

## “Report regarding Competitive Situation in the Broadband Service”

Tatsuo Tanaka (CPRC Visiting Researcher and Assistant Professor, Faculty of Economics, Keio University)

This research investigated the competitive situation of the market for broadband access to the Internet (hereinafter referred to as ‘broadband service’) based on the three perspectives such as economies of scale, network externality and switching costs. In addition, the situation of inter-platform competition among broadband services such as ADSL, FTTH and CATV is examined. These investigations aim at provision of basic materials for considering competition policy issues and challenges in the broadband service market.

We regard capability of a new market entry as primary importance to maintain competition, and thus introduce these three perspectives as barriers to the entry.

Firstly, as to the economies of scale, the presence of large economies of scale theoretically makes it difficult for new entrants to enter the market, which easily causes a monopoly or oligopoly. We examined the existence of economies of scale by estimating the production function from financial data of individual ADSL service providers. As a result, little evidence of economies of scale was verified.

Secondly, network externality exists when the network becomes more valuable according to the increase of the number of subscribers in the network. Under this circumstance, only one network tends to increase its subscribers if interconnection among networks is not sufficient, leading to a monopoly. In this study, we conducted a questionnaire survey which asked users whether they were aware of any network externality with regard to the IP phone, and inferred the existence of network externality from their answers. Consequently, it was demonstrated that network externality had not had a marked impact at that stage when IP phone service had just begun while the users were conscious of network externality to some extent.

The third point was the switching costs, which make it more difficult for the existing users to switch providers even if a rival provider or new entrant offered a lower cost or superior service, and thus it reduces the competitive pressures. We asked users the actual amount of switching costs in the questionnaire and investigated whether the switching cost influenced consumer behaviour. Our result confirmed that the switching cost actually existed with some impact on consumer behaviour.

As to inter-platform competition, when inter-platform competition provides an enough competitive pressures, the market power does not work even if individual market of broadband service is monopolistic. With respect to three broadband services (ADSL, FTTH and CATV Internet), this study also reached a tentative conclusion that it was hard to conclude that they belong to separate markets as there exists certain level of inter-platform competition, taking into consideration the results of our hearing survey.

Based on the findings discussed above, our conclusion is that further measures such as those beyond the supervision and elimination of anticompetitive behaviours based on the Anti-Monopoly Act are necessary, in terms of the perspective of entry disincentive and inter-platform competition, because the current market of broadband service was weak in both economies of scale and network externality with a sufficient level of competition, keeping some reservations as follows. The first reservation is concerned with the network externality of IP phone. Though the network externality is not currently evident due to the limited number of users, it may emerge prominently as the number of users grows in the future. With regard to the second reservation, the fierce competition in the broadband market is mainly brought by ADSL while FTTH is forced to reduce its charges because it is exposed to inter-platform competition with ADSL currently. However, due to technological barrier of the ADSL service, inter-platform competition between ADSL and FTTH may not work effectively in the future, once the number of contents and services which are only available with the speed of FTTH service increase.

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