so as to gradually realize the effective constraints on the monopoly behavior of Internet enterprises.

Key words: Internet enterprise; Data monopoly behavior; Anti-monopoly

INTRODUCTION

In recent years, the emergence of Internet companies has become a general trend in the growth of the global data economy. Thanks to the leapfrog development of technology, the update of business model and the iterative upgrading of consumer services, many Internet enterprises have come to prominence quickly and gradually entered more industries and fields. In the international market, the Internet enterprise economy has become the focus of attention of all countries in the world, and its industrial form is constantly evolving and improving. With the rapid growth of the number of platform enterprises and the change of the competition pattern among platforms, the single-subject monopoly formed under the traditional market structure can no longer meet the requirements of the industrial expansion of Internet enterprises. The emerging Internet enterprises not only promote social progress, but also trigger the supervision problem of the monopoly phenomenon of platform economy. At present, anti-monopoly legislation of platform economy in our country lags behind, and has obvious deficiencies. In August 2019, The General Office of the State Council officially released a document entitled "Guiding Opinions on Promoting the Standardized and Healthy Development of Platform Economy"; In January 2020, the State Administration for Market Regulation (hereinafter referred to as the "State Administration for Market Regulation") published the draft amendment to the Anti-Monopoly Law of the People' s Republic of China (Draft for public Comments), which began to add relevant provisions on the basis for determining the market dominance of Internet operators. In November of the same year, the State and Municipal Regulatory Office published a document called "Anti-monopoly Guidelines on the platform Economy Sector (Draft)". The document makes it clear that the purpose of the guidelines is to prevent and curb monopolistic behaviors in the field of platform economy, strengthen and optimize the anti-monopoly supervision mechanism in the field of Internet platform economy, so as to safeguard the public interests of consumers and society, guarantee fair competition in the market, and promote the sustainable and healthy development of platform economy. On April 10 of the same year, the State Administration of Market Regulation issued the Written Decision on Administrative Penalty, which clearly pointed out that Alibaba Group had abused its dominant position in the market, infringed upon the legitimate rights and interests of platform operators, harmed the interests of consumers, and hindered the innovation and development of platform economy. As a result, the group was fined 4 per cent of its 2019 onshore sales in China, totalling 18.228 billion yuan. The fine is the largest ever imposed by China' s antimonopoly authority and marks an important moment in antitrust enforcement. In order to carry out "super regulation" of super platforms, we must deeply understand the logical reasons behind the economic monopoly behavior of Internet enterprises. At present, there are still many problems in the economic anti-monopoly regulation of Internet enterprises in our country, which need to be broken through theoretically and practically. This paper aims to provide effective regulation suggestions for the monopoly behavior of Internet enterprises in our country through in-depth analysis of the internal reasons of monopoly behavior, combined with the legislation and implementation status of other countries such as European Union and Germany.

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1. THE DILEMMA OF MONOPOLISTIC BEHAVIOR REGULATION OF INTERNET ENTERPRISES

