

*Original Paper*

# Discussing the Prudence Application of “Essential Facilities Doctrine” in Anti-Data Monopoly Strategies in the Digital Economy Era

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## **Abstract**

*As one of the most fundamental production elements of the digital economy, data has become a critical factor in determining enterprises' competitiveness. Consequently, it is highly problematic that data monopolies frequently form in the market. Recognizing the issue, principle fourteen in “Anti-trust Guidelines on Platform Economy (Draft for Comments)” establishes a methodology for regulating data access restrictions. In addition, it reflects on the viral and debatable data monopoly problem by clearly stating that data can be perceived as an “essential facility”. In the study, it is argued that the “Essential Facilities Doctrine” has a high practical significance for regulating vertical monopoly in the traditional economy; however, it should be applied with caution under certain restrictions when dealing with data monopoly.*

## **Keywords**

*Essential Facilities Doctrine, data monopoly, anti-monopoly*

## **1. Background**

“CPC Central Committee and the State Council’s Opinions on Advancing reforms on the market-based allocation of production factors” demonstrate that data can be considered a key production factor. It is recognized that data plays an essential role in the digital economy development. Consequently, proprietors competing for access to crucial data in the market have become a common phenomenon. When a proprietor collects enough data to disrupt the competition, its actions can be independent of its competitors’ and consumers’ opinions. Thus it gains a dominant power in the market. And data monopoly forms (Yang, 2021). “Essential Facilities Doctrine” applies when the monopolizer controls

the “bottleneck” of the necessary materials or resources. In particular, when the monopolizer controls the access to the essential facility for competing in the downstream market. And the facility cannot be duplicated by its competitors. In these situations, the doctrine forces the monopolizer to share the facility with its downstream competitors to resolve the issue. In other words, the “Essential Facilities Doctrine” is a law that imposes additional trading obligations on market monopolizers (LAO, 2013).

Currently, many legal cases outside of China concern the necessity of providing open access to essential data. Consequently, researchers participate in multiple discussions about whether the “Essential Facilities Doctrine” should be applied to data monopoly. In China, the guidance for using the doctrine in data monopoly is first proposed in 2020. Principle fourteen in “Anti-trust Guidelines on Platform Economy (Draft for Comments)” clearly states that data can be considered an “essential facility” and lists the preconditions for applying the doctrine. To summarize, “Anti-trust Guidelines on Platform Economy (Draft for Comments)” consider the following factors. The data needs to be indispensable for the market competition; enterprises can only obtain the data from a predetermined channel; open access to the data needs to be achievable; the potential influence on the data owner is manageable. Overall, it is demonstrated that “Anti-trust Guidelines on Platform Economy (Draft for Comments)” provides a thoughtful response to the viral and debatable data monopoly problem.

“Essential Facilities Doctrine” has been a long-existing yet highly controversial anti-monopoly rule. It is a mandatory remedy that ensures the fairness of market competition and the effectiveness of access to the facility. However, it is limited and restricted in its application. Forcing the proprietor to share the facility with its competitors causes conflicts. And it may negatively affect the its willingness to invest and innovate. The anti-monopoly agencies in the US and UN have similar concerns, so they are prudent in considering data as an essential facility. Note that there are also practical dilemmas in defining the market for the data, identifying dominant power, and providing open access (Wang & Wu, 2021). Therefore, it adds to the difficulty of determining whether data should be considered an essential facility or not. The official “Anti-trust Guidelines on Platform Economy” published in 2020 removed the principles that directly categorize data as an essential facility. At the same time, it added new clauses considering viewing the integration of data and platform as an essential facility (Shi, 2021). The modification implies that it is still possible to apply the “Essential Facilities Doctrine” to data.

Regarding providing open access to data, the “Essential Facilities Doctrine” is effectively introduced by the guidelines as a possible solution for regulating data monopoly. However, researchers have not yet reached a consensus about whether data should be considered an essential facility or not. In addition, the application of the doctrine is shown to be a key challenge in anti-monopoly theories and practices. It is argued that the “Essential Facilities Doctrine” must be applied with caution due to its controversies, the non-competitiveness nature of data itself, and the rapid growth of dynamic competition in China’s Internet industry (Qin, 2021).

