Relevant Temporal Market Definition of Internet Enterprise

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Abstract: In practice, the relevant temporal market is defined using demand substitution method, supply substitution method and SSNIP test, but its operation in the context of Internet enterprises not only deviates from the focus, but also does not fit with the relevant temporal market, and the scope of analysis covered by it is limited. Therefore, this paper proposes a more reasonable formulation of the relevant time market for Internet enterprises by combining relevant factors. In this regard, this paper proposes a principle-oriented theoretical framework with the integration of relevant factors as the main path, supplemented by the analysis of penetration rate indicators while considering the market structure.

1. Introduction

According to the traditional analysis model of antitrust law, the logical starting point for the examination and trial of antitrust cases is the "definition of the relevant market". Therefore, the importance and role of the definition of the relevant market is self-evident. The most traditional methods of dealing with antitrust cases in China are the definition of the relevant product market and the relevant geographical market. However, in the environment of the Internet industry where "fast" is the keynote of development, the importance of the relevant time market far exceeds that of any previous development stage. The development and competition of the Internet market is changing rapidly, and the definition and analysis of the whole relevant market can only be vague under the previous analysis mode of ignoring the definition of the relevant time market, which will bring difficulties to the definition and analysis of the market power of enterprises. Too short a definition of the relevant time market may

A too short definition of the relevant time market may artificially narrow the relevant market and lead to an over-interpretation of the market power of enterprises; a too long definition of the relevant time market may expand the real relevant market and spare some monopolistic behaviors that should be sanctioned by the law enforcement authorities. This paper proposes the definition of the relevant time market for Internet enterprises, adding a dimension to the analysis of China's traditional relevant market This paper proposes the definition of the relevant time market for Internet enterprises, adding a dimension to the analysis of the traditional relevant market in China - the time dimension - in order to meet the challenge of the Antitrust Law by the rapid development of Internet enterprises.

2. The definition of the market needs to be principle oriented

2.1. Long-term development principle

The long term development principle means that when reviewing an antitrust case, enforcement authorities look at the competitive situation in the market over a period of time, i.e., the various factors affecting the development of the market are considered together over a period of time. This view has been expressed by Australian courts. The Australian court in Tooth & Tooheys noted that the longer consumers respond to the market economy, the longer the market's effects will be. It makes no sense to focus only on the short-term market when our legislative (or enforcement) objectives are clear and reasonable; we need to examine the issue of the effects of competition in the context of long-term development.

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The Long-Term Development Principle is a principle based on the traditional industry that divides the relevant time market. The theoretical logic of this principle starts from the fact that market competition is always dynamic and that dominance cannot exist forever. This is even more evident in the case of Internet companies. The general environment of innovation and creative destruction, the temporary nature of market barriers and the swarm of potential competitors not only demonstrate the dynamic nature of competition and the non-permanence of dominance, but also reveal the deeper reasons why competition is dynamic and dominance is non-permanent. Therefore, this principle can be fully applied to the definition of time markets related to the Internet market.

2.2. The principle of predictable range

The specific meaning of the principle within the predictable range is that when the relevant time market is defined, the enforcement department should make a reasonable time range to determine the competitive state of the analysed market according to the existing actual situation. The within-predictable range principle and the long-term development principle are closely related and interdependent. For Internet enterprises because of the dynamic nature of competition and other reasons need to appropriately enlarge the scope of the relevant time market, which is the premise of defining the relevant time market of Internet enterprises. However, the amplification of time boundaries will, on the one hand, make the antitrust enforcement agencies have laws and cases but are unable to determine the real market power of the enterprises, and on the other hand, make the enterprises have a fluke mentality and try out at the edge of violation. Thus, it is necessary to rely on the principle of predictable scope for necessary restraint and appropriately shorten the relevant time market so that the improper behavior of enterprises falls within the predictable scope, which is a defective complement to the principle of long-term development and a powerful deterrent to the improper behavior of enterprises in private, and a powerful guarantee to ensure the normal operation of the market and the vigorous development of the new economy.

