

The Challenge of Monopoly Regulation in Platform Economy

Zuo Jiale

School of Economics, Nanjing Audit University, Nanjing, China

Email: Z1754508201@gmail.com (Z.J.L.)

Manuscript received March 14, 2024; revised March 29, 2024; accepted April 20, 2024; published May 9, 2024.

Abstract—With the rapid development of the new generation of digital information technology, the platform economy has begun to flourish, and various platforms have exerted a subtle influence on people's life. Because the platform has the characteristics of double and multilateral market attributes, scale economy, network effect and lock-in effect, the platform economy is more likely to produce monopoly problems in the market competition. By systematically sorting out the relevant literature, this paper summarizes the characteristics of the platform economy and the current challenges to the anti-monopoly of the platform economy, and puts forward the relevant enlightenment of governance.

Keywords—platform economy, digital economy, monopoly regulation

I. INTRODUCTION

Since the 21st century, with the rapid development of the new generation of information technology such as big data, cloud computing and artificial intelligence, the new generation of Internet industry is rising strongly, and the digital platform based on information technology has gradually become the main component of the digital economy. However, as the main part of the digital economy, the platform economy will inevitably face the problem of platform monopoly in its development.

Platform economy is the product of the joint action of the real economy and digital technology, so it also has a completely different characteristics from the real economy. In the era of big data, user information is the key resource that platform enterprises must compete for. Meanwhile, based on artificial intelligence algorithm, the platform can unilaterally customize “information cocoon room” for its users, making the platform enterprise competitors at a competitive disadvantage. Due to the non-specificity of its business model, its business model is easy to copy, while simple algorithm and digital technology cannot provide enterprises with long-term and stable advantages.

Therefore, it is of certain academic value to study the monopoly problem of platform economy and to explore the anti-monopoly regulation measures. In theory, it can enrich the anti-monopoly theory and contribute to the research of virtual economy. In practice, it can provide some inspiration for solving the monopoly phenomenon of “platform choice” and “exclusive transaction”, promote the sustainable and healthy development of platform economy, increase social welfare.

II. CHARACTERISTICS OF PLATFORM ECONOMY

A. Multilateral Market Properties

A platform brings together different users and acts as an intermediary for user interaction. It is also a typical multilateral market. On one side is the demand side

composed of users, and on the other side is the supply side providing services for users. Platform economy is a mode of resource allocation in which the platform is the carrier, the multilateral market is the support, and the supply and demand of multilateral entities are matched. With the integration and development of multiple factors, especially the wide application of digital technology, platform economy has evolved into a resource allocation mode of multilateral entities based on platform and digitalization, which is a new paradigm of resource allocation different from unilateral market. The main expression form of digital economy is to use the platform model to achieve the accurate matching of supply and demand, and the platform itself has the characteristics of multilateral market, so the platform economy also has the attributes of multilateral market. The so-called platform model, in a word, is to design a platform that can attract at least two consumer groups, and the market demand represented by these two consumer groups is positively correlated with (Sun, 2021).

Taking TAOBAO e-commerce platform as an example, the platform attracts sellers to sell goods on the platform, and attracts buyers to buy goods on the platform, and on this basis, the ecology within the platform is formed. However, this feature also shows that consumers have the possibility of using multiple platforms at the same time. The buyer can buy the same product or service on multiple platforms, and the seller can also sell the same product or service on multiple platforms. If consumers can choose from multiple platforms, the platform is quite limited. Therefore, in order to protect its own profits, the platform will restrict consumers, especially the platform choice of sellers. On this basis, the monopoly problems of platform economy such as “exclusive transaction” and “alternative” are derived.

B. Scale Economy

The operation of platform economy is based on the Internet, so it will not be limited by time and space, nor will it be constrained by natural resources, so theoretically there is a huge scale economy effect (Yin *et al.*, 2022). Some scholars research points out that platform economy can first through technical scale effect to solve the problem of the cost of products or services, then by the network effect to compress the cost of platform operation and service, make its control below the number of customer change range, eventually reached the limit threshold of scale, the cost growth infinite to zero (Katz, 2019). In addition, the platform generally has a large openness, which can form a huge user scale, and then produce a huge range of economic benefits and high market share. Therefore, the economy of scale characteristics of the platform makes it easy for the platform enterprises to obtain a high market share and user base, and it is also easy to cause monopoly problems.

Platform economy has the characteristics of scale economy and scope economy, so platform economy will naturally pursue a larger market share. Platform economy, especially the rapid expansion and strong bargaining power of large digital platforms, has some impact on the production and research and development of small and medium-sized enterprises. Large platforms use capital and data advantages to rapidly explore the market, and then use market advantages to improve their bargaining power. In the short term, consumers can get cheaper products, but in the long run, the reduction of bargaining power of small and medium-sized enterprises will reduce their investment in research and development of new products, which is not conducive to these enterprises to improve product quality and develop new products.