1.1 It is Difficult to Express the Implied data and Algorithm Monopoly Agreement

Both implied data and algorithmic monopoly agreements are new monopoly forms developed on the basis of Internet technology. Compared with traditional monopoly agreements, implied data and algorithm monopoly agreements are more secretive in reaching or maintaining, and show no signs of monopoly agreement at all externally. This feature makes it more difficult for antitrust law enforcement agencies to detect the existence of implied data and algorithmic monopoly agreements, mainly reflected in the following two aspects. One is the concealment of implied data and algorithmic monopoly agreements themselves. In the traditional market environment, the formation of horizontal monopoly agreements often needs to depend on the structural conditions of the traditional market. Typically, such monopolistic agreements exist only in market structures with fewer competitors, so that the monopolistic parties can effectively reach an agreement that can exclude or impede competition. On the one hand, horizontal monopoly agreement is an emerging form of technology based on network technology, so it is easier to produce and can have a huge impact on the traditional market structure. However, in the case of implied data and algorithmic monopoly agreements, the dependence of such monopoly agreements on market structure is significantly reduced due to the adoption of data and algorithms of Internet enterprises. On the other hand, the implied data and algorithmic monopoly agreements did not change the market structure, but in some cases the effect became more significant. Implied data and algorithmic monopoly agreements are not only limited to markets with data monopoly, but also exist in other marginal markets, which undoubtedly increases the work burden of regulators. Especially in the implied data and algorithmic monopoly agreements in which a large number of Internet companies participate, the greater the number of participants, the more difficult it is for antitrust enforcement agencies to detect abnormal changes in market structure. Therefore, it is not sufficient to initiate antitrust review against implied data and algorithmic monopoly agreements simply by observing anomalies such as the rapid increase in the price of relevant data products in the market or the frequent exit of small and medium-sized Internet firms. Therefore, in this case, it is difficult for antitrust authorities to make a correct judgment and ruling on such behavior. Traditional monopoly agreements often require long-term negotiations between Internet companies before they can reach an initial monopoly agreement. Once an agreement is reached, the two parties cannot change their original interests. In this process, it is usually necessary to use a variety of means to transmit and describe information, and the subsequent promotion after realizing this goal also has certain uncertain factors, with considerable risks. Therefore, in the implied data and algorithm monopoly agreement, through the participation of data and algorithms of Internet companies, the agreement can be negotiated in a secret way through data transmission, which makes it difficult for such information to be known by non-participants. Therefore, even if such information is publicly released, it will still lead to multiple occurrences of monopoly agreements.In addition, due to the variability of implied data and algorithmic monopoly agreements, it is difficult for antitrust authorities to identify such monopolistic behavior in a timely manner. Therefore, the implied algorithm, the low exposure rate and the secrecy of data monopoly agreement will bring high enforcement difficulty and dilemma to the antitrust regulatory authorities.

1.2 The Dominant Position of Internet Enterprises in the Data Market is Identified as Ambiguous

Generally, for the determination of dominance, the proportion of market share is used to determine whether the data market is dominant. The data market share of Internet enterprises can not only measure their operating conditions, but also reflect the market' s recognition of their products or services. In determining the dominant position of the market, according to Articles 18 and 19 of the Anti-Monopoly Law, the first thing to consider is the market share. Therefore, we should first calculate the market share to determine a dominant market position. From the current situation, China mainly adopts the method of identifying market share to define Internet enterprises. However, both determining market share and forecasting market share are based on a stable and static market environment. As the structure of the Internet enterprise data market is very dynamic, the market share does not fully reflect the dominant proportion of Internet enterprises, which also makes it difficult to use market share to determine the dominant position of Internet enterprise data market. In the regulation of monopoly behavior of Internet enterprise data market, how to rationally use market share has become an urgent problem to be solved. Although Article 19 of the Anti-Monopoly Law specifies several situations in which market dominance can be inferred based on market share. For example, an operator is considered to have a dominant market position if its market share in the relevant market reaches half without any other facts to refute it. However, in the traditional static market economy environment, this ratio is relatively appropriate, but it can not meet the current Internet enterprises in the data dynamic market economy environment of the data market share is relatively high actual demand. From another perspective, the dominance of Internet

companies in the data market is often not truly demonstrated by determining market share alone. Therefore, in the dynamic market economy environment, we can indirectly judge whether the Internet enterprise data market has a strong market power by determining the dominant position of the data market, so as to evaluate the enterprise behavior in the market more accurately.In the rapidly changing environment of the Internet enterprise data market, due to the influence of network effects and lock-in effects, there is not always a complete positive correlation between the Internet enterprise' s data market share and its dominant position in the data market. With the passage of time and the change of the intensity of competition in the data market of Internet enterprises, this positive correlation will also change accordingly, which is different from the positive correlation in the traditional economic environment. A smaller Internet company' s share in the data market does not mean that it is less competitive in the data market. Although the share of some Internet companies in the data market may not be very large, their data development prospects are very broad, which provides a strong competitive advantage for the existing Internet companies. Having a higher data market share of Internet companies does not necessarily mean that Internet companies are more competitive in the data market, because Internet companies usually have a higher data market share compared to traditional companies. From a theoretical point of view, Internet enterprise data market monopoly is a common phenomenon. If it is judged that it has a significant dominant position in the Internet enterprise data market, it may inhibit innovation and limit the activity of the Internet enterprise data market. If it is simply restricted according to the proportion of market share, it is not conducive to the development of the Internet enterprise itself. At the same time, it can also be measured by the difficulty of Internet enterprises to control data to measure the extent of their effective domination of the industrial market. According to the revised Draft of the Anti-Monopoly Law and the recently released Anti-Monopoly Guidelines for Platform Economy, we can not only determine the dominant position of Internet companies in the data market by market share, but also assess the ability of Internet companies to control the data market of Internet companies. This includes the ability to grasp and process the data of relevant Internet enterprises, and the difficulty of other Internet enterprises to obtain the data of Internet enterprises to determine the dominant position of Internet enterprises in the data market. It is necessary to sort and analyze the current regulations and policies of data market in our country, and put forward corresponding suggestions according to the development status of Internet enterprises in our country. However, these provisions at the legislative level are relatively vague and general, and lack specific rules to guide how to determine the dominant position of Internet enterprises in the data market through other factors, which causes certain troubles in practical applications.