## 2. The Theoretical Frameworks Supporting the “Essential Facilities Doctrine”

“Essential Facilities Doctrine” is a long-existing, yet highly controversial principle in the anti-monopoly history (Li, 2009). Technically, the doctrine can apply to many situations in practice. However, the appropriate contexts are not articulated definitively for case law regions like the US and UN or other statute law countries (Chen, 2021).

Researchers agree that the “Essential Facilities Doctrine” was first applied in the United States v. Terminal Railroad Association of St. Louis Case in 1912. At the time, Terminal Railroad Association controlled the bridges across the Mississippi River in St. Louis and their related facilities. And Terminal Railroad Association refused to open the facilities to its competitors. The judge thought the facilities were essential for the competition. And in order to encourage effective market competition in the local transportation industry, Terminal Railroad Association should open the facilities. As a result, Terminal Railroad Association needs to share the ownership of the facilities with its competitors. Moreover, if the competitors are not interested in obtaining the ownership, Terminal Railroad needs to provide open access to the facilities to the competitors under reasonable condition (Note 1). The case provided the foundation for forming the theoretical framework of the “Essential Facilities Doctrine”. In the later MCI Communications Corp. v. AT&T. Co. Case, United States Seventh Circuit Court introduced the concept of “essential facilities”. The court believed that the owner of the essential facility could potentially utilize its advantages to restrict the actions of its competitors. The court proposed the precondition for applying the “Essential Facilities Doctrine” as the following. It must be proved that, first, the monopolizer controls the facility. Second, the monopolizer refuses to open the facility to its competitors. Third, the monopolizer can provide access to the facility to their competitors (Note 2). Scholars agree that the US sets the precondition for applying the doctrine with this legal case. However, court judges are still prudent in practice. They implement strict procedures when using the “Essential Facilities Doctrine”. And consequently, very few cases are judged solely based on the doctrine.

The UN is relatively more open about applying the “Essential Facilities Doctrine” in practice. It is demonstrated that the doctrine can be applied to intangible properties, services, and copyrights. It implies that the definition of “essential facility” can extend beyond tangible properties. In addition, the doctrine is included in “Treaty on the Functioning of the European Union” Principle 102. And it is used and improved in multiple legal cases.

However, applying the “Essential Facilities Doctrine” to big data is still controversial. The legal departments in the US and UN have different opinions. Anti-trust enforcement department in the US proposes that big data should be considered raw materials or resources in Mergers and Acquisitions reviews. On the other hand, the UN publicly states that it is considering using laws that regulate the abuse of dominance in the market to include principles about big data. Germany and France jointly published the “Competition Law and Data” report in 2016. The report clearly states that big data can be seen as an essential facility. Therefore refusing to trade big data with its competitors can be seen as an abuse of dominance. Overall, the UN is still cautious and conservative about applying the “Essential

Facilities Doctrine” to data. In China, as the “Anti-trust Guidelines on Platform Economy” propose, the doctrine can start to be used in the digital governance of the platform economy.

### **3. The Legitimacy of Applying the “Essential Facilities Doctrine” in Anti-Data Monopoly**

Compared to traditional industries, the market competition in the Internet industry is shifting from “price dominance” to “data dominance” (Shi, 2021). It implies that the data ownership directly links to the proprietor’s status in the market. Enterprises are in need of open access to data, so new laws and regulations are necessary for the current situation. It is demonstrated in the history of the “Essential Facilities Doctrine” that applying it in the digital economy can cause conflicts of interest. Forcing the proprietor to provide data can demotivate it to invest in building the essential facility. At the same time, due to economies of scale and network externalities in the digital economy, the data owner can easily create a bottleneck that prevents competitors, especially downstream competitors, from entering the market by refusing to share its data. Its action can also negatively affect market innovation. As a fundamental principle in competition law, “Essential Facilities Doctrine” should also be considered in the digital economy as it provides insights into addressing the conflict of interests. Because of the competitive nature of data, the conflict results from sharing data is not unresolvable if careful considerations are made (Yang, 2021).

