Summaries

Collusion and Participation Constraints

Shinji Kobayashi

This paper examines optimal contracts with collusion in a model in which a government (the principal) procures two complementary products or facilities from two firms (the agents) under asymmetric information. We extend the literature on optimal mechanisms with multiple agents under asymmetric information to a setting in which each firm's costs comprise not only a variable cost but also a fixed cost, both of which depend on private information. Optimal contracts with collusion are compared with cases of optimal contracts without collusion. Optimal collusion-proof contracts with countervailing incentives are characterized when the difference in the amount of fixed costs with respect to each firm's type is sufficiently large.

Competitiveness of the air transport market in Japan

Koji Takenaka

The purpose of this paper is to examine the competitiveness of the air transport market, focusing on the air transport market in Japan, from the perspective of rate of profit. Rate of profit expresses competitiveness. When entering and exiting the market are free, the rate of profit is zero. If the rate of profit is equal or extremely close in size to zero, it can be said that that market is competitive. However, actual rates of profit fluctuate annually. It can be said that virtually all of these fluctuations are caused by some kind of uncertainty, and, whether directly or indirectly, this uncertainty may affect the rate of profit in the following year. This paper applies a time-series model to the rate of profit for each company and calculates the expected rate of profit, using this as an indicator for determining competitiveness. Furthermore, the paper estimates structural changes based on the results of our examination of four statistics. Specifically, taking into consideration the time of structural changes for JAL and ANA, we estimate the time-series models for each time period using the maximum likelihood estimation and calculate the expected revised rate of profit, adding several interpretations of the results.

Did Japan's Labor Policy Increase the Efficiency of the Labor Market?

Kwon Hyeog Ug

Using industry-level data taken from the *Census of Manufacture* from 1981 to 2007, we examined whether Japanese labor policy has increased labor market efficiency. From empirical analysis, we found that labor market efficiency increased from 2003, when labor market flexibility was greatly promoted. In particular, the increase in non-regular workers due to the expansion of the scope of dispatched workers' operations is thought to have had a significant impact on the internal labor markets of large Japanese firms. Moreover, our results strongly suggest that the labor market rigidity of the large corporation sector, which overprotects regular workers, may have reduced the efficiency of resource allocation in the Japanese labor market.

Future Direction of Community Bus Services in Japan

Satoru Hashimoto

Since deregulation in 2002, local bus services have been abolished as a measure for reducing subsidization within individual private companies (subsidization through the movement of funds within a company), and there is a trend towards local governments providing community bus services as a substitute. In many areas, however, community bus services have been introduced without sufficient consideration of the issues of appropriate subsidy amounts and sustainability. Based on a literature review, this paper examines the significance of local governments operating community bus services and the outlook for such services.

Our finding is that community busses have an economic significance in that they maintain an appropriate balance between efficiency and fairness, as well as significance in terms of the welfare policy of a "civil minimum" guaranteeing the minimum standard for quality of life. It is thought that community bus services will continue to increase in the future as a new means of public transportation that substitutes for local bus services abolished by private companies. However, our research also identified several issues: appropriate amounts for covering deficits are unclear; subsidization sustainability has not been considered sufficiently; strategies for attracting potential community bus users living in non-public transportation areas are unclear; and the roles of community busses and Demand Responsible Transport (DRT) are unclear. It is thought that clarifying these issues will enable long-term sustainability of local community bus service networks.

An analysis of spot pricing and market monitoring in wholesale electricity markets

Koichiro Tezuka

Triggered by the Great East Japan Earthquake in 2011 and other factors, Japan's energy industries—and especially the electricity industry—have undergone a rapid reformation of regulations and systems referred to as "energy market reform". Consequently, various policies have been implemented to encourage competition within the electricity industry, such as the liberalization of retail electricity sales in 2016. On the one hand, this competition contributes to the improvement of the electricity market's economic welfare. On the other hand, however, due to the character of the natural monopoly held by industries with large-scale networks, there is also a fear that "unregulated monopoly" will be generated. Accordingly, market monitoring has an important role to play.

Against this background, this paper first of all provides an overview of the process of liberalizing retail sales in the electricity market and electricity system reform. Based on this, the paper then addresses the following three issues from the perspective of monitoring wholesale electricity markets. The first issue is: "How are prices formulated in wholesale electricity markets under uncertain conditions?" The second issue is: "What points need to be kept in mind when monitoring markets?" And the third issue is: "What methods are there for addressing these points?"

Addressing the first issue, with regard to the model devised by Ishii and Tezuka—which utilizes a non-cooperative game framework—and the equilibrium price formula derived from this model, the paper divides case examples broadly into two groups—wholesale electricity markets without capacity restrictions and wholesale electricity markets with electricity restrictions—providing a very general overview of each and explaining their respective consequences. Addressing the second issue, the paper identifies two points that need to kept in mind: that there is a trade-off relationship between the amount of information provided and the cost of "showing one's hand"; and that it is also necessary to take into account risk premiums under uncertain conditions. Based on these points, addressing the third issue, the paper shows that under the model devised by Ishii and Tezuka it is possible to decompose equilibrium price formulas under uncertain conditions into parts resulting from concentration of mark-ups and risk-premium parts. At the same time, the paper presents a framework for data analysis, using PJM as a case example of application to market monitoring.