1.3 The Spontaneous Expansion of Duopoly

For Internet enterprises, monopoly is often presented as a dual monopoly model. In the duopoly, there are both business model innovation led by emerging technologies represented by the Internet, and industrial groups formed by traditional industry giants through mergers and acquisitions.[1] Duopoly is a platform based basic monopoly position, which extends the monopoly position to a new field of cross-border monopoly, and this cross-border monopoly can be subdivided into vertical cross-border and horizontal cross-border. The so-called vertical cross-border refers to those who have the dual identity of platform and platform operators at the same time, and use the dominant position of the platform to compete with other platform operators.Horizontal cross-border means that when two companies in different industries operate on the same platform, their business models will change. Taking the JD.com platform as an example, on the JD.com shopping platform, merchant stores are divided into "JD self-operated" stores and other merchant stores, and JD self-operated stores have great advantages on the platform. Firstly, based on the brand power of Jingdong platform, consumers will trust its brand and quality more. Secondly, Jingdong platform can analyze consumer preferences through specific algorithms based on big data and preferentially push self-operated products to consumers based on data. It is a "big data-enabled price discrimination against existing customers" for non-Jingdong self-owned merchants and consumers, which makes the non-self-owned merchants settled in Jingdong at a disadvantage in the competition. Another mode of horizontal crossover is for a platform to quickly enter new markets and areas by introducing new products for its users based on its existing user base. The expansion of Tencent and Meituan's business areas is a typical case of successful horizontal expansion. Tencent, a giant company with two platforms, QQ and wechat, already covers several tech markets, including e-sports, Internet of things commerce, and fast online payments.In the early days, Meituan has

[1] Chen Bing, Lin Siyu. The Governance Mechanism of Internet Platform Monopoly -- Based on the Investigation of the Occurrence Mechanism of platform double-round Monopoly [J]. China Circulation Economy,2021,35(06):37-51.

transformed from a simple platform based on outbound sales to today' s collection of rental, entertainment, tourism, group and other diversified functional software. Therefore, horizontal cross-border can also be understood as the dual oligopoly price structure existing in the competition relationship between platforms. Horizontal cross-border behavior is not a monopoly in itself, but penetrates into other industries by exploiting its inherent monopoly position. Through the cross-network, the cross-market entry behavior of the platform will further increase the number of users, improve the loyalty of users, and strengthen the market dominance of the platform, so as to achieve the purpose of monopoly in multiple fields. Therefore, the Internet enterprise platform in order to obtain the maximum profit. It is inevitable to strengthen the interoperability of data services and the migration of derived data with its own platform or even with other platforms. Because there is a large amount of redundant information in the collection process of big data, the acquisition cost of pointing data is too high, so that the effective satisfaction of consumer needs cannot be fully realized. In order to pursue the monopoly advantage generated by massive data, the platform may weaken or even eliminate the interoperability of its own data and services with its competitors in data and services, resulting in the failure of effective circulation and dissemination of the data it has, thus forming the phenomenon of data islands. For Internet enterprise platforms, the macro data ecosystem spanning multiple markets can not only realize the cross-market transmission of benefits. It also realizes differentiated operation for different types of users, so as to gain more market share and improve its overall competitiveness. In the multiple related markets, the power of the comprehensive market is significantly higher than that of the single related market. The power is weighted by the influence of the initial monopoly industry of the platform and the related duopoly industry. It makes the platform have a strong ability to exclude competition, and then gradually squeeze the living space of other competitors.

