Joint R&D and a New Downstream Entry in a Vertically Related Market: The Effects of R&D and Export Subsidies

Naoto Jinji and Yoshitaka Kawagoshi
Kyoto University *Kyoto Sangyo University*
RIETI

Abstract

In this study, we analyze the effect of a new entry in a downstream industry on the incumbent firms in upstream and downstream industries and welfare. The entry is supported by the government through R&D or export subsidies. We consider, at first, there is one downstream and one upstream firm. Then we also consider the new entrant in the final-good market with either the R&D or the export subsidies in three cases. The first case is that the new entrant and the upstream firms agree with the price of the intermediate-good such as the price is exactly equal to the marginal cost of the upstream firm. The second case is that the upstream firm sets the intermediate-good price discriminately. The last case is that the upstream firm sets a unilateral price to the downstream firms. The new entrant brings joint R&D between new entrant and upstream firms. By the joint R&D, both the marginal costs of upstream and downstream firms reduce. However, the joint R&D is needed the subsidies. The same as the R&D subsidy, the export subsidy affects a firm's entry decision. In addition, the export subsidy increases the profit of the firm, which is subsidized by the government. Then, the incumbent firm is worse off by the export subsidy. Therefore, we compare these two types of subsidies.Our primary analysis shows that the incumbent firm does not necessarily suffer from a loss in profits by the new entry if it can benefit from spillovers from the new entrant through R&D in the upstream industry. We also compare the difference between R&D and export subsidies in the effects on incumbent firms and welfare.

Keywords: vertical related market, Joint R&D, R&D subsidy, export subsidy
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