

Data Protection and Online Platforms

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Abstract: Everyone needs data to succeed in today's world economy. The information extracted from it forms the basis of competitiveness and growth for each player in the digital marketplace, and information built on the disclosures made by individuals when using online services has become an important asset in the digital economy. While digitization has contributed to the dynamic evolution of competition, the market position has also become a growing concern. This paper focuses on whether data can be considered a key factor in the creation of monopoly positions during the development of platforms, and suggests the introduction of the essential facilities principle to mitigate the data monopoly phenomenon, promote market competition, and facilitate industrial innovation and technological development.

1 INTRODUCTION

The emergence of the digital economy has brought about new business models and opportunities. It has brought about new market developments that have impacted society as a whole. Unlike non-platform companies that sell their products after assigning a certain unit of value to each link of the distribution chain, the platform creates value follows the principle of triangular relationship (Vicente, 2020). For example, Youku users will be exposed to non-search-displayed videos and ads before they choose to watch videos on their own. These ads will potentially help create connections between users and merchants. Through such measures to optimize interactions, the cost of the platform is decreasing, and strengthening the generation of network effects. All in all, while digitization continues to contribute to a dynamic evolution of markets, concerns are increasingly raised about the alleged powerful market positions of a number of key players. (MONOPOLKOMMISSION, 2015)

2 PLATFORM MONOPOLY AND BIG DATA

Providers can collect information about the profile, behavior and interests of users, the increasing

collection and use of data has positive welfare effects. However, the increased collection and use of data can also result in negative welfare effects. In particular, having control over and being able to analyze large volumes of data may form a source of power for incumbent market players

2.1 Switching Costs

The high threshold of switching costs using data is currently an important means for Internet companies to carry out monopolistic behavior. Switching costs are divided into direct switching costs and indirect switching costs, which are one-time costs incurred when a customer switches from one supplier of a product or service to another supplier. For consumers, switching costs are incurred when changing suppliers whenever a specific investment is made in the current supplier that must be repeated for any new supplier. And when switching to a new product or service is costly, consumers will likely be forced to stay with the initial supplier so as to undermine consumers' rights. For example, in the case of social networking platforms, they seek to discourage user churn by restricting users from transferring their profiles and other content to competitors.

2.2 The Network Effect

The network effect promotes the use of data by platforms to carry out monopolistic behavior. As the number of users in a platform gradually increases, the analysis of consumer data becomes more in-depth and comprehensive, and the services that platforms can provide become more targeted. When the value of products or services increases with the number of users, the network effect is direct; When the number of users of a commodity increases, so as to produce more complementary products or services, thus increasing its value, it is indirect. While network effects benefit consumers in the short run by increasing consumer utility, they can also make it easier for firms to gain dominance and strengthen barriers to entry. (WORLD ECONOMIC FORUM, 2011) In the case of social platforms, for example, since more people can be reached through the same platform, the value that users derive directly from social networks increases with the number of other users in the network. As more users join social networks, the types of personal information available increases, and compatible applications such as service offerings on the platform increase. This indirectly increases the value of the platform to users. Thus, giving full play to the platform network effect is a way for dominant Internet companies to consolidate their monopoly position.

2.3 The Acquisition Strategy

The acquisition strategy is used to strengthen data consolidation. The more important reason for platforms to engage in monopoly behavior is to maintain competitiveness. In a market that is often characterized by dynamic competition and winner-take-all, mergers are widely used as monopolistic strategies for platform firms. When potentially competitive start-ups emerge in the market, acquisitions can effectively control the threat of competition, refine the type of data mastery, and have positive implications for the establishment of diversified business lines. This kind of behavior is also called Killer Acquisitions, which will inhibit the competitiveness of the market. (MONOPOLKOMMISSION, 2015) Taking Amazon's acquisition strategy as an example, its strategy has effectively protected and expanded Amazon's market power in e-commerce and has helped Amazon expand that power into other markets. Over the past 20 years, Amazon has acquired at least 100 companies. With more online and offline consumer behavior data, Amazon's

acquisitions have started a self-reinforcing cycle that has caused a widening gap between the platform and its competitors.