2. CURRENT SITUATION OF ANTI-MONOPOLY LAW LEGISLATION OUTSIDE CHINA

2.1 The EU' s Data Market Act

The EU' s data antitrust legislation for Internet companies is represented by the Data Market Law, which was enacted in December 2021. The law has a relatively comprehensive regulation on the behavior of large Internet companies in the data market. The Data Market Law set up a "Gatekeeper" system, that is, large Internet companies as a "gatekeeper" to make them undertake certain obligations. The EU considers that such large Internet enterprise platforms have the market dominance to determine the barriers to entry into the data market. They will use their dominant position in the data market to implement the data monopoly behavior of some Internet companies, which will have a negative impact on the market, so they need to bear certain obligations.[1] For example, since such platform enterprises usually have a huge amount of user data and privacy information, once the data and information involving personal privacy are leaked, it will cause great social harm. And because they have a dominant position in the market, they will occupy a great advantage in the market competition, which is particularly unfavorable to small and medium-sized enterprises in the market. Thus, the Data Market Act imposes certain obligations, responsibilities and penalties if such market players do not comply, presupposes acts they cannot perform (i.e., prohibited) and the related duties they should assume as gatekeepers. However, it is also necessary to regulate the "market gatekeeper behavior" to avoid the further development of such "market gatekeeper phenomenon" into "network economic black box". In some expressly prohibited acts, it is expressly stated that personal data sets obtained from core platform services cannot be combined with personal data sets obtained from other businesses unless the user's express permission is obtained; The data advantage of Internet companies must not be used to target advertising to users unless explicitly authorized by users, and it must not prevent consumers from uninstalling software or preventing them from forwarding links to other Internet businesses. In the act of restricting the use, it defines the behavior of improper use of Internet platform enterprise data or illegal acquisition of Internet enterprise data, and puts forward the corresponding responsibility. Internet platform enterprises are clearly required to provide consumers with convenient services and take measures conducive to market competition. When dealing with the monopoly problem of Internet platform enterprises, it is stipulated that Internet platform enterprises can take measures to restrict competition, but the measures do not include the exclusion, suppression or sanctions of users.For example, companies of Internet platforms are required to ensure compatibility with third-party services and should provide Internet advertisers with the necessary tools and information resources to place ads on their platforms. Under the premise of not violating the basic

[1] European Commission, The Digital Markets Act: ensuring fair and open digital markets, European Commission official website, https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_en

theory of anti-monopoly law and the spirit of relevant legislation, Internet platform enterprises can be allowed to impose certain restrictions on users' use of Internet data. In order to avoid the adverse consequences brought by data monopoly that Internet platform enterprises may adopt and maintain market competitiveness, we pre-regulate Internet platform enterprises through the above prohibited behaviors. In order to avoid the adverse consequences of data monopoly that may be taken by Internet platform enterprises and maintain market competitiveness, we pre-regulate Internet platform enterprises through the above prohibited behaviors and bear responsibilities. It can be concluded from the legislation of the European Union that when dealing with the monopoly behavior of Internet companies, it must be considered from multiple levels and taken into account comprehensively. In its Data Market Law, the European Union has clarified which specific enterprise characteristics will make Internet platform enterprises become "market gatekeepers", and has defined in advance the types of data monopoly behaviors of Internet enterprises that may be taken as "market gatekeepers", which reflects the illegal principle that the European Union regards specific monopoly behaviors as regulable objects. The EU has optimized and updated this data Act in view of the characteristics of Internet Internet enterprises and Internet enterprise data monopoly, thus building a set of legal framework for the pre-regulation of Internet enterprise data monopoly and the identification and review of illegal acts after the fact.[1] At present, there are still deficiencies in the relevant legislative regulation in China, which can be improved from the legislative level by referring to the Digital Market Law of the European Union.

