

Research on the Standard of Identifying the Abuse of Market Dominance in Data Enterprises

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The wave of globalization with data as the core of development is sweeping, and the digital trade accounts for a growing share of global cross-border trade. The new transformation of trade mode not only pours new impetus into the reform of international trade rules and system, but also brings new opportunities for the development of domestic digital trade. From an international perspective, some of the large-scale data-based internet enterprises outside the region have and abuse their dominant market position on the basis of their long-term data advantages, which not only stifles potential competition, but also seriously hinders the healthy and sustainable operation of relevant markets. From a domestic perspective, China's Internet technology is rapidly developed in the digital economy era; abusing the dominant position of market has become one of the main ways to stabilize the development of data enterprises based on data in our country. By analyzing and studying the empirical cases of abuse of dominant market position by data enterprises in Europe and the United States, Chinese regulators can, in the practice of identifying abuse of dominant market position, first of all, dilute the connotation of "relevant market"; secondly, optimize the criteria for determining "market dominance"; thirdly, the identification standard of "abuse of market dominance" is formulated, so as to increase the theoretical and practical supply of anti-monopoly justice, accurately identify and combat the abuse of data market dominance, and safeguard stability of the digital economy market.

Keywords: data market, anti-monopoly, relevant market, market dominance

Introduction

In the age of digital economy, the abuse of market dominance by data-based enterprises (hereinafter referred to as "Data Enterprises") has been listed as anti-competitive behavior in Europe and the United States; most countries or regions outside the country have issued relevant laws and regulations.¹ However, different from the traditional market abuse of market dominance, from the international level of judicial practice, the emerging digital market abuse of market dominance has the identification of the following problems: First, it is difficult to define "relevant market" in the abuse of market dominant position by data enterprises. Because of the

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¹ In 2020, in order to maintain a fair, shared, and open Internet platform, the European Union enacted the Digital Sphere Act for the first time in nearly two decades: The Digital Services Act and the Digital Markets Act both focus on regulating anti-competitive practices by large Internet companies that use data to their advantage; in June 2021, the U.S. House of Representatives issued five bills for antitrust regulation of technology giants: the Merger Filing Fee Modernization Act, the American Choice and Online Innovation Act, the Platform Competition and Opportunity Act, the Enhanced Compatibility and Competition by Allowing Service Conversion Act, and the Ending Platform Monopoly Act. The 10th amendment to the German Anti-Restrictive Competition Act came into force in 2021.

characteristics of cross-industry operation and dynamic competition, it is difficult to define the relevant market and consume a lot of time and resources. For example, in *Ciao's* case accusing Google of abusing its “dominant position in the search engine market”,² the European Commission took a seven-year investigation to determine the relevant market and abuse; the standard of “market dominance” in the abuse of market dominance by data enterprises is becoming more and more diverse. For example, in the case of *HiQ V. LinkedIn*,³ the court of first instance and the Court of Appeal used market share, market competitiveness, necessary facilities, and other standards to determine LinkedIn in the “professional social network market” dominant position; third, data enterprises abuse the dominant position of the market in various forms of behavior. The complexity of data technology leads to the more complex and hidden means of abusing the dominant position of data market, and the more complex identification and identification standards of abuse. For example, in *Ciao's* case accusing Google of abusing its “dominant position in the search engine market”, the commission concluded that Google’s “self-preferencing” was one of those abuses. In the *Digital Market Competition Research Report*, the United States House Judiciary Committee has pointed out that FAAG (Facebook, Amazon, Apple, Google) has predatory pricing, core facilities and reject the trade, and killer acquisition, among other new forms of abuse that are perceived to be complex and insidious.