C. Network Effect

Network effect refers to the phenomenon that the utility of a product or service to users increases with the increase of the number of users, which is also a theoretical explanation that the platform economy is easy to expand. In the network effect, the digital platform that enters a certain market earlier or obtains capital and technological advantages due to disruptive innovation will occupy a favorable situation in the market competition because of the first-mover advantage, and the Matthew effect of “the strong are always strong, the weak are always weak” will constantly appear (Wang and Fang, 2021). Platform network effect has a strong externality, namely the platform users rely on the number of the same platform users, the consumer behavior is network externalities intuitive explanation is the more users platform to attract new users to join, because the more users represents the platform goods recipient more review, product quality level is relatively higher.

Generally speaking, there are two kinds of network effects on Internet platforms, one is direct network effect, and the other is cross network effect. Direct network effects are when the value of a product or service to consumers increases as the number of consumers using the product or service increases. Under the network effect, the platform has a self-reinforcing positive feedback and positive growth mechanism, once the number of platform users increases, beyond a certain threshold, the number of users and transactions of the platform will grow exponentially. The network effect also has a negative feedback mechanism, when the number of platform users decreases, below a certain critical value, the number of users and transactions of the platform will continue to decrease.

In addition, the more users the platform has, the easier it is for new users to get buying advice from users with the same preferences. The network externality of the bilateral market is not a one-way and linear externality, but presents a crossover nature, namely, the crossover network externality (Xiong, 2019). The cross-network externality under the two-sided market platform is that the user utility is not only dependent on the number of users on one side of the platform, but also related to the number of users on the other side of the platform. This cross-network externality will cause a huge network effect in the operation process of the bilateral market.

D. Lock-in Effect

Lock-in effect refers to the phenomenon that platform users subjectively ignore the changes in the use cost of the platform and insist to the time cost paid by being familiar with software operation and replacing and upgrading the system. Intuitively, platform users for a long time will produce habits and dependence, and are too lazy to change other platforms. The lock-in effect will stimulate the self-strengthening mechanism of the platform, further increase the transfer cost of the platform users, and make it easier for users to change the platform (Farrell and Klemperer, 2007).

Under the influence of network effects, the more users on the platform, the greater the value of the platform, and the higher the transfer cost when users want to leave the platform and transfer to other platforms. Due to user preferences, learning costs, transfer risks and many other reasons, when this transfer cost is very high, users will be locked in the original platform. When users want to move from one platform to another, users need to consider the cost of moving. At the same time, with the support of massive data and powerful data processing capabilities, the platform can continuously improve its own services, enhance user dependence, and further increase user transfer costs. Over time, strong user engagement can be formed, and the locking effect will be more solidified.

In addition, lock-in effect will reduce the platform of privacy (Bamberger, 2017). It provides more development space for platform, also further strengthen the monopoly of platform, namely through path dependence let users accustomed to an operator's products and services, under the premise of no high conversion cost cannot use another operator of similar products.

III. MONOPOLY PERFORMANCE OF PLATFORM ECONOMY

A. Cross-border Merger

Cross-border competition means that the platform utilizes the advantages accumulated in the basic service market and relies on technological innovation to continuously develop new value-added products or services. On the one hand, the platform carries out cross-border competition in order to obtain the extensive and lasting attention of users to obtain more business opportunities; On the other hand, the lower reproduction cost of digital products and services allows platform enterprises to participate in the competition for market share in other segments by relying on existing user traffic relatively easily without restrictions on intellectual property rights, thus making cross-border competition a realistic possibility. On the one hand, this change increases the functions and services of the product, but on the other hand, it also makes the product boundaries more blurred, which brings new problems to the determination of the benchmark product in the definition of the relevant market.

In the traditional enterprise monopoly, there are two main forms of merger: horizontal merger and vertical merger. Horizontal merger refers to different enterprise entities for the same interests, and finally achieve monopoly high price and profit expansion. Vertical merger refers to the upstream and downstream of products in order to improve the operation efficiency of the upstream and downstream of the

supply chain, through the vertical merger to block the market, and then limit the competition, to achieve the purpose of obtaining monopoly profits (Shi, 2021). Under the era of digital economy, the connotation of enterprise merger further extension, digital platform enterprises can through the implementation of cross-industry, cross-field mergers to build a huge ecological connectivity platform, monopoly platform to enter a new industry, expand their business scope, and even can achieve control platform competitors of raw material suppliers and product sellers, and produce market delineation effect, improve the cost of the platform competitors to achieve the purpose of limit its market share (Qu and Liu, 2018). This unique form of platform economy is called “diagonal merger”. Compared with traditional horizontal and vertical merger, diagonal merger is more threat of monopoly.

