

## **New Trends of Competition in a Digital Economy**

### **I. Research Background**

Peter Drucker once predicted that human society will face revolution roughly once every two hundred years. Development of the economy can be divided into three stages, the earliest being an agricultural economy, followed by an industrial economy, and now the digital economy, which started with the rise of the internet after 1995.

New business models, such as e-commerce, cloud computing, big data applications, Internet of Things (IoT), and sharing economy, were developed under rapid technological developments and economic globalization since the end of the 20<sup>th</sup> century, which created a competitive environment. Hence, it is inevitable that digital economy will become an important direction for industrial development. Related legal and economic issues derived from this trend have attracted great attention from the international society.

The development of a digital economy relies on highly available internet access and communication devices, as well as mature commercial trade mechanisms, in which creating a fair competition environment is essential. Therefore, one of the main issues faced by competition policy in an era of digital economy is to find potential difficulties and solutions based on the existing foundation and positioning.

Observing the history of law enforcement by competent authorities of competition law around the world, adjustments are often made following economic development. Hence, avoiding over-protection and its effects on anti-competition, while encouraging technological innovations, is a matter that deserves careful consideration.

Development of network technology has brought challenges of digital economy to countries around the world, and competent authorities of competition law must ponder on how to respond to these challenges with respect to competition policy and law.

### **II. Research Methodology and Process**

This study first gives an overview of the impact and disputes caused by characteristics, development trends, and business models of digital economy. Management and legislation of digital economy, such as infringement of intellectual property right and social security concerns, are then introduced. Finally, literature review and practical experiences are used to explain competition trends and issues faced by competent authorities of competition law in a digital economy, further exploring possible solutions to provide a basis for law enforcement.

### **III. Recommendations**

Industries in a digital economy have different characteristics than traditional industries, such as dynamic competition, bilateral market, and network effect. These characteristics pose new challenges to competent authorities of competition law in law enforcement:

#### **(I) Boundaries of markets are blurred**

Development and innovation is extremely rapid in industries of a digital economy,

and uncertainty of product or service substitutes makes it even harder for the competent authority of competition law to define markets. The SSNIP test used to define markets may produce inaccurate and non-objective results due to the bilateral markets of industries in a digital economy. Errors in defining market boundaries most often occur when the price of a product or service in any market of a bilateral market is zero. This is because the price of products or services in the other market and positive feedback is overlooked.

(II) Decreased importance of market share in evaluating market power

In a digital economy, industries with rapid technological developments often have high market concentration rates, and a large customer base does not necessarily mean an enterprise is able to dominate a market.

(III) Big data changed how enterprises compete

The greatest benefit of big data applications to consumers is allowing them to obtain products (services) at a low price (free of charge) or with better quality and in product (service) innovation. From another perspective, big data can easily create a barrier to entry. Switching cost and lock-in are the most common in the information industry. The OECD also pointed out that data-driven markets will result in “winner takes all” and cause high market concentration. Furthermore, big data can create economies of scale through a “feedback loop,” and network effect will further strengthen this feedback loop, making the data a key to whether or not participants will be able to gain access to the market.

With consideration to the abovementioned characteristics of industries in a digital economy, the competent authority of competition law should make the following adjustments when reviewing cases:

(I) Lower requirements on the precise definition of market boundaries

Acknowledge that market boundaries are somewhat indefinite for industries in a digital economy. In non-merger cases, the competent authority of competition law may lower requirements on the precise definition of market boundaries, and only need to prove that an enterprise has high market power, which it used to impede competition or damage consumers’ interests.

(II) Understand the limitations of price standards

While recognizing that price standards are effective in most situations, we must note that non-price competition is often far more important than price competition in industries in a digital economy. Hence, the SSNIP test’s effectiveness is limited. Furthermore, price standard cannot be relied on when reviewing cases due to the network effect of bilateral market, and product performance, usage effects, and number of market competitors should also be taken into consideration.

(III) Lower the importance of market share in evaluating market power

Most dominant enterprises in a digital economy have high market shares and a

large user group, but the state of competition can often be overturned overnight. Hence, market share is less capable of representing market power compared with traditional industries. Therefore, the difficulty of entering or exiting a market should be emphasized when analyzing whether or not there are barriers to market entry.

(IV) Characteristics of industries in a digital economy should be taken into consideration when evaluating potential market competition

In a digital economy, innovation competition is extremely important when evaluating the market power of an enterprise, and must be considered together with price competition. Standards for evaluating innovation competition include: network effect, economies of scale, structural differences between platforms, source of data, and potential of marketing innovation.