From the perspective of judicial practice at the domestic level, under the trend of strengthening the supervision of data enterprises in the international community and their predicament, China’s anti-monopoly judicial regulators also face and attach importance to the problem of data enterprises abusing the identification standards of market dominance. The current “Anti-monopoly Guidelines of the Anti-monopoly Commission of the State Council on the Field of Platform Economy” published in 2021 specifies that the relevant market should be defined in compliance with general principles at the same time, focusing on case analysis, determining the factors that can be considered in market dominance which should be integrated with platform economic development, six kinds of abuse, and identification criteria. Article 9 of the newly revised Anti-monopoly Law of the People’s Republic of China in 2022 clearly regards data as one of the means for enterprises to carry out monopolistic behavior. Although the reform of our legislation contains the characteristics of the digital economy era, there are still some deficiencies in the scope and depth of the standard of identifying the abuse of the dominant position of the data market in the anti-monopoly cases. Although there are some related researches in the

² In early 2010 *Ciao*, a large German website, and several Internet companies that run price-comparison services filed a complaint with the European Commission, alleging that Google used its dominant position in the “search engine market” to display its own search results before those of other websites. After a seven-year investigation, the European Commission finally found that Google abused its dominant position in the “search engine market” and engaged in anti-competitive conduct that impeded the normal operation of other competitors, fined it 2.42 billion euros, and ordered it to stop the abuse. In the penalty decision issued by the European Commission, a heavier proportion was assigned to the part defining the relevant market, and the European Commission initially defined the relevant market in this case as “search engine market” and “price comparison service market”.

³ In *HiQ v. LinkedIn*, first of all, in terms of market share. Since 2003, LinkedIn has innovatively collected and integrated relevant data for the workplace field. After long-term data accumulation and deployment, the database service provided by LinkedIn has become a pioneer in the workplace social platform. Secondly, from the perspective of market competitiveness. The court held that there was no hope of finding a substitute for the database provided by LinkedIn to obtain employee data. Even if there was a slight possibility of creating a similar employee information database, the company would be afraid of the core position of LinkedIn in the relevant market when entering the relevant market, which would ultimately lead to the failure of the company to operate. Finally, from the point of view of necessary facilities, HiQ has been capturing relevant data with the implied consent of LinkedIn since its operation and operation, and if LinkedIn adopts technology to prohibit the capture, HiQ’s wire-based business activities will be paralyzed. In the end, the court ruled that HiQ failed to identify which data could replace the corresponding “personnel analytics product”, that is, failed to define the data as an essential facility and rejected the claim.

academic circle, they are mainly based on the basic concepts and the existing rules of argumentation. Therefore, starting from the empirical cases of abuse of dominant position in the data market by large data enterprises, this paper reviews and reflects on the judgment criteria of “abuse of dominant position by data enterprises” in some extraterritorial data monopoly cases, in order to improve and reform the judgment criteria of anti-monopoly cases in our country in judicial practice.

The Connotation of “Relevant Market” in the Abuse of the Dominant Position of Data Market

There Are Two Ways to Define “Relevant Market” Outside the Domain

The accurate connotation of the relevant market has the basic function to judge the behavior and effect of the data enterprises which may involve monopoly. Under the background of the rapid development of Internet technology, the relevant markets have changed from static state to high-speed dynamic development. The cross-border management of data enterprises makes the boundary line between product or service markets more and more blurred and merged, in practice, the connotation of relevant market is more and more difficult, and academic research has a tendency to complicate it. The current two approaches to the definition of relevant markets are as follows:

Firstly, Europe and the United States and other countries in the relevant market categories recognized and adopted the “product market” and “geographical market” double identification standard. The basic connotation of product markets and geographical markets have been provided in the merger guide issued by the United States in 1968; the European Union issued in the “EC competition law defines the relevant market in the circular” also provides for a double standard to define the relevant market in 1997. “Product market” means the market for the disputed product and all economic substitutes for that product. The associative product market includes all products or services that are deemed to be exchangeable or succedaneous by consumers because of their peculiarities, cost, anticipated use, etc. For example, the European Commission provides all services or products into the competitive scope, as a judgment of the dominant position of enterprises in the relevant market; in the European Community Competition Law, the competition between enterprises is classified into requirement fungibility, provision fungibility, and underlying vie, and the relevant market is defined in the form of demand substitution. And “geographical market” refers to the product that has a close relationship with the products in dispute; the product is located in the relevant geographical area. The relevant geographic market includes the area in which the relevant enterprise participates in the supply and demand of products or services, within which the conditions of competition should be satisfied and should be distinguished from adjacent areas where the conditions of competition are significantly different. In the case of *Ciao*, for example, which accused Google of abusing its “dominant position in the search engine market”, the European Commission penalty decision believes that one of the focus of the case is the relevant market identification. First, for the product market, the commission initially defined the “general search market” and the “comparison shopping service market” as relevant markets, and later the commission, based on competition effects, that is, to cover all competing possibilities in products or services that will meet the changing needs of the market and are difficult to replace by other products or services, identified the relevant market as the “search engine market”. At the same time, the European Commission has also considered the high barriers to entry in the general search market as a factor in determining