3. Relevant time period integration as the main path

Guided by the broad principles, it remains difficult to clarify the relationship of various factors to draw the final relevant time market conclusion. Therefore, in this paper, we propose the idea of integrating the relevant time periods after combining the relevant factors.

3.1. Relevant time period of the background market

The first time period relevant to the background market in which the company is located is divided. Taking basic network technology as an example, 3G technology is located in the time period from 2009 to 2013, while 4G technology is from late 2013 to the present. The significance of dividing this time period is that:

- The time period is more stable and long-term because the background market considerations such as infrastructure and technological facilities are not as frequently updated as the upper level facilities. The time period of the background market is more stable and long term, which is a good reference in line with the long-term development principle.
- The workload can be reduced by taking the lead in defining the time period of the background market. The time period of the background market is similar to the relationship between commonality and individuality compared with the time period of the market segments. Focusing on the relevant time period of the market segments after effectively extracting the common factor (time period of the background market) can make the analysis process simple and clear.

3.2. Relevant time periods for different types of companies

Secondly, the Internet companies are categorized and then combined with relevant factors for the time period. Internet companies are mainly divided into two categories: innovative product-based and core competitiveness-based. Different types require different factors to be combined. The time periods related to innovative product Internet enterprises include the duration of monopolistic behavior, the time period of product innovation, the product life cycle and the duration of intellectual property protection. The time periods associated with core competence Internet enterprises include the time period of monopoly behavior duration and the different time periods experienced during the development of business models.

3.3. Relevant time period integration

Finally, the time periods of different types of Internet companies are calculated by taking the intersection and the concurrent set, and the results are calculated by taking the intersection with the relevant time periods of the background market (the general Internet market environment). As a result, a relatively long time period and a relatively short time period can be derived. The reason for this operation is that the definition of the relevant market is ultimately a concretization of the proposed market, and the result of taking the intersection is a reflection of the smallest proposed market of the relevant time market, while the result of taking the concurrent set is a reflection of the largest proposed market. The reason that the relevant time period of the background market can only take the intersection is that the background market is far-reaching enough for the upper market to divide the other time period, i.e., the background market considerations are capable and able to divide the two different markets.

After obtaining the minimum range of relevant time markets and the maximum range of relevant time markets, how can they be reduced or expanded into scientific relevant time markets for Internet companies? This question is answered in detail in the following section.

4. Market structure under the penetration criteria for the ultimate orientation

After obtaining the above two different sizes of relevant time markets, what needs to be solved is how to determine the final relevant time market for Internet enterprises. In this paper, we propose to use the penetration index to scientifically expand or reduce the relevant time market of Internet enterprises under the premise of determining the market structure.

4.1. Market structure determination as a prerequisite

Market structure is a concept that reflects the relationship between competition and monopoly in the market. The reason why the penetration index needs to be predicated on the market structure is due to the special nature of dynamic competition in Internet enterprises. This is because Internet business competition is full of dynamics, both in terms of competition mode and competition subject, and the degree of dynamics needs to be analyzed according to a specific market structure to ensure that factors such as competitive dynamics, potential competitors, and competitive innovation are fully reflected in the time-related market definition of Internet businesses.

Market structure can reflect the dynamics of competition. Market structure is composed of market players, which is a reflection of the way the internal elements are connected and struggle, and it reflects the commonality of internal players as well as their individuality. The market structure can reflect the competitive relations of the internal constituents of the market (enterprises) as well as their competitive characteristics. Therefore, using market structure as a prerequisite for analysis can play a role as a pointer.