#### *3.1 Data Bottleneck Phenomenon*

The data market exhibits strong network externalities, so it is possible that “the winner wins all” in the data centralized sub-markets. At the same time, data monopolizers can easily cross the market boundary and cause multiple layers of monopoly in the broader industry. In the digital economy era, data has become the engine for innovation and the key barrier to entering a data-intensive market. Platform economy drives the reform of competition advantages; giant platforms accumulate data in mundane industries like clothing, food, housing, and traveling and service industries like entertainment, socializing, and payment. Furthermore, giant platforms strive to form closed ecological systems to amplify the Lock-in Effect (Zhao, 2022). From the industry perspective, data monopolies form mainly in the social networking, search engine, and e-commerce sub-market of the Internet industry. And the oligarchy platforms in the three sub-markets have enormous power.

#### *3.2 “Essential Facilities Doctrine” Is a Powerful Way to Break the Data Monopoly*

Big data has a high fixed price, but it can provide high financial profit. As stated above, forcing the monopolizers to open the facility may induce the risk of restraining innovation. However, without open access, new enterprises entering the market need to invest a lot of capital and spend a long time to catch up. Due to economies of scale and network externalities, the users will likely stay with the same platform instead of moving to the new platform. The Lock-in Effect prevents the new enterprises from collecting additional data although they have invested a lot of money to innovate and develop their products. It is implied that the new enterprises cannot enter the market not because their quality or price of services is poor; but because the monopolizer locks them out (Zeng & Zhu, 2019).

The “essential facility” needs to be developed with long-term investment. Therefore “Essential Facilities Doctrine” asks the competitors who share the facility with the owner to pay for the facility. To prevent the owner from setting an unreasonable price and stopping the competitors, the “Essential Facilities Doctrine” also potentially regulates the price range. Dealing with data monopoly by applying the “Essential Facilities Doctrine” is effective because the doctrine ensures the monopolizers are held responsible for sharing the data with these hidden implications. The “Essential Facilities Doctrine” can provide key support for other enterprises that need the data to enter the market. And it minimizes the negative impact on the data monopolizers. Therefore, the doctrine can be applied to protect the liberty and fairness of competing in the market (Shi, 2021).

### *3.3 Data Sharing Is an Inevitable Trend for Digital Economy Development*

Data sharing can reduce the cost of data processing and analysis, thus improve the quality of data and the effectiveness of utilizing them. Note that a monopoly in the digital market is different from a monopoly in the real economy. In the digital market, the data giants profit from innovation. As long as the Internet industry can continue to expand, they need to continue implementing new ideas to survive in the market. Compared to “essential facilities” in the bridge, railroad, and electric power industries, data itself is not exclusive, which means openly sharing the data does not damage it. Due to the nature of data and the nature of digital economy development, data sharing is an inevitable trend. In addition, sharing data can motivate the development of more innovative products or services. It is argued that the boundary value of digital resources is not yet fully explored. And the unknown range of profit motivates the competitors and potential competitors inside and outside the market to invest (Zhou & Su, 2020).

## **4. The Prudence Application of “Essential Facilities Doctrine” in Dealing with Data Monopoly**

### *4.1 Articulates the Preconditions for Considering Data as an Essential Facility*

To properly apply the “Essential Facilities Doctrine” in the digital economy, the government must set the preconditions and boundaries for considering data as an essential facility. After conducting thorough research about the frameworks that set the conditions for applying the doctrine in “Anti-trust Guidelines on Platform Economy” and relevant studies, the paper propose that the following factors need to be considered:

- (1) The precondition for applying the doctrine is that the data owned by the monopolizer has to be essential and necessary for other enterprises to enter the downstream market. If other enterprises can still freely enter and compete in the downstream market without obtaining the data, the data is not considered an “essential facility” (Shi, 2021). “Essential Facilities Doctrine” does not apply in this situation. Oppositely, if some products or services cannot be provided without using the data or the industry cannot function properly without using the data, the related data is then an “essential facility”.
- (2) The “essential “data cannot be fundamentally or functionally replaced by any other data to make products, provide services, or support the industry. In addition, any other competitors cannot develop or

duplicate the “essential” data by putting in the work and effort.