the relevant product market; secondly, for the geographical market, according to the European Commission statistics, since 2008, google has a long and European Economic Area (EEA) market share of more than 90% in the 31-country European Economic Area of universal search, with high barriers to entry in the search engine market; this defines the relevant geographic markets as European Economic Area.

Secondly, it is difficult to judge in practice due to the highly dynamic nature of the Internet industry market, the multilateral nature of the relevant market, the platform provides services for free, and the inter-substitution of products; therefore, the conventional requirement fungibility method, provision fungibility method, and SSNIP (Small but Significant and Non-transitory Increase in Price)⁴ test method cannot adapt to the definition of the relevant data market. As a result, Europe and the United States and other countries have gradually adopted another way of thinking in defining relevant markets, that is, vagueness and dilution of practice standards. For example, in the case of Ciao accusing Google of abusing its dominant position in the “search engine market”, the European Commission proposed in the penalty decision that the effect of crowding out competitors caused by Google’s competitive behavior in the “price comparison service market” was too significant (Kuenzler, 2020). Therefore, when demarcating the correlative market, the importance of the correlative market in determining the monopoly behavior can be appropriately blurred or weakened after a comprehensive evaluation of the connotation criteria, and it is more desirable to focus on determining the abuse of the predominant position of the data market. Excessive pursuit of accurate definition of the correlative market will cause cumbersome and waste of resources for the operation of the enterprise and the market, and only by restricting the demarcation of the correlative market and ignoring the identification of the abuse of the predominant position of the data market will you pay attention to one and lose the other.

Overseas Dilution of the “Relevant Market” to Define the Practical Dilemma

To some extent, the definition of relevant market begins to give way to the determination of whether there is market dominance or whether there is abuse of market dominance. First, the development and upgrading of data technology will lead to different products or services into the same relevant market, the boundaries between the market gradually blurred. Second, it has been proven that the connotation of the relevant market consumed less time and resources than the speed of technology update, law enforcement agencies in the process of identifying data enterprises can continue to engage in abuse and profit from this, the profits earned far exceeded the fines, and the disciplinary effect was greatly reduced. Therefore, in order to save judicial resources, Europe and the United States and other countries gradually introduce the second way to define the correlative market, that is, to dilute the way of defining the correlative market, and directly enter the stage of market dominance status determination or abuse of market dominance. In its study, the Organization for Economic Co-operation and Development (OECD) (2018) found that the definition of the relevant market was less important when considering the market in which the multilateral platform was located; priority should be given to the need to define line-related markets and to the proportionality of resources expended. The case of large-scale data enterprises in foreign countries proves that the flexibility to dilute the relevant market identification can not only reduce unnecessary losses, but also improve the efficiency and success rate of identifying the abuse of data market

⁴ In 1982, the United States first proposed the SSNIP market definition method (hereinafter referred to as SSNIP) in the Merger Guide, SSNIP is also known as: The hypothetical monopolist test is a kind of thought experiment, used to determine the range of relevant market of mergers and acquisitions antitrust regulation.

dominance. However, there are practical hardships in the determination of the correlative market, such as: Whether the determination standard can be a uniform application rule, or can only be applied in a special case? How should the dilution standard be determined? There is no uniform international standard for this kind of problem, so it directly leads to dilute the practicality and effectiveness of the relevant market.

China's Ideological Reform to Dilute the Definition of "Relevant Market"

The connotation of correlative market is the cornerstone of the demarcation of abuse of dominant market position, the competitive behavior and its consequences are formed in a certain product and regional scope, and a clear definition of the correlative market is conducive to limiting the effects and consequences of behavior within a certain range. But because of the dynamic competition in the data market, the result is that some products or services that are not competitive may become competitors because of technological innovation, and the emergence of alternative products may lead to different markets becoming "relevant markets" for a particular product; the dividing line of the correlative markets has changed dynamically.

