

Ueda, Masashi

Assistant, Information and Society Research Division

The ideal information infrastructure for the economy and society

The tendencies and technologies of our current information-intensive society affect our economy and lifestyles in various ways. As information technology advances, public policies must change to keep pace. This includes revised laws and market structures. I'm exploring the question of ideal information public policy, particularly with regard to how information infrastructures affect markets and how the information infrastructure can be improved to ensure ideal market functioning.

Modeling for competition of the information infrastructure network building

Japan's communication infrastructure is shifting from ADSL (Asymmetrical Digital Subscriber Line) to fiberoptics. Since ADSL uses existing telephone lines, the primary lines were monopolized by NTT (Nippon Telegraph and Telephone Corporation). Various companies are competing to build the next generation infrastructure by fibreoptics. Generally, since building an infrastructure entails huge initial costs, only financially stable companies can tackle such projects. This leads inevitably to the domination of the market by a very few companies. Still, numerous companies have joined the competition to build the fibreoptic access network, so called FTTH (fibre-to-the-home) service. I'm modeling the facility based competition to evaluate how a society would be affected by overlapping investment under competitive conditions versus a natural monopoly without competition, as well as structural separation separating retail from wholesale and vertical integration that combines all necessary business operations, with the ultimate goal of identifying optimal policies for market competition.

R & D strategies for software

In the area of software, I'm pursuing research on open source software. Open source software (OSS) refers to free programs whose source code (original program code) is developed jointly by a community of users. In earlier years, OSS was used mostly by private end users. Now, major corporations are actively involved in open source software. These corporations stand to benefit from their involvement in OSS in two ways: from a cost standpoint, through the possibility of reduced expenses through joint development, and from a demand standpoint, by selling a variety of related software and ancillary services to the large community of users of OSS. This is a new style of R & D strategy. To identify information communication policies that promote efficient and competitive R & D over the long-term, I'm interested in examining various R & D possibilities, including open source software, from the perspective of transaction cost theory.

(Interviewed and summarized by Asako Murakami)