Development of the Digital Still Camera Industry in Taiwan

Satoshi Numata

Molded by the entrance of Japanese companies into Taiwan, the Taiwanese camera industry became the world's No. 2 ranked film camera production base after Japan in 1985. Furthermore, in the area of contract manufacturing of DSC (Digital Still Cameras), the rapid development of Taiwanese companies has been remarkable, with Taiwanese companies accounting for approximately half of total DSC production volume at their peak. There are already several excellent previous studies on Taiwanese companies and their remarkable rise to prominence in existence. However, this does not mean that the factors behind the rise of Taiwanese companies have been thoroughly clarified. Accordingly, this paper aims to organize previous research and issues in order to clarify the factors behind the remarkable rise of Taiwanese companies. To this end, the following three tasks have been set.

Firstly, clarify the industrial support provided by the Taiwanese Government to the DSC industry and the fruits of this support; secondly, clarify the factors behind the remarkable rise of Taiwanese companies through interview surveys conducted with major Taiwanese companies; and thirdly, clarify the actual situation regarding technological complementary "Japan-Taiwan" inter-company collaboration for not just one company but rather expanding the targets for applying the framework to major Taiwanese companies.

From the findings of this research the following conclusions could be obtained. Firstly, the Taiwanese Government's industrial policies did not play a definitive or leading role in the development of the DSC industry. Secondly, from interview surveys with one major Taiwanese company, Ability Enterprise Co., Ltd., it became clear that Taiwanese companies have close relationships with Japanese companies, and Japanese companies have played significant roles in the success of the Taiwanese companies' DSC businesses. Thirdly, the targets for applying the framework indicated for technological complementary "Japan-Taiwan" inter-company collaboration were expanded to include four major Taiwanese companies, the content of the complementary collaboration with Japanese companies was summarized, and the importance of this collaboration was identified. From this, it was concluded that the factors behind the remarkable rise of Taiwanese companies are technological complementary "Japan-Taiwan" inter-company collaboration and the roles played by Japanese companies.

This paper was unable to sufficiently examine the optical industry in Taiwan. As with the DSC industry, Taiwanese companies have close relationships with Japanese companies, and so this is an important topic for future investigation.

A preliminary examination of the dissemination and expansion of optical and precision technology: focusing on Nippon Kogaku's evacuation to Shiojiri and Hachiyo Optical Co.'s camera production

Yuji Yamashita

This paper examines the activities of Nippon Kogaku, a company that evacuated to Shiojiri Town in Nagano Prefecture during World War II, and the camera manufacturing activities of Hachiyo Optical Co., which took over Nippon Kogaku's Nagano factory.

Nippon Kogaku purchased the Chushin-Sha silk mill and used the building as an evacuated factory.

Nippon Kogaku employees, former Chushin-Sha silk mill employees, and mobilized students all worked at the evacuated factory making measurement instruments requiring high skill and precision.

The Shiojiri factory was the only one of Nippon Kogaku's evacuated factories that continued production after the war; however, microscope manufacturing was difficult with only locally recruited workers.

Productivity increased after Nippon Kogaku engineers instructed Shiojiri factory workers about how to maintain the precision of parts and scientific, rational production methods utilizing gauges and jigs. Accordingly, it is thought that basic technical skills for metal working, modification, and assembly became established at the Shiojiri factory in the postwar period.

People working at the Shiojiri factory have been praised as being independent, but this cannot be verified unless concrete case examples can be found.

The Shiojiri factory was closed down due to unprofitable business operations at Nippon Kogaku headquarters, and Hachiyo Optical Co. took over the factory facilities when the company was launched. Hachiyo Optical Co. newly entered the camera manufacturing business, but sales growth was poor, causing labor-management relations to deteriorate.

With regard to twin-lens reflex cameras (TLR cameras), Yashica and Ricoh have low-priced products, and Canon has lens shutter cameras (35 mm); therefore, without constructing a mass-production system capable of outputting products that were both low-cost and multi-functional, it was impossible for Hachiyo Optical Co. to survive in the camera sector.

It is not known who recommended to Hachiyo Optical Co. that they go into camera manufacturing. There should have been people at the company with technology and skills.

Hachiyo Optical Co. withdrew from camera manufacturing due to unprofitable business

operations and the factory closed down. Subsequently, another company took over operation of the factory, which became a successful exposure meter and electrical appliance assembly plant.

From the standpoint of factory scale and costs, the Shiojiri factory was not suited to camera manufacturing.

Accordingly, it can be concluded that the efforts of Nippon Kogaku and Hachiyo Optical Co. over a 10-year period did nothing more than to create a high-quality, easy-to-use assembly plant and labor force.