The issue of ideological reform defined by the relevant market should be downplayed with sufficient discretion. First of all, the development of the Internet industry is changing rapidly, innovation has become the foundation of the industry development and power source, and product replacement makes the relevant market definition longer and more difficult. Secondly, the dynamic market makes the traditional way of definition no longer applicable; insisting on defining the relevant market as the first step will reduce efficiency, not conducive to the trial and judgment of the case. Therefore, it is more effective to reduce the attention of relevant market definition and focus on market dominance and abuse of market dominance to determine whether an enterprise constitutes abuse of data market dominance. The practice of the Supreme Court's guiding cases has proved that, although defining the relevant market is always considered as the most important step in the anti-monopoly cases, there have been some problems in the current trial process. In Article 4, Paragraph 3, of the "Platform Economy Anti-monopoly Guidelines (Draft for Consultation)" published by the General Administration of market supervision of our country in 2020, an attempt was made to provide that "In a particular case... de facto monopolies can be identified without demarcating the correlative market". This provision, in the modality of a law, established the status of diluting the recognition of market dominance; however, this provision was deleted in subsequent official documents and replaced with the principle of case determination, while once again confirming and affirming the fundamental status of the relevant market definition, this kind of pattern is slightly regretful to the practice application. For our country, we should break the inherent judgment thought of "relevant market-dominant position-abuse behavior" formed in the early practice of Europe, and our country should play down the relevant market definition of this rigid requirement. In practice, the relevant market is regarded as the factor to evaluate the competitiveness of data enterprises and the effect of behavior, rather than the necessary path or basic necessities to establish behavior.

Abuse of Data Market Dominance in the "Market Dominance" to Determine New Criteria for Determining "Market Dominance" Extraterritorially

The determination of market dominance is a prerequisite for whether there has been abuse, the anti-monopoly law and the traditional industry mostly judge the existence of the dominant market position by the market share, but for the digital economy industry, there is no close relationship between the market share and the dominant position of data market. First, in the early days of the Internet, offering free services in exchange

for users' attention and personal data, zero-price competition inevitably leads to a build-up of market share, but it has little to do with the existence of market dominance. Second, in the digital economy, transactions by data firms are more about quality than volume, meaning that quality is more representative of a firm's competitiveness, but the criterion of quality is more subjective, which has little to do with market dominance. Therefore, market share has long been just one of the basic criteria to judge whether data enterprises have monopoly power, and there are more diversified criteria in practice.

There is no uniform standard for determining the dominant position of data market in the world. From the practice of European and other countries, we can conclude three kinds of standards: market share standard, market behavior standard, and market operation standard. In this long-term development, market share standards are often preferred to apply. However, the upgrading of the Internet has transformed the market from the original relatively static to dynamic, high market share, strong competition constraints, high-tech capabilities, etc., which have become the characteristics of the platform itself rather than the only criteria to measure market dominance, and standards such as industry barriers, user dependence, technological updates, and data collection capabilities have become new factors to determine (Manne & Wright, 2011). Due to the complexity and diversity of determination elements, countries with rapid development of digital trade, such as Europe and the United States, have avoided the limitations of traditional identification standards and sought new regulatory paths. First of all, the European Union innovatively proposed the "digital gatekeeper mechanism" in the Digital Market Act (DMA), which is to include large data enterprises that have an absolute amount of data and a certain ability to control or influence the operation of the market in the list of data gatekeepers, and identify the considerable obligations and responsibilities that they should bear. When data gatekeepers abuse their identity to undermine healthy competition in the big data industry, to the detriment of consumers, they should bear more responsibility. As of April 2022, based on the company's market capitalization and user activity, there are 11 companies that meet EU data gatekeeper criteria, including 10 US technology companies including Google, Apple, Amazon, Microsoft and one European company. Amazon has responded to the European Commission's anti-trust investigation that it uses non-public third-party data to favour its own companies and logistics, to avoid further penalties such as a gatekeeper and a hefty fine; promises were made to clean up the self-favoritism of gold shopping carts and Prime value-added services. Second, the United States proposed the "covered platform" in the American Innovation and Choice Online Act (AICO), that is, the Silicon Valley giant technology companies are listed based on market value, annual net sales, user activity, and other criteria, so as to reduce the power of gatekeepers in the market and severely crack down on the discriminatory and abusive behaviors implemented by them. The bill is very targeted, and it can be clearly identified that there are specific regulations on technology companies such as Amazon, which has a retail market share of 55 percent, Apple, which restricts or prevents users from uninstalling pre-installed software programs, and Google, which has indulged in self-preferential behavior.