2.2 Anti-restrictive Competition Act Enacted by Germany

In the era of data economy, Germany is also facing the challenge of data monopoly of Internet enterprises, and its law modification is relatively radical compared with other EU countries. In the five years from 2017 to 2021, Germany made two amendments to its Anti-Restrictive Competition Law, which made further provisions for Internet companies' data monopoly.[2] In June 2017, Germany formally adopted the ninth amendment to the Anti-Restrictive Competition Law, the most notable feature of which is that the market dominance of Internet companies in multilateral markets or online markets is clarified, which also means that the complexity of obtaining relevant competition data needs to be taken into account when making monopolistic judgments. At the same time, the amendment also further clarifies the responsibility allocation and rights relief mechanism among relevant subjects, providing an effective guarantee for the data abuse of Internet enterprises. The revision has become a guide for other countries in determining the dominance of Internet companies in data markets.In 2020, Germany revised its anti-restrictive competition law for the tenth time. The revision covers Internet enterprise data market monopoly, data collection and analysis technology, and consumer rights protection.[3] Based on the in-depth study of the competitive characteristics of the Internet data economy, the antitrust law enforcement department of Germany provides the latest coping strategy for the data monopoly problem of Internet companies. The law not only defines the concept of "data market" for the first time and defines the types and scope of network operators, but also brings data abuse into the scope of anti-monopoly law adjustment. It is also the most advanced revision ever undertaken. The legal revision on the anti-monopoly regulation of Internet enterprise data mainly focuses on the following aspects: First, German lawmakers have realized that owning Internet enterprise data is a key factor in the competition of Internet enterprises, which enables Internet enterprises to have a huge competitive advantage in the data market, thus gaining a dominant position in the Internet enterprise data market. Therefore, in order to safeguard the interests of consumers, promote fair competition and prevent the development of the Internet industry from falling into the dilemma of excessive competition. Therefore,"the ability to obtain competition-relevant Internet enterprise data" is regarded as a key factor to judge whether an Internet enterprise has a dominant position in the Internet enterprise data market. Second, we introduced a different kind of supermarket power Internet company from the traditional market power,"operators with significant influence in cross-market competition." Third, it clearly defines the scope and procedures for the implementation of data restrictions and investigations on Internet companies with supermarket power,

[1] Yang Dong, Zhou Xin. The Latest International Development and Theoretical Reconstruction of Digital Economy Anti-monopoly [J]. Chinese Applied Law,2021(03):97-111.

[2] Ninth Amendment to the German Anti-Restrictive Competition Act, https://www.competitionpolicyinternational.com/germany-competition-law-amendment-came-into-force/.

[3] Yuan Jia. The Practice and enlightenment of German Digital Economy Antitrust regulation [J]. International Economic Review,2021(06):56-76+5.

and requires Internet companies to submit relevant evidence to consumers before providing services. The provision is in effect a specific German rule for large Internet data companies such as Google and Facebook. The purpose of this provision is to protect the Internet companies in a monopoly position to gain a competitive advantage, rather than to threaten and harm the competition of other competitors. German lawmakers have taken the view that the "competitive advantage of supermarkets" held by Internet data giants such as Google and Facebook should not be abused, and should ensure that this cross-market competitive advantage is not used as a means of entering new markets. Therefore, the amendment clearly stipulates that Internet companies with "supermarket power" must not engage in acts such as self-preferential treatment, raising the threshold of the data product market, restricting interoperability, and restricting the portability of consumer data. Third, it also introduces a pattern of behavior that abuses the position of relative trading advantage. In other words, if an operator controls the Internet enterprise data that other operators are dependent on and that is necessary for their own Internet enterprise data business. Fourth, in the case of abusing the data of Internet enterprises, when regulating Internet enterprises, whether they are the subjects of data monopoly of Internet enterprises should be taken into account, and competition should not only be excluded or restricted. These two conditions can be an undue barrier: the refusal to open up the necessary Internet enterprise data at a reasonable price, and the inability to access this necessary Internet enterprise data through open market transactions.

