

Big Data & Issues in Competition Laws

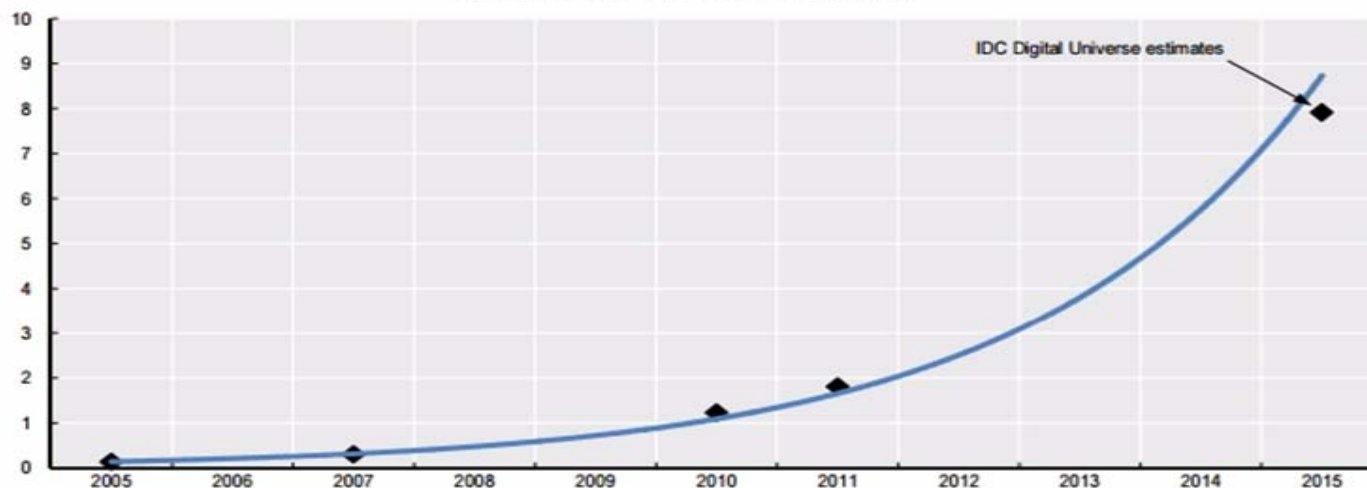
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What is Big Data?

- Big Data: Hard to define
 - ✓ Data subject: Data sets for which **volume** becomes an issue in management and processing
 - ✓ Analytics: What matters is **the way data is used** and the **resulting complexity**
 - ❖ *Example of Personal Data aggregated - Android smartphone*
<https://www.google.com/maps/timeline?pb=!1m2!3m1!1s2016>

Figure 1.1. Estimated worldwide data storage
In zettabytes (ZB, trillions of gigabytes)



Source: Based on the IDC (2012) Digital Universe research project.

- 4 “V”s
 - ✓ Volume of data, Velocity at which data is collected, used, and disseminated, Variety of information aggregated, Value of the data
- Importance of Big Data - Data-driven innovation(DDI)
 - ✓ Data is an infrastructural resource(un-exclusivity): unlimited users, purposes as an input, increasing returns to scale and scope, etc.
- Value Creation Mechanisms of Data Analytics
 - ✓ Gain insights(natural phenomena or individuals’ conducts)
 - ✓ Decision automation(Google’s driverless car)
- Industries benefited
 - ICT: Google, Apple, Amazon, Samsung, 네이버, 카카오톡, etc.
 - Non-ICT: Finance, transportation, utilities, retail, healthcare, etc.

- Companies are increasingly adopting business models that rely on personal data as a key(e.g. two-sided market)
- As 4Vs increase, companies will undertake data-driven strategies to obtain and sustain a competitive advantage
 - ✓ Network effect, entry barrier, etc.
- As data-driven mergers increase, one might expect the merging parties to raise as a defense data-driven efficiencies(e.g. TomTom/Tele Atlas Merger, Microsoft/Yahoo! joint venture)
- Business have strong incentives to:
 - ① Limit their competitors' access to data
 - ② Prevent others from sharing the data, and
 - ③ Oppose data-portability policies that threaten their data-related competitive advantage.

- Every step about Big Data can be problematic in enforcement due to strong inherent incentive to become big and dominant
 - ✓ Data Production – Different capabilities to produce
 - ✓ Data Collection – Availabilities of data collected, Salability of Data set
 - ✓ Data Analysis – Arbitrary processing
 - ✓ Data Transfer – portability of data leading to level playing field
- Great opportunity for innovation and business BUT also Great risks to harm consumer welfare and industry development in unprecedented manner and magnitude
 - ✓ Calls for careful balancing and quick & strong regulation when needed

- Traditional antitrust principles are valid but need to be improved to address the complexity and work not too late
 - ✓ All categories of infringements are applicable that means arsenal is ready to react
 - ✓ Merger, Refusal to deal, Group boycott, Foreclosure, Exclusive dealing, Predatory Pricing, Raising rival's cost(customer's switching cost), etc.
- Privacy – hard to evaluate non-price factors(Value, harm, balancing) BUT a critical factor of consumer welfare which antitrust aims to advocate
- Cost of false negative and late intervention is expected high
 - ✓ Need to analyze issues and find right time to regulate esp. in Korea with high share of ICT industries and high industry concentration
 - ✓ Any differences between US and EU?

Thanks.

Q & A