New Hidden Danger of Extraterritorial Determination Standard of "Market Dominance"

Most of the world's countries or international organizations for the determination of market dominance have formed their own criteria, and realize that the traditional criteria cannot meet the development of emerging data enterprises; as the core standard, market share can still play a role, but new standards such as data collection ability, industry barriers, user dependence can better acclimatize itself to the development of the industry and

work out problems. At present, Europe and the United States and other countries have taken countermeasures based on their national conditions, such as including a small number of giant technology companies in the scope of strong supervision with specific criteria, and carry out legislative regulations. Although there are differences in the relevant definitions, obligations to be complied with, and identification criteria, there is consensus on the four aspects of determining the amount of data that can be included in the list threshold, controlling the strength of entering the industry, continuity, and influence. The 10th Amendment of Germany will propose “significant cross-market competition impact”, reconstruct the standard path for determining market dominance, and regard market dominant position, financial resources, access to resources, or data channels as identifying enterprises with cross-market power. Although innovative, the standard stipulated in the act has a certain degree of solidification and hysteresis.

It is undeniable that the gatekeeper mechanism embodies the principle of matching capabilities with responsibilities and quantifies the market power of data enterprises; direct regulation of relevant subjects can not only bypass the dilemma of defining relevant markets the predominant position of the market, but proactive regulation can also make big data enterprises more responsible for maintaining a healthy digital trading environment. However, the new standards, the new list of obligations, the existence of discriminatory treatment, and other hidden dangers have become the focus of supervision. At the same time, no matter what standard is used to conclude the market dominance of data enterprises in Europe and the United States, there are still some hidden dangers in practice, such as the fragmentation of regulation, the complexity, and the disunity of the standard.

The Direction of Reform Set by China to Optimize Its “Predominant Position in the Market”

The rapid development of digital economy and the fierce competition of data enterprises in our country lead to the time gap of only five years between the full development of domestic internet industry and the emergence of monopoly pattern; this kind of development not only results in the difference between our country and the data enterprises of Europe, but also leads to the fact that some of the practical experiences of the supervision on the market dominant position cannot match the development of the digital enterprises of our country. For example, in the EU’s Digital Economy Act, the kernel platform service provider is designated as a gatekeeper. In accordance with Digital Markets Act Chapter II Article 3,

Designation of Gatekeepers

1. A provider of core platform services shall be designated as gatekeeper if:

(a) it has a significant impact on the internal market; (b) it operates a core platform service which serves as an important gateway for business users to reach end users; (c) it enjoys an entrenched and durable position in its operations or it is foreseeable that it will enjoy such a position in the near future.

The basic conditions of Gatekeeper are: First, it has a major impact on the internal market; second, offering kernel platform services is a crucial method for commercial users to contact end users; third, it enjoys a strong and unremitting position in its business, or can be anticipated to possess this status in the near future, and the criteria for determining the financial revenue of the enterprise, the number of users, etc., are very strict and complex. For our country, this high standard is not conducive to the long-term development of domestic data enterprises, so there is still room for improvement in the standard level. In order to find the way of legal regulation outside the framework of anti-monopoly law, our country should take an open attitude to the data gatekeeper