3 REGULATE DATA MONOPOLIES

Data is becoming a necessary input of production for a variety of products and services competing with or complementary to the services offered by incumbent providers of online search engines, social networks and e-commerce platforms. By refusing to share information with potential competitors or new entrants, incumbents may limit effective competition to the detriment of consumers. In this context, the question rises whether the denial of a dominant firm to grant competitors access to its dataset could lead to liability under the so-called Essential facilities doctrine. In this context, the thesis contributes to academic and policy discussions about how data-related competition concerns should be addressed under competition law.

3.1 Origin of The Essential Facilities Doctrine

The essential facilities doctrine has in the past been applied to physical infrastructures, including ports and tunnels, as well as to intangible assets protected by intellectual property rights. This doctrine attacks a particular form of exclusionary anticompetitive conduct by which a dominant undertaking refuses to give access to a type of infrastructure or other form of facility to which rivals need access in order to be able to compete. (Maxwell Meadows, 2015) Because of the particular nature of data collected by providers and the new online platforms' models that are employed, potential refusals to share data give rise to new competition concerns and may require a different analysis under the essential facilities doctrine.

3.2 The Possibility of Introducing the Principle

Compared with the EU and the US, the current Chinese regulations on refusal to deal in the abuse of dominant position are mainly reflected in Article 17 of Anti-monopoly Law of the People's Republic of China, which restrict trading counterparts to transact only with the business operator or only with designated business operators without a valid reason.

The relevant Chinese documents also include operators controlling essential facilities in the platform economy as one of the elements. It shows the feasibility of introducing the essential facilities doctrine into the Anti-monopoly law.

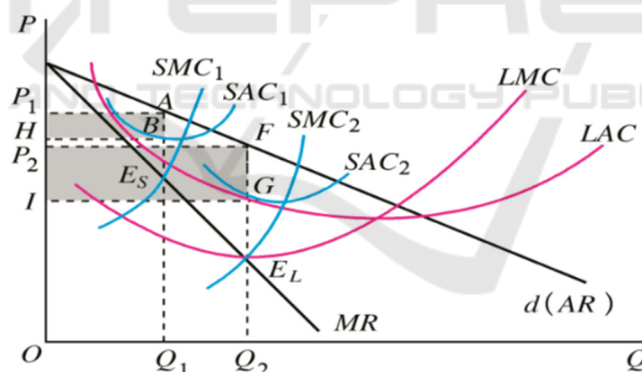
4 ANALYSIS OF THE APPLICATION OF THE DOCTRINE

From its inception to practice, the essential facilities theory has been mainly applied to the real economy, which determines that when it is applied to the Internet, it should be adapted and modified to meet the actual needs of data competition. As shown in Figure 1, except for a few natural monopoly firms, the traditional monopoly firms are in the stage of diseconomy of scale on the right side of MC curve. But this above theory is subverted in the Internet. The Internet platform with market competition will even maximize economic efficiency, fairness, social welfare and economic growth. On the whole, the bilateral market structure, of Internet platform enterprises will have a unique impact on the application of the essential facilities theory, which

will make the identification of Internet essential facilities follow a new path and paradigm different from the traditional essential facilities.

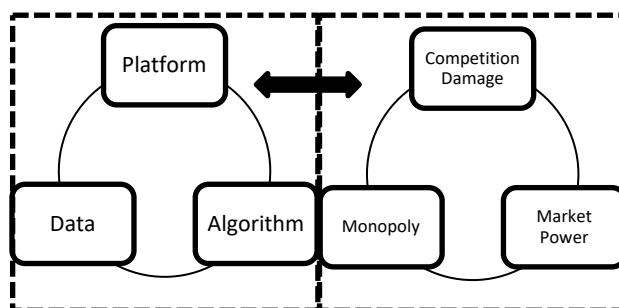
4.1 The Bilateral Market Structure

A bilateral market is relative to a traditional market, specifically a market structure in which a market operator offers a product or service to two or more consumer groups at the same time, and the consumers are related to each other. (D.S. EVANS, 2008) The asymmetry of market prices is one of the essential characteristics of a two-sided market. The bilateral market structure of the Internet has given rise to a predominantly free service model, which has led to a change in the way the relevant market definition relied upon in determining the necessary facilities (Rochet, 2006). Therefore, it is inconclusive whether the free market can constitute an independent relevant market, and the determination of market dominance of Internet platform enterprises faces difficulties in reality, and the traditional essential facilities theory, which presupposes that the owner of the facility has a monopoly position in the market for the application of the theory, faces difficulties in its application.