B. Abuse of Data Dominance

Competitive disruption and monopolistic behavior in the field of platform economy include abuse of dominant market position, discriminatory pricing, hijacking, restrictive transactions, preventive acquisitions, misuse of data, algorithmic discrimination, monopoly agreements, etc. Traditional market regulation and anti-monopoly have three cores: first, the definition of the relevant market is taken as the premise, second, the quantitative index is taken as the judgment standard of dominant position, and the third is the influence of the manufacturer’s behavior on competition. However, the market behavior of the platform is more reflected in the platform ecosystem or related fields, and its market behavior and related effects are significantly different from the traditional monopoly behavior and its impact.

To a certain extent, the platform’s destruction of competition is more the abuse of the dominant market position supported by the platform as an intermediary and data. First, the entry threshold. The platform has economies of scale and cross-boundary network effects supported by multilateral markets and digitization, which will create high barriers to entry and “threshold” user requirements. At the same time, incumbent platforms will continue to raise the threshold and “threshold” requirements through multiple initiatives to maintain a competitive advantage or market position. The second is data interoperability. Incumbent platforms may hinder the realization of data sharing through various means, ultimately making it difficult to achieve data portability and interoperability, so as to obtain data advantages by relying on the accumulation, ownership and use of data assets. The third is self-preference. When the Platform’s own products or services compete with those provided by other suppliers using the Platform, it shall give its own products and services special preferences to different degrees. Fourth, differential pricing supported by data.

Thousands of buyers and sellers trading on the platform also expose massive user data to the platform, which is a key resource in the digital age. The platform has mastered the user transaction data, and it has the dominant position of data with the data mining technology and big data algorithm. From a positive perspective, the platform can use the advantage of data to manage the market within the platform more efficiently, improve the matching efficiency of supply and demand, and improve the quality of service. From a

negative point of view, the platform can also use users’ transaction data to adopt monopolistic behavior and hinder the market competition within the platform.

In addition to the above abuse of data dominance, there may also be the collusion of using data, that is, after the platform signs the price agreement with the seller, the price level of a product of the seller is similar to that of other platforms through artificial drainage and data manipulation. In essence, this is that platforms abuse their dominant position to force users to price, weaken the competitiveness of other platforms, consolidate their own market position, and secretly damage the principle of fair competition.

IV. CHALLENGES OF MONOPOLY REGULATION

A. Vague Definition of Monopoly Standard

Since the platform itself is based on digital technology, in the current popularity of the Internet, any new platform may acquire a huge user group and occupy a large market share, but it is unknown whether a platform with a large market scale must be suspected of monopoly. First, the platform depends on network effects. When the more users on one side of the platform, the more users on the other side of the platform and even both sides of the platform gain. Secondly, the platform economy itself has the characteristics of diminishing marginal cost or even the marginal cost near zero. In the early stage of the platform, the investment in the infrastructure construction is large. In the growth period of the platform, the daily investment in maintaining the platform is relatively large. But when the platform is mature, each additional user will reduce the marginal cost of the platform. Therefore, for the platform economy, a large market size and a high market share are inevitable trends.

In the traditional economy, the main body participating in economic activities is the buyer and seller, and the seller provides one-way flow of products and services to the buyer, and the function of the product or service is often relatively simple. Therefore, when monopoly disputes occur, it is easy to identify the benchmark product of the case. Therefore, in traditional anti-monopoly cases, the research on the definition of relevant commodity markets mainly focuses on the analysis of product substitution. In platform antitrust, the characteristics of multilateral market and cross-border competition make the determination of benchmark products in the definition of relevant commodity markets become an important prerequisite. Different from the unilateral market under the traditional economy, the platform bilateral market has the characteristics of providing services to both users, non-neutral price and cross-network externalities. Under the characteristics of cross-border competition, Internet enterprises integrate a variety of different types of value-added services in basic services, which has diversity and complexity. At this time, whether the value-added service can be separated from the basic service into an independent product also raises a problem for the determination of the benchmark product.

In addition, the advantages of big data can only be reflected based on the huge user scale, so the larger the more efficient the platform economy will be. Besides, whether the platform is large depends not only on the magnitude of the platform itself, but also on the market size of the bilateral

platform. The larger the market size of the bilateral platform, the higher the high social benefits of the platform. Therefore, the analysis of the monopolistic behavior of platform economy requires more comprehensive consideration and more accurate calculation, set reasonable monopoly judgment standards, and accurately define the relevant commodity market.

B. Fierce Market Competition

Due to the network effect, economies of scale and the existence of diagonal merger behavior, even if the market competitors less, there is a wide range of cross-border competition between platform, and due to the lack of platform business model innovation, easy to copy, platform on the market enterprises facing more intense internal competition pressure, the competition equilibrium in the short term is easy to break. Relatively speaking, in this fierce competition situation, only a larger scale platform can stand firm in the competition, continue to carry out innovation and product development and upgrading, so as to provide consumers with a broader and better choice. In order to create a larger market and expand its own scale, the platform must realize innovation and increase research and development efforts, which realizes a virtuous cycle.

