

# **Technological Trajectories and Coordination over Technologies among Competitors: Use of Social Network Approach**

By

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## **Abstract**

Coordination over technologies among competitors is undertaken by various forms (e.g. patent pool, cross license and horizontal merger, and so on). This type of coordination often produces pro-competitive and anti-competitive effects to the technology and/or product markets because of the characteristics of technologies such as its cumulative nature. So, antitrust authorities should evaluate these conflicting effects in order to judge whether the coordination form should be permitted in the view of competition policy. In order to perform this evaluation, it is necessary to identify the influential technologies (patents) and to consider the competitive effects of the coordination behaviors of the firms. In this paper, taking up the patent pool on the pachinko manufacturing technologies and the horizontal merger by the firms owned the influential patents, I examine the usefulness of main path (technological trajectory) approach focusing the patent citation network. It is concluded that derivation of the main path using patent citation network is very useful to identify the influential patent and to consider the competitive effects of the coordinating behavior among the competitors.