

## Abstracts

### **HAYASHI Shuya, Competition Review in the Japanese Telecommunications Market**

Since the privatization of Nippon Telegraph and Telephone Public Corporation and the liberalization of the telecommunications market in 1985, the Ministry of Internal Affairs and Communications (MIC) has changed its “ex-ante” regulation of the telecommunications business into the “ex-post” regulation in 2004. In April 2004, with the advancement of competition, the Telecommunications Business Law was substantially amended to realize drastic institutional reforms, including the abolition of regulations on market entry, tariffs and agreements, in principle. The regulation system greatly shifted from *ex ante* to *ex post* basis. Consequently, the number of enterprises entering the telecommunications market has largely increased, and due to the advancement of technological innovations, the emergence of diverse services such as mobile communications and internet access, the promotion of deregulatory measures and other factors, the competition among the telecommunications carriers progressed, prompting the significant development of the telecommunications market. Two kinds of drastic structural changes—“a shift to mobile” and “a shift to broadband and IP”—are occurring in the Japanese telecommunications market. In such a rapidly changing circumstances, it is essential to evaluate the market competition with a focus on fixed-telephony, mobile communications, and broadband services, in order to figure out the trend of the telecommunications markets accurately and rapidly. The MIC has conducted the Competition Review since fiscal year 2003 to ensure that the tendencies above are reflected in government policies. This article firstly considers about market definition from a legal viewpoint, and secondly, it generalizes the current condition of competitions in the telecommunications business by summarizing the Competition Review, and finally, the article examines the challenges that the Competition Review face in the telecommunications business field.

### **IDA Takanori, Demand Analysis of Japan’s Broadband Services and Information Policy**

This paper investigates the following topics that are important when considering broadband and information policies: the demand substitution of broadband services in the era of diffusion and maturity, the lock-in effects when the migration from ADSL

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to FTTH advances, the demand substitution of mobile phone services in terms of brand and standard competitions, and the leverage effects when fixed and mobile services converge.

### **ISHIBASHI Ikuo & MATSUMURA Toshihiro, Cream Skimming and Multiple Potential Entrants**

This paper investigates the effects of multiple potential entrants on competition in multi-product industries. We find that the cream skimming behavior of one potential entrant induces destructive competition and that more than one potential entrant yields a monopoly position for the incumbent. Counter-intuitively, an increase in the number of potential entrants reduces the competitive forces of potential entries.

### **MIZUNO Keizo, Access, Wheeling, and Strategic Investment in Infrastructure**

This paper examines a firm's incentive for infrastructure investment in network industries such as information and telecommunication, electricity, and natural gas. In particular, a main question we ask is: How can the economic institutions of "access" and "wheeling" be influential in investing in infrastructure? Several elements that affect the incentive for infrastructure investment are discussed in this paper.

### **HATTORI Toru, An Empirical Study on the Retail Competition in the Japanese Electricity Market after Partial Liberalization**

This paper empirically examines the market power of the incumbent electric utilities in the Japanese electricity retail market after partial liberalization in 2000. Including supply from self-generation facilities of large industrial customers in calculating the market share of the incumbent utility, we estimate the impact of market share on price after controlling the changes in marginal cost. Our results suggest that, as the market share increases, the markup will be greater, which is in line with the theoretical prediction. On the other hand, a higher price leads to a lower market share of the incumbent, suggesting that competition is successful when the price is relatively high. In addition, our results indicate that the markup depends also on the composition of customers by industries.

**SHINKAI Tetsuya, OKAMURA Makoto, OHKAWA Takao, A model analysis on switching energy demand competition between a gas firm and an electric power firm —‘gas cogeneration system’ vs. ‘all electrification products’ —**

In this paper, we consider a duopoly for home use energy in which a gas company, say, firm 1 and a power company firm 2 compete in price. They also scramble for its rival's energy demand by installing intended solar power generation systems (gas engine cogeneration systems) in firm firm 1 (firm 2)'s customers' houses. Employing a Hotelling model with asymmetric transportation cost to each firm's energy service of consumers, we derive a Nash price competition equilibrium and a second best equilibrium in which the government can control firm1's unit transportation cost. We show that the government has to decrease asymmetric transportation costs' difference to attain the second best equilibrium. Furthermore, we show that the greater the asymmetry of these transportation costs to firms is, smaller the government's cut-off intervention level to the higher transportation cost is, in the latter.

**INO Hiroaki & MATSUMURA Toshihiro, Growing competition in electricity industry and the power source structure**

We investigate how the strategic behaviors of electric-power producers work on their power source structure. We introduce the competitor who cannot use the technologies which requires an enormous set-up cost such as nuclear power into an electric-power market which is originally local monopoly. Does introducing such a competitor decrease the capacity of nuclear power in the market? We show that the capacity of nuclear power decreases if and only if nuclear plant is sufficiently efficient.