However, in the early stage of the platform construction, the monopoly platform can also adopt an aggressive pricing strategy and attract users to join at a price lower than the market price, but it also increases the cost of potential entrants in the industry. In this case, the more increased R & D investment to reduce costs, the more detrimental to industry innovation and market competition. Therefore, the establishment of the monopoly judgment standard also needs to identify the platform enterprises in different types of competition and different degrees of competition situation. After all, some monopolies do not necessarily threaten the market competition order or even are conducive to the maintenance of the competition order.

C. Data Advantages May Not Last Long

Data plays an important role in the development of platform economy. Another reason for taking the ability of a platform to master and process data as an important factor for determining its dominant market position is that the massive data and powerful data processing ability of a platform are easy to cause market entry barriers, which will increase the difficulty for competitors to obtain data and make it impossible for them to compete effectively with incumbent platform enterprises. Thus, the market power of incumbent platform companies can be maintained.

In the era of digital economy, data, as a new factor of production, has entered the links of production, processing, circulation and consumption, and is also the core asset of the current major digital platforms. Some platform enterprises obtain a large amount of data from users through multiple business scenarios, which triggers the discussion of “data oligopoly” and “data monopoly” in the academic circle. However, the data itself is replicable and non-exclusive, so it is difficult for the platform to achieve market monopoly through data, and it is difficult to give the data exclusive characteristics through data monopoly to consolidate its monopoly position. Therefore, the advantages of the platform enterprises that obtain the monopoly position with the

advantages of big data may not be lasting, and the value of anti-monopoly regulation is limited. The anti-monopoly of platform economy should focus on the use of enterprises’ own capital advantage and first-mover advantage to prevent potential competitors from entering the industry.

V. CONCLUSION

In order to build a long-term anti-monopoly mechanism, and adopt targeted short-term regulatory measures and administrative control, it is also necessary to build a systematic overall regulatory framework and a long-term regulatory mechanism. According to the particularity of the platform economy itself, the monopoly identification standards such as the relevant market, dominant position, price discrimination, algorithm control and excessive merger and acquisition should be scientifically and reasonably defined, and precise governance should be implemented.

It is effective to vigorously develop hybrid supervision and promote the unification of behavioral supervision and functional supervision. With the application of a new generation of digital information technology, it will promote the digitalization and intelligence of monopoly supervision, improve the data analysis and processing capabilities of monopoly regulators, and strengthen the ability to identify monopoly behaviors.

It is necessary to strengthen the protection of consumer rights and interests, improve the relevant standards for consumer rights in the field of platform economy, and pay attention to the protection of the right to security, the right to know the truth, the right to make independent choices, the right to fair trade, the right to seek compensation according to law, and the right to supervise and criticize.

CONFLICT OF INTEREST

The author declares no conflict of interest.

REFERENCES

- Bamberger, K. A., Lobel, O. 2017. Platform market power. *Berkeley Technology Law Journal*, 32(3): 1051–1092.
- Farrell, J., Klemperer, P. 2007. Coordination and lock-in: Competition with switching costs and network effects. *Handbook of Industrial Organization*, 3: 1967–2072
- Katz, M. L. 2019. Platform economics and antitrust enforcement: A little knowledge is a dangerous thing. *Journal of Economics & Management Strategy*, 28(1): 138–152.
- Qu, C., & Liu, H. B. 2018. The cross-network externality, platform heterogeneity and the market foreclosure effect of diagonal mergers. *Industrial Economics Research*, (02): 15–28. doi:10.13269/j.cnki.ier.2018.02.002.
- Shi, X. M. 2021. The formation mechanism of internet platform enterprises monopoly: From data competition to data rent. *Journal of Management*, (06): 1–12. doi:10.19808/j.cnki.41-1408/F.2021.0041.
- Sun, J. 2021. Antitrust regulation of digital platforms. *Social Sciences in China*, (05): 101–127, 206–207.
- Wang, X. L., & Fang, X. 2021. The anti-monopoly in platform economy: Trends, challenges, and countermeasures. *Journal of Shandong University (Philosophy and Social Sciences)*, (02): 87–97. doi:10.19836/j.cnki.37-1100/c.2021.02.009.
- Xiong, H. 2019. Platform monopoly in the development of digital economy in China and its governance strategies. *Reform*, (7): 52–61.
- Yin, Z. T., Chen, Y. X., & Xu, J. J. 2022. Platform economy: Characteristics, monopoly analysis and anti-monopoly regulation. *Nankai Business*

Review, (03): 213–226.

Copyright © 2024 by the authors. This is an open access article distributed under the Creative Commons Attribution License which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited ([CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)).