Hal Walian: microeconomics, Economic Science Press, 2010, P. 250.

Figure 1: Monopoly equilibrium model of traditional manufacturers.



Yang Dong: Anti monopoly regulation of digital platform, Journal of Wuhan University, 2021, Vol. 74 No.2, page 160-171

Figure 2: Economic structure.

4.2 The Lock-In Effect

The lock-in effect of Internet platforms raises the technical difficulty for the application of the essential facilities theory. In the Internet platform economy, the use of Internet products and services by Internet users as consumers creates huge sunk costs. In detail, when network users leave the original Internet platform and seek new similar services, they create serious switching difficulties because of the sunk costs.

Under this condition, the criteria for judging whether the facilities can be rebuilt and replicated become complicated and confusing: if it is only technically possible to judge whether it is possible to build an Internet platform, then most platforms are difficult to be defined as necessary facilities, even if BAT, they are not particularly difficult to be replicated technically by Internet enterprises; on the contrary, if we consider the consumer conversion brought by the lock-in effect of Internet platforms. On the contrary, if we take into account the sunk cost of the Internet platform locking effect, the real economic reconstruction of the platform is very difficult, which in turn will make the threshold for judging the necessary facilities too low and may result in over-regulation. In this sense, the application of the essential facilities doctrine in the Internet industry cannot stick to the traditional mode of thinking and identification criteria, but must make certain theoretical innovations and institutional breakthroughs.

4.3 Dynamic Competitive Monopoly Structure

The dynamic competitive landscape of the Internet economy increases the uncertainty of antitrust regulation of Internet platform enterprises. Under the dynamic market competition pattern of the Internet, the application of the essential facilities doctrine may cause excessive interference with the normal competition of Internet enterprises. The Internet industry is also characterized by innovation, and the monopolist in the market may be replaced by the innovator at any time. In short, the Internet market is a dynamic competitive monopoly structure.

In such a competitive market, the monopolist's position is not only gained by its own innovation, but also may be lost at any time due to competitors' innovation. Therefore, requiring Internet platform companies to open up their facilities may result in over-regulation of the market and encroach on the residual profits of Internet innovation. In this case,

there is a view that if enterprises are unilaterally prohibited from using their own traffic pools for "free-rider" promotion, it will result in a situation where the Anti-monopoly Law forces enterprises to help competitors grow.

5 REGULATORY FRAMEWORK FOR NECESSARY FACILITIES

As mentioned above, we should adopt prudent criteria for the essential facilities and restraint or regulate the competitive behavior of the corresponding platform enterprises. Of course, this paper is not advocating the excessive expansion and abuse of Internet antitrust activities. Based on the consideration of maintaining dynamic competition on the Internet, the determination of Internet essential facilities should have its own threshold. In the real economy, the application of the essential facilities doctrine usually focuses on such key issues as whether the facilities are necessary for effective competition and whether it is possible to replicate and rebuild the facilities, and these issues are usually limited to whether they exclude or restrict competitors. In the determination of necessary facilities in the Internet, in addition to the criteria of whether they prevent effective competition, they should also be applied or refined to increase the relevant criteria based on the special characteristics of the Internet industry.

5.1 Functional Positioning of the Theory

The monopolistic behavior of the Internet platform has caused serious damage to the effective competition in the market and to the consumers, the antitrust regulation of the Internet industry has become imperative. The theoretical framework and regulatory path of traditional antitrust law have shown obvious inappropriateness when dealing with the Internet competition field, and the introduction of the idea of Internet necessary facilities can help realize the breakthrough of regulation.