3. HOW TO OPTIMIZE THE ANTI-MONOPOLY STRATEGY IN THE REGULATION PLATFORM ECONOMY

3.1 To Optimize Data Sharing Behavior

First, we need to ensure that data sharing does not become exclusive for Internet companies. Internet companies use shared algorithms and technologies to capture user demand for implied business between monopoly platforms. In general, the behavior of data sharing can significantly optimize the market competitive environment and reduce the possibility of platform enterprises using data advantages to influence the relevant market. However, due to the intervention of algorithms, enterprise data information can show higher economic value under the calculation of algorithms, which changes the way of communication between enterprises, and ultimately increases the possibility of implied business monopoly. Secondly, in order to avoid implied horizontal monopoly behavior becoming an important means for platform enterprises to obtain maximum benefits; And the monopoly risk of platform enterprises when using algorithmic tools. On the one hand, we prohibit implied business monopoly to prevent platform enterprises from signing "monopoly agreements" with downstream enterprises through data sharing agreements. On the other hand, we also do not allow platform enterprises to share an algorithm or exchange certain key data in the data sharing agreement, which constitutes a substantial monopoly behavior. At the same time, the substance of the sharing agreement should be examined to determine whether there is a monopoly agreement. In addition, for the "monopoly agreement" that has already taken effect, it is necessary to prevent platform enterprises from using specific algorithms in the process of data sharing to realize the de facto monopoly of the market. Both of these methods can effectively prevent the data monopoly behavior caused by the abuse of the platform enterprise's dominant position. However, in the practice of antitrust law enforcement in our country, there is no public investigation of the use of algorithmic models to support the monopoly agreement that has been reached. In order to solve the problem of data sharing, it is necessary to clarify the purpose of data sharing. The main purpose of data sharing between platform enterprises and downstream enterprises is to promote production, improve efficiency, and realize the secondary use value of data.Platform enterprises hope to realize data value through data sharing, while downstream enterprises hope to obtain necessary data resources to develop or exercise algorithms through data sharing. Therefore, if the data sharing behavior and impact beyond the legal boundary, it is necessary to strengthen the data sharing behavior of the two parties to the data sharing antitrust review. At the same time, it should also be clear that in the anti-monopoly law, "sharing data agreement" does not belong to a monopoly agreement. In this case, data sharing behavior can not be the object of anti-monopoly law regulation. Thirdly, in the selection of sharing subjects, platform enterprises, upstream enterprises and downstream enterprises can adopt a negotiated cooperation mode to achieve the purpose of jointly protecting their own interests, so as to avoid conflicts of interest caused by sharing behaviors. However, it is worth noting that in the business collaboration between the platform enterprise and the downstream enterprise, the application of a specific algorithm between the two parties is sometimes only to monitor or cover up the execution of the monopoly agreement that has been reached, rather than only using the algorithm as a tool for business cooperation. In the practice of extraterritorial enforcement, the European Commission and its member States have repeatedly used the application of specific algorithms as one of the situations where monopoly consent exists. But in our country, there have been no similar cases. Finally, we need to strengthen the supervision of data sharing algorithms of Internet enterprises, regularly adopt specific

methods to verify whether the algorithm has the function of participating in implementation and assisting monopoly consent, or regularly evaluate whether the algorithm model has collaborative monopoly behavior. In short, when evaluating the monopoly impact brought by such data sharing behavior, the relationship between data sharing and various algorithmic analysis tools should be included in the framework of monopoly agreement analysis of the Anti-Monopoly Law for comprehensive consideration.

3.2 To Establish a Professional and Technical Data Antitrust Enforcement Team

Compared with the monopoly behavior of traditional enterprises, Internet enterprises involve more extensive fields in data monopoly, and the technical factors involved are also more complex.[1] The monopoly and complexity of the data of Internet enterprises make the application of the anti-monopoly law of Internet enterprises face greater challenges. When formulating data antitrust rules for Internet companies, it is essential to build a law enforcement team with professional skills. Therefore, the anti-monopoly review also needs to have the corresponding technical ability of law enforcement personnel to carry out. In the process of data antitrust enforcement of Internet companies, if there is a lack of personnel with professional knowledge to review, then sometimes it is likely to be unable to accurately grasp the core of the problem. At present, there is no national anti-monopoly agency in China that can fully perform the above functions. Therefore, in order to more effectively deal with the emerging monopoly phenomenon of Internet enterprise data monopoly, future anti-monopoly law enforcement should specifically train a group of law enforcement teams with expertise in multiple professional fields such as law, economics, computer science and cybersecurity.