mechanism adopted by the United States and Europe. In fact, the legislation has already started to show signs, such as in 2021, the General Administration of Market Supervision and Administration issued the “Internet Platform Classification and Classification Guide (Draft for Comments)” clearly divided the platform business into six categories, and at the same time, according to the business scale, economic volume, business type, and restriction capacity, the platform is divided into super, large, small, and medium-sized platforms, which is similar to the EU gatekeeper rules. However, for the “Guidance on the Implementation of the Main Responsibility of Internet Platforms (Draft for Comment)” released at the same time, China mainly focuses on the regulation of super-large platforms. This means that as many as 23 of our platforms will be heavily regulated, compared with 13 or even falling under EU standards and only five under US standards. In the period following the outbreak, with the rapid development of digital trade in China, large-scale data enterprises have sprung up, and the following problems such as platform preferential behavior, data monopoly, and abuse of market dominance need to be solved. To some extent, the large and extensive regulation and supervision has the tendency of restraining innovation for the development of data enterprises in our country, to stick up for the well pullulation of digital economy, but practice has proved that direct reference will not be able to accommodate to the pullulation of our digital economy process; therefore, it is necessary to consider and judge the standard of data gatekeeper, the distribution of responsibility, and the way of punishment.

On the basis of “Classification Guide” and “Responsibility Guide”, in order to build a more perfect data supervision system, and further optimize the path of data market dominance judgment, on the one hand, in 2022, the State Administration of Market Regulation released the “Provisions on Prohibiting the Abuse of Market Predominant Position (Draft for Comment)”, which, combined with practical experience, expands the considerations for determining market dominant position, such as adding the standard of market concentration when analyzing relevant market competition conditions, and improving the situation of insufficient supply of anti-monopoly legislation. It has certain significance of *The Times*; on the other hand, for the expansion of determining factors of market dominance, we can refer to the practice in the 10th Amendment of Germany, which regards the ability to “obtain competition-related data” as one of the determining factors, and at the same time make special provisions for platform enterprises as intermediaries, introducing the concept of “intermediation force” to address the abusive behavior of business data enterprises operating across markets. While learning from the practical experience of determining dominant position in Europe and the United States and other countries, it should be determined according to the pullulation reality of China’s data enterprises and related markets. Therefore, on the foundation of the classification criteria for identifying oversized platforms, factors such as enterprise data occupancy, user stickiness, technical capabilities, and industry barriers can be introduced and comprehensively considered to optimize the touchstone for determining market superiority, and to perfect the plight of insufficient anti-monopoly law enforcement reserves.

The Identification of “Abuse of Market Dominance” in the Abuse of Data Market Dominance

“Abuse of Market Dominance”: The New Focus of Extraterritorial Identification

On the basis of having a predominant position in the market, the abuse behavior of data enterprises is identified as the last and most critical step. There is no uniform definition and standard for the abuse of the

dominant position of data market in the world, but there is a consensus that with the pulluation of digital technology, the dominant position of the data market is abused by the data enterprise in order to consolidate its dominant position; it has changed from unreasonable high price or unfair low price, tie-in, monopoly price, and so on to “two-choice-one”, predatory pricing, restrictive technology, self-preferential treatment, bundling, limited trade, and other new models. However, whether to exclude the competition effect of restricting the fair competition in the market and whether to damage the rights and advantages of consumers are always the fundamental principle of determining whether there is abuse of market dominance. In order to regulate abuse more comprehensively, Europe and the United States and other countries continue to introduce relevant laws. For example, the EU bases its decision on acts such as the EU Operation Treaty, DMA, and the EU competition law. Among them, the EU Operation Treaty defines unfair prices, restrictions on technological development, unreasonable supplementary obligations, and other acts as abuse of market dominance. In the United States, for example, market abuse concerns have begun with the Sherman Antitrust Act, while administrative agencies such as the Federal Commission have focused on data enterprises. Conduct is analyzed on the basis of the Sherman Act, the Clayton Act, and the Trade Commission Act to determine whether it constitutes an abuse of market dominance. In addition, in 2021, Germany and the United States successively promulgated the 10th Amendment to the Anti-restrictive Competition Law and other anti-monopoly regulatory bills targeting technology giants, focusing on the identification and regulation of abusive behaviors of large data enterprises.