(3) The “essential” data is owned by one proprietor. In other words, the facility is in the control of the monopolizer.

(4) Providing open access to the data does not affect the quality of the data owner’s products and services, and it does not impose additional data security or privacy issues.

(5) Data owner can put forward its reasons for refusing to provide the access.

The official version of “Anti-trust Guidelines on Platform Economy” do not clearly state that data can be considered an essential facility. However, it does not indicate that the “Essential Facilities Doctrine” cannot be applied to data. This version still leaves the probability open. To ensure the effectiveness of the guidelines in practice, the government should clarify that the “Essential Facilities Doctrine” can only apply to data under certain circumstances. If the preconditions are not met, the government or the legal agencies should not force the proprietor to provide open access to its data unless the data sharing can improve the competitive environment enormously and the profits from sharing can benefit the consumers (Wang & Wu, 2021).

#### *4.2 Setting the Boundary for “Essential Facilities Doctrine”*

Direct competition is a form of horizontal competition. It implies that refusing to provide open access will not have an anti-competitive effect. However, in indirect competition, refusal of opening the access may give the monopolizer dominant power in other markets as well. The monopolizer is then able to reduce and eliminate competition in other markets.

“Essential Facilities Doctrine” only applies to indirect competition. It is because leverage theory heavily influenced the development of the doctrine. The nature of indirect competition is that the proprietor utilizes the leverage effect to increase its power in another market. As a result, the proprietor takes the dominant position in both markets. The proprietor may not be directly receiving profit from the other market. However, its dominant position leverages the transaction cost in that market, thus damaging its competitors. “Essential Facilities Doctrine” is supposed to prevent the monopolizers from controlling the essential facilities and extending their market influences to eliminate or reduce competition in related markets (Yang, 2021).

#### *4.3 The Effect of Dynamic Measurement on Competition Order*

Protecting and improving the competition order is the precondition and basis of imposing regulations on market activities. The government and enforcement agencies need to strictly follow the essential value principles and obey the standards set by laws to ensure the application of the doctrine is prudent, effective, and lawful. Furthermore, the regulator needs to find the balance of achieving short-term competition and long-term investment before determining if the “Essential Facilities Doctrine” applies. To help finding the balance, some researchers propose that the principle of proportionality in administrative law can be used as a reference. The principle of proportionality investigates the types of activities and their influence on the conflict of interest; it can identify the types of action that will achieve a balance and determine the standard for the lawful action (Zhang, 2019). According to the

“undermine market neutrality” principle, competition is the process of dynamically balancing profits for all parties. It is naturally justified to use the principle of proportionality to set the boundary for unfair competition. Applying the principle of proportionality in anti-data monopoly can guide law enforcement agencies and judiciaries by ensuring that they cannot categorize irrelevant data as the essential facility without effectively protecting the market competition. And the principle can reduce the possibility that the data owner will be severely harmed without legitimate reasons, thus protecting the data owner’s profit and ability to innovate.

To be specific, the following criteria need to be met before applying the doctrine. First, the “Essential Facilities Doctrine” needs to be appropriate for the situation. The government or enforcement agencies must conduct comprehensive investigations to ensure the appropriateness. In addition, they must analyze and evaluate the data owner’s reasons for refusing to provide open access. The demur may be legitimate if the reasons are justified. In addition, it needs to be proved that sharing the data is beneficial for protecting the downstream market competition. Second, the doctrine needs to be necessary for the situation. The doctrine should not be applied if the data owner can provide an alternative solution. And the alternative solution can reduce and minimize the damage to competition orders. Third, the restricted theory of proportionality needs to be considered. In other words, the request for data sharing can only cover the minimum data for entering the market. Mandatory sharing of more unnecessary data needs to be prevented. Utilizing the proportionality principle can protect the data owners’ profit to the maximum extent before future research can provide appropriate standards for quantifying the trade-off between short-term competition and long-term investment (Shi, 2021).

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### Notes

Note 1. See *United States v. Terminal Railroad Ass’n*, 224 U.S. 383 (1912).

Note 2. See *MCI Communications Corp. v. American Tel. & Tel. Co.*, 464 U.S. 891 (1983).