The types of market structures can be divided into perfectly competitive markets, monopolistically competitive markets, oligopolistic markets, and perfectly monopolistic markets. In practice, the monopolistic competitive market is the norm. However, in this market structure, it is also necessary to distinguish between a perfect monopoly market and a perfect competition market. If the market structure of the case is closer to a perfect monopoly market, it means that the market position of the enterprise is relatively stable and the monopoly behavior shows sustainable characteristics, so it is more appropriate to choose a shorter relevant time market; while when the market in which the enterprise is located is closer to a perfectly competitive market structure, it means that the market competition is more intense, the market entry barriers are low, the market dominant position is unstable and the monopoly behavior is not When the market is closer to the perfectly competitive market structure, it means the market competition is more intense, the market entry barrier is low, the market dominant position is unstable and the monopoly behavior is non-permanent.

Therefore, when the market structure converges to a perfectly competitive market, it needs to be appropriately reduced from the largest relevant time market (obtained by taking the merging set). And when the market structure converges to a perfect monopoly market, it needs to be expanded appropriately from the smallest relevant time market (obtained by taking the intersection set).

4.2. Penetration rate indicator as the final guide

Regarding how to expand and shrink the relevant time market, this paper proposes the penetration rate indicator for this purpose. Penetration rate is a calculated indicator of the relevance of product-to-product conversions and market-to-market expansions. Penetration rate can be applied to be between generations of products or between different stages of development of business models.

For Internet companies with innovative products. For example, when the relevant time market is defined as the life cycle of a product, and it is found that the time period is too short to accurately reflect the relevant time market of the Internet enterprise, the time period can be appropriately expanded by conducting intra-generational product correlation through the penetration rate, and the penetration rate can be calculated by the consumer group for inter-generational product conversion rate, when the consumers all switch to use the new generation products, then of course the old generation products can be used When all consumers switch to new generation products, the penetration rate can be derived from the data of consumers using old generation products, and the correlation coefficient can be derived to expand the relevant time market appropriately. At this point, the penetration rate calculation for product switching is close to the product substitution analysis, but because the later section involves the definition of the time period between markets, the term "penetration rate" is used in this paper to distinguish it from the traditional substitution analysis.

For Internet companies with core competencies. For example, when the relevant time market is defined as the time period of the enterprise in a market appears too short, the time relevance can be calculated by calculating the rate of penetration of the enterprise into other markets, while the penetration rate at this time should not only consider the consumer factor, but also consider the degree of dependence of the enterprise's upstream and downstream on the enterprise, and the penetration rate is derived comprehensively. Assuming that the company has penetrated into other markets, but there is no dependency factor and consumers have not switched to the expanded business of the company, the penetration rate is considered to be zero, which means that the relevance is zero, and the relevant time market is limited to the time period of the initial market, otherwise, it is necessary to use the penetration rate to calculate the appropriate expansion time period. (Unfortunately, the use of the "penetration rate" indicator in this paper is only in writing, due to the lack of data on Internet enterprises.) When law enforcement agencies analyse Internet companies, they can analyse the economic analysis after they have data on the correlation of related companies.

5. Conclusion

In recent years, the state has promulgated a number of regulations for the Internet market, aiming to strengthen the anti-monopoly regulation of the platform market. The relevant market definition, which is the basis of antitrust theory, has an inherent deficiency when facing the Internet market, but the traditional method cannot be completely discarded. The Draft of <*Guidelines on Antitrust in the Platform Economy*> provided that the definition of the relevant market could be waived in a given case only if the evidence was sufficient, the conduct achieved through a monopolistic position in the market had existed for a long period of time and had produced a clear result of damage, and it was very difficult to define the relevant market with great precision. However, this provision has been deleted from the official Guidelines, which means that the relevant agencies consider that no subsequent conclusions can be drawn without defining the relevant market, or that the conclusions drawn lack a certain degree of credibility. Based on this, after absorbing the traditional theories of relevant product market analysis, the market definition theory based on the relevant time market definition is a feasible choice to fully reflect the dynamic competition characteristics of the Internet market. It is the intention of this paper to analyze the market power definition factors scientifically and rationally within a certain relevant time market, and finally to draw scientific conclusions about the market power and market position of enterprises, so as to provide a solid and powerful theoretical premise for the subsequent behavioural definition.

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