In recent years, in addition to the intensive promulgation of laws, European and American countries began to pay attention to the role of essential facilities doctrine in anti-monopoly law regulation. In 2017, HiQ sued LinkedIn and made it clear that LinkedIn was using its dominance of the “professional networking market” to technically block HiQ from continuing to grab LinkedIn’s public data.⁵ As a result of the competition, HIQ has built its business on scraping data from LinkedIn since its inception, LinkedIn has never objected, and HiQ’s business cannot continue if LinkedIn blocks scraping. The data captured in the case became a “necessary facility”, but the court ultimately found that HIQ failed to identify data that could replace the “personnel analysis product”. The failure to define the data necessary for the facility and the rejection of the claim is a recognized regret, but it is a commendable attempt. Germany’s regulation of the principle of necessary facilities is worth learning. In 2021, the 10th Amendment of Germany clearly points out that the refusal to provide, especially data access and other rights at a reasonable cost, must be authorized to enable upstream and downstream enterprises to carry out business activities; otherwise it will affect the effective competition in the market and will be identified as one of the abuses of market dominance. Directly expanding the scope of application of necessary facilities can effectively solve the dilemma of the dominant data enterprises refusing to access data to a certain extent. Although the connotation of this principle is constantly enriched in the development, there is great uncertainty in its application. In the era of digital economy, data may become “necessary facilities” under the principle of necessary facilities, and most of the “necessary facilities” are generated by the data resources of those who occupy the dominant position in the market, so determining whether there are alternative attributes becomes the core of the application of the principle of necessary facilities. The European Court of Justice has pointed out that the elements of necessary facilities should include the inputs necessary for market entry, the fact that the consumer’s need to

⁵ HiQ Labs, Inc. v. LinkedIn Corp., 273 F. Supp. 3d 1099, 2017 U.S. Dist. LEXIS 129088.

acquire the product is impeded by the refusal of a transaction by a dominant party, the lack of a reasonable basis for refusing a transaction, and the fact that the refusal of a transaction would restrict competition. On the basis of the above determination, it is still difficult to identify the necessary facilities because the data are not absolutely irreplaceable. Even if the necessary facilities principle could become one of the criteria for regulators to judge abuse of market dominance, to block the use of data resources by large data enterprises to impose a ban, and to stick up for the stable pullulation of the sector, the issue of defining standards should also be taken seriously.

The Problem of “Abuse of Market Dominance”

Big data has obvious interactivity, and on the basis of having a dominant market position, data enterprises in a monopoly position will further strengthen their dominant position through different, complex, and hidden behaviors to evade the supervision of law enforcement agencies. The difficulties in identifying abusive market dominance lie in the following aspects: Firstly, compared with traditional trade or service markets, the development of digital technology has brought more uncertainty and complexity to relevant markets. The definition of relevant markets can be blurred or weakened due to the dynamic development of data technology, but the determination of abusive behaviors cannot be reduced. At present, the real purpose of regulating or punishing data enterprises for abusing market dominance in countries such as the US and Europe is not to prevent companies from occupying market dominance, but to curb their abuses. For example, the EU listed four possible abuses in Article 102 of the Treaty on the Functioning of the European Union. This non-exhaustive list reflects the EU’s forward-looking view of the development of digital technology. Secondly, big data enterprises like Apple and Google have been collecting and operating data for decades, making it almost impossible for regulators to fully analyze corporate data. The European Commission’s antitrust department took seven years to analyze more than 1.7 billion interface search results before finally finding Google in violation of the EU’s fair competition law, although it eventually imposed a huge fine of 24.2 billion euros, but in the seven-year investigation, the update of digital technology has long since left the investigation agency behind. The innovation of abusive practices far outpaces the pace of institutional oversight. Thirdly, legislation has an inevitable lag. The dynamic competition makes the identification of abusing the dominant position of the data market complicated, and the upgrading of technology brings more difficulties to the regulation of regulators. In the case of *HiQ V. LinkedIn*, corporate denial of access to public data became the key to the verdict, and in the case of Google’s abuse of search engine dominance, corporate bias became the core of the verdict. The difference of the case directly leads to the difference of the cognizance standard. In Europe and the United States and other countries, the standards for determining the abuse of data market dominance have certain epoch-making and innovation, but the practice of one case one standard also brings many practical difficulties to the judicial determination.