3.3 To Establish a Market Dynamic Monitoring Mechanism

Because of the high secrecy of implied data and algorithmic monopoly agreements, it is difficult to detect the monopoly consensual behavior. At present, the anti-monopoly investigation of data and algorithm monopoly of Internet enterprises is mainly carried out for the monopoly consensual behavior between Internet enterprises and other network enterprises, but these investigations cannot completely prohibit the monopoly consensual behavior in the Internet industry.In this case, we can consider using the method of assuming data and algorithm monopoly agreement. When judging that there may be a monopoly agreement between Internet companies through market changes, we should take the initiative to conduct anti-monopoly review. Secondly, it is also feasible to analyze the law of market change through data analysis.When we analyze market movements in data and algorithmic monopoly agreements, we can consider the following aspects: Certain Internet companies exchange data with each other significantly more frequently than other competitors in their field. The prices of the provided Internet company data products or services show a similar or similar upward trend. The price of the Internet company data product or service offered in the market is much higher than its actual value. And there is a clear mismatch between the data and algorithmic behavior of some Internet companies and their own interests. Based on these characteristics of market changes, antitrust law enforcement agencies can infer the existence of data and algorithm monopoly agreements. In the case of frequent occurrence of the above situation in the market, the anti-monopoly law enforcement department can infer whether there is a monopoly agreement for data or algorithms according to the changes in the market, and conduct anti-monopoly review accordingly. If no such situation occurs in the market, anti-monopoly law enforcement agencies can judge that the Internet company does not have a monopoly position in data and algorithms. However, it is worth emphasizing that inferring whether Internet companies have monopoly agreements on data and algorithms based on the above market dynamics needs to be carried out carefully on the basis of comprehensive consideration of multiple practical factors to avoid mistakes or excessive interference in the data market, thereby interfering with the normal legal competition environment of the data market.

3.4 To Create Algorithm Analysis Control Mode

There are difficulties in determining the implied data and algorithmic monopoly agreements mentioned above. The characteristics of the algorithm can be analyzed to determine whether there is subjective intention connection. The core of this analysis is how to find and verify evidence related to subjective intentions. Therefore, this paper proposes a subjective path based on tacit information. Despite its high degree of intelligence, algorithms do not yet possess human-like subjective communication capabilities, let alone legal expressions of intent.Therefore, when judging whether there is implied data or algorithmic monopoly agreement, objective factual method should be adopted rather than subjective logical

[1] Chen Bing, Lin Siyu. Governance mechanism of Internet platform monopoly: An investigation on the mechanism of platform duopoly [J]. Circulation economy of China,2021,35(06):37-51.

reasoning method.[1] Therefore, in such a context, we need to change the traditional way of thinking that justifies the link of implied data and algorithms to monopolistic subjective intentions. Under this idea, we should study the proof method of subjective intention connection of algorithm monopoly agreement, so as to realize the effective control of algorithm monopoly agreement.Posner once proposed a method to prove the relationship between implied data and algorithmic monopoly agreement. First, we should analyze whether there are conditions conducive to the formation of implied data and algorithmic monopoly agreement in the current market. Next, based on such preconditions, we need to judge whether there is a monopoly consensual behavior of implied data or algorithms; Thirdly, after judging that the implied data and algorithm monopoly agreement are not established, it is further determined whether other measures should be taken to correct it according to the needs of specific cases.[2] Ultimately, algorithms can't relate to each other subjectively in the same way that people do. It is recommended to move from communication evidence to economic evidence and behavioral evidence when demonstrating whether such subjective intention links exist. In this way, the link of subjective intentions can be inferred more accurately from the perspective of economic evidence and behavioral evidence.

CONCLUSION

The digital economy is triggering a new wave of changes in global production and living habits. The continuous and rapid growth of the data economy depends on the innovation of data and algorithm technology. Data has become a key driving force for the transformation and development of China' s data economy. With the continuous development of Internet enterprises, various types of data monopoly will become the intentional or even unintentional choice of platforms. Through the updating of data sharing behavior, market dynamic monitoring and algorithm analysis control mode, the data monopoly can be effectively restrained. However, for the ever-evolving data technology, whether these measures can be permanently effective remains to be further promoted by judicial and law enforcement practices. In the face of iterative data monopoly in the future, continuous analysis and research are still needed.

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