At present, the determination of the abuse of dominant market position of Internet enterprises is still on the definition of the relevant market. In traditional antitrust theory and practice, the definition of the relevant market usually relies on the analysis of commodity substitution due to price changes, which is known as the SSNIP. The so-called SSNIP is a test conducted mainly by means of prices, and

the premise of the effective test is that the test should be conducted for products with sufficient competition in the current market price, which implies the basic premise of setting a certain price mechanism for the products. However, in the Internet, operators usually do not rely on charging for basic services to make profits, and the majority of Internet users usually use Internet products or services free of charge. Conducting the SSNIP test on a product or service that does not involve prices completely violates the basic assumptions of the application of the test tool, and thus the conclusions reached are hardly accurate. Moreover, the SSNIP test is only applicable to the definition of homogeneous product markets, and is not fully applicable to differentiated product markets, and its importance gradually decreases. The basic profit model of the Internet market relies on the promotion of free basic services, paid value-added services or other forms of paid goods. If the hypothetical monopolist testing tool is used to test only the free side of the market, while ignoring the more important differentiated product, this testing approach completely deviates from the focus of the profitability of the business model and the core of the competition. Under the path dependence of test, the relevant market of Internet competition is easily defined too broadly or too narrowly, which leads to imprecise regulation. By scientifically setting the criteria for determining the necessary facilities of the Internet, the Internet necessary facilities theory can bypass the reliance on the definition of the relevant market for the determination of market dominance in the traditional antitrust procedure and avoid the instrumental defects of the existing antitrust regulation system in the determination of the relevant market of the Internet, thus realizing the breakthrough of China's Internet Anti-monopoly law regulation.

5.2 Judgment Criteria for Internet Essential Facilities

Due to the virtual nature of the Internet economy to a certain extent, the criteria for judging the necessary facilities of the Internet should be different from the traditional criteria for determining the necessary facilities mainly applicable to the real economy. Among them, the most important is the transition from the standard of "effective competition" based on the irreproducibility of facilities to the standard of "data base" based on the locking effect. Whether the Internet platform facilities occupy a sufficient amount of data base, and whether a very high percentage of users have developed inertia to use the

platform, so that it is easy to superimpose market advantages on this basis, should become the basic criteria for judging the necessary Internet facilities. At this point, whether the use of a platform occupies an overwhelming position in the Internet user base, and whether a strong user lock-in effect is formed as a result, will become the basic criterion for determining whether it constitutes an Internet essential facility, while whether the platform specifically dominates in terms of market share percentage is no longer important.

First, digital platforms have a lock-in effect on users. As mentioned above, because of the sunk costs involved in switching between Internet products or services, consumers are dependent on the prior Internet operator and find it difficult to freely choose between various types of Internet products and services. Moreover, due to the network effect of the Internet industry, the more Internet consumers of a particular Internet product or service, the greater the utility of the product or service to consumers, and thus the easier it is to attract potential Internet users to the product or service, under the effect of demand-side economies of scale and network externalities.

Second, the standard of irreproducibility of facilities in the traditional essential facilities theory is difficult to accomplish. In the Internet industry, the core challenge for competing companies to compete in the market is not the inability to replicate or rebuild the Internet platform of the dominant company, but the inability to attract online consumers from the dominant Internet platform company in a normal market situation. In this sense, in the Internet field, irreproducibility cannot be a reference factor for determining whether an Internet platform is dominant, let alone a basic criterion for determining whether an Internet platform is necessary for effective competition in the relevant market. It is the data base based on network users that is the basic criterion for judging whether an Internet platform has a monopoly position in the market, and thus whether the Internet platform is necessary for competition in the downstream market.

Third, in the bilateral differentiated market of the Internet, how to accurately define the relevant market is a difficult problem that has not been effectively solved by the current antitrust regulation theory and practice. Under the standard of data base, as long as the data base is in the hands of the Internet operator reaches the standard of forming the network locking effect, it can be found to have a dominant market position, which can bypass the problem of the need to determine the dominant market position

of the Internet and the inability to accurately define the relevant market of the Internet products.

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6 CONCLUSION

The booming Internet industry led by BAT is becoming an important engine for China's economic development and will gradually become one of China's core competencies in the international trade and economic market. However, China's Internet industry has gradually formed an oligopoly market structure, which will lead to more difficulties and challenges for effective competition and consumer protection. Against this background, the thesis explores how existing competition tools and concepts can be applied to data-related competition concerns in digital markets. The governance of the digital platforms requires the joint efforts of themselves and the executive agencies. Under the essential facilities doctrine, platforms, which are commonly referred to as the 'gatekeepers' of the Internet, they need reduce monopoly risk, and the executive agencies need do a good job in external supervision, so as to make the digital economy develop soundly and rapidly.

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