China’s Measures to Regulate the Identification of “Abuse of Market Dominance”

Considering the multiple factors such as the nature, duration, and effect of the abuse of data, the diversity and complexity of the abuse of data bring difficulties to the identification in practice; therefore, the identification standard of abuse of market dominance can not only clearly identify abuse, but also predict the legitimacy of data enterprises’ behavior. As technology evolves, new forms of abuse emerge. For example, in the long run, data enterprises tend to use their vast data resources to their advantage, using specific business technologies; the practice of giving priority or convenience to one’s own products or services is a matter of self-preference for the

data enterprise. In filing the abuse of dominance charges against Google, the U.S. Department of Justice (DOJ) concluded that Google had abused its data resources by, but not limited to, barring businesses from trading with Google's competitors, intentionally using distribution agreements to determine search entry, and specifying that the content of the Google APP be preloaded and preferentially presented, provide information processing services, and determine what information users can see or block. As for the standardized identification standards, China's Anti-monopoly Guide and Opinion Draft also responds to the standards for the identification of abusive behaviors of data enterprises, among which the Anti-Monopoly and Opinion Draft concretely stipulates six kinds of abusive behaviors, including unfair high or low price, refusing to deal, limiting deal, etc. Opinion Draft on this basis clearly defined the behavior of self-preferential treatment of the form and grounds for exemption. The delay of legislation makes it unable to catch up with the complexity and variability of abuse, and regulators must have a high law enforcement forecasting ability and resilience to determine it. The materialization of identification criteria is of great theoretical and practical significance for the determination of abuse of market superiority. The materialization of identification criteria not only provides a frame for the behavior of data enterprises, but also provides an identification tool for regulators. The principle of reasonableness and timeliness should be adopted when determining the abuse of data market dominance. With the rapid development of the data-based Internet industry, whether a certain competitive behavior constitutes an abusive behavior in essence should be comprehensively considered from various aspects, and there is already a one-sidedness in the identification conditions of the law. In order to adapt to the development of the industry, a reasonable analysis of the nature of the behavior can be made by integrating the form, motivation, and consequences of the enterprise behavior. Therefore, anti-monopoly law enforcement agencies should promptly discover and respond to new abusive behaviors in practice, enrich the criteria for the abuse of data market dominance, accurately crack down on the abuse of data enterprises using their dominant position, and maintain the fair competition order of the digital economy industry.

Conclusion

With the appearance and pullulation of the global digital trade, governance issues generating from global digital trade, such as personal data protection, artificial intelligence, and 5G communications, continue to arise; the effectiveness and practicability of existing international data laws and regulations are constantly impacted. In COVID-19 outbreak, all industries rely on the network for office, directly to the data-driven enterprises to the peak of development. However, due to the exclusivity of data and the network externalities of bilateral market participants, the data-driven enterprises are apt to form oligopoly, and the regulation problem of abusing the data market position in digital trade comes into being.

The four stages of data collection, analysis, preservation, and manipulation are usually the whole process of data enterprise monopoly. The data acquisition stage becomes the beginning of creating the relevant market for data enterprises, maintaining and strengthening the relevant market boundaries in the analysis and preservation stage, and finally achieving the effect of data monopoly in the manipulation stage. Data-dependent enterprises are gradually undermining the healthy development of the digital economy market by taking advantage of their huge data advantages. Data enterprises abuse their data market dominance while using the data resources they have mastered to obtain market dominance, which not only increases the difficulty and complexity of identifying

abusive behaviors, but also brings new challenges to anti-monopoly law enforcement. It should be realized that the abuse problem in the process of the pullulation of the digital economy market is the product of natural competition, and the scope of regulation for data enterprises should be carefully grasped, too lax supervision cannot achieve the due effect, and too strict supervision will hinder the innovation and flexibility of enterprise development. This paper proposes that in the process of identification, we should break through the traditional way of determination. Firstly, China should dilute the connotation of relevant market; secondly, we should continue to optimize the basis for determining data market dominance; thirdly, we can standardize the behavior of abuse of data market dominance. China should continue to improve the comprehensive consideration of data governance regulatory system identification standards, verify the applicability and practicality of the standards in practice, provide a strong theoretical basis for China's anti-monopoly law enforcement agencies, and maintain the steady development of the digital economy industry.

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