

# 論文の内容の要旨

## 論文題目

### Essays on Competition, Regulation, and Privatization Policies (競争政策・規制政策・民営化政策に関する論文集)

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Firms play vital roles in a wide range of economy; they produce, improve, and distribute products essential for consumers, through R&D, development of viable business models, and other kinds of marketing activities. However, prominent firms often exploit their market power to raise profits thereby hurting consumers' welfare. The ways firms do so include raising prices (either unilaterally or multilaterally), foregoing investments, consolidating to a small number of firms to reduce competition, among others. Governments therefore often need to intervene with the firms' activities in order to refrain them from exercising market powers. The way the government intervene depends on the market environments.

In most industries, competition authorities monitors firms' activities to make sure that their conducts, such as cartels, mergers, and vertical restraints, do not hurt consumers. This line of government interventions is called competition policy, where the governments' role is to keep the markets competitive. In some industries such as water, gas, and electricity networks, keeping competitive markets is often unfeasible due to the technological constraints such as extremely high (sunk) fixed costs. In such natural monopoly, governments need to tailor the regulation policy and often directly control the firm's decisions such as pricing and investments. This is called regulation policy. In recent years, thanks to the technological progress, the technological constraints imposed on network industry are relaxed, which induces market liberalization, and reduction in the degree of government control on the firms. At the same time, the government's budget constraints has become tighter, which also induces the reduction in the government control by giving up the ownership of regulated enterprises. In this way, the government started to privatize the originally state-owned regulated enterprises. The situation where the state-owned enterprises and private enterprises co-exist is called a mixed oligopoly. In mixed oligopoly, the government need to design the role of the state-owned enterprises, which may result in greater or smaller control over the state-owned enterprises, which is implemented by the design of privatization policies.

In this dissertation, I present three theoretical analysis on each area of competition, regulation, and privatization policies. Below I present the abstracts of respective chapters.

■Chapter 2: Horizontal Mergers in the Presence of Network Externalities Evaluating network effects and two-sidedness is critical for merger control in the digital economy. Using a model of multiproduct-firm oligopoly with firm-level network externalities, I provide several results regarding the impacts of network externalities on consumer-surplus effects of mergers. First, the impacts of network externalities on the welfare properties of mergers depend on the sizes of merging parties relative to the industry; direct network externalities justify mergers between small firms but make the mergers between dominant firms more likely to hurt consumers. Second, when an incumbent tries to acquire an innovative entrant, the incumbent may have a greater incentive to innovate due to the demand-side scale economies, which suggests that too strict merger control may inhibit potential innovations. Finally, I present a merger analysis in two-sided markets and show how the pre-merger sizes of firms on one side can predict the post-merger consumer surplus on the other side. These results provide handy theoretical guidance on merger policy toward platforms.

■Chapter 3: Monopoly Regulation in the Presence of Consumer Demand-Reduction In this chapter, I study a monopoly regulation in the setting where consumers can engage in demand-reducing investments. I first show that, when the regulator ignores the consumers' investments, the excess investment occurs. Next, I analyze the case where the regulator takes consumers' investments into account and compare the optimal policy under asymmetric information with the first-best policy. Optimal policy results in higher average price, higher level of consumer investment, but lower prices for efficient firms, compared to the first-best.

■Chapter 4: Dynamic Privatization Policy This chapter formulates a two-period model of mixed oligopoly in which the government privatizes a state-owned public firm over multiple periods. We introduce the shadow cost of public funding (i.e., the excess burden of taxation). The government is concerned about both the total surplus and the revenue obtained from the privatization of the public firm. We find that the government may or may not increase the degree of privatization over time depending on the competitiveness of the product market and nationality of private competitors. The government increases the degree of privatization over time if the product market is competitive and the foreign ownership share in private firms is low. Although it adjusts its privatization policy over time, this harms welfare. In addition, this distortion in the ex-post incentive leads to too low a degree of privatization in the first period.