

14:30~15:10 Summary of Lecture 3

"Competition and network externalities- reconsideration"

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The Competition Policy Research Center(hereinafter "CPRC") summarizes the lecture Professor Gilbert gave for the CPRC 5th Open seminar on 20th of September, 2005, under its responsibility. All possible mistakes in this summary are CPRC's.

The lecture focused on a particular topic as it relates to both network industries and other industries, what is called "Unilateral Refusal to Deal" i.e. a refusal to deal by a single company. The lecture consisted of two parts, a case study in both US and EU and an economic model analysis of Unilateral Refusal to Deal.

Professor's paper "Product Improvement and Technological Tying in a Winner-Take-All Market", on which the lecture based, is downloadable at <http://www.jftc.go.jp/cprc/DP/cdpd-17-e.pdf>. Please refer to it for the detail.

1. Case Study of Unilateral Refusal to Deal

(1)US

In consideration of recent important cases at the appeals court or higher level, the attitude to Unilateral Refusal of Deal was severe in the 1980s. For example, the court said that AT&T's denial of interconnections without a "legitimate business or technical reason" held to violate Section 2 of the Sherman Act in the MCI case¹. It set out an essential facilities argument, which describes conditions under which something that is necessary for competition cannot be withheld from the market. Another case at about the same period of time is the Aspen Ski case². There, a ski company, Aspen Skiing discontinued a long-standing practice of cooperating with a competitor to offer a multi-mountain, multi-day ski pass and that was held to be an unreasonable refusal to deal. Since the 1990s, the view of the courts on a unilateral refusal to deal has changed, depending on cases. In the 1990s, cases that support a unilateral refusal to deal and cases that object to it have appeared. An example of the former is the Data General case,³ which said that the desire of an IP owner to be the exclusive user of its original work (i.e., the denial to license software protected by the copyright law) is a presumptively legitimate business justification for a refusal to license to competitors.

¹ MCI Communications Corp. v. AT&T, 708 F.2d 1081 (7th Cir. 1983)

² Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985)

³ Data General Corp. v. Grumman Systems Support Corp., 36 F.3d 1147 (1st Cir. 1994)

An example of the latter was the Kodak case,⁴ which overturned summary judgment where Kodak refused to supply independent service organizations with (patented) parts and software.

We can observe the same situation in the 2000s. For example, the Xerox case,⁵ which said intellectual property rights do not confer a privilege to violate the antitrust laws, but recognized Xerox's right to refuse to supply parts and software to third-party service organizations, and the Microsoft case,⁶ which said in effect that it is fine not to deal with your competitor but it does not give the authority to treat the competitors unreasonably. Another recent case is the Trinko case⁷. The case said that the denial of interconnection services to rivals, by itself, does not fall within existing exceptions to the general rule that federal antitrust law does not require firms, including monopolists, to cooperate with competitors.

Observing these cases, we can see that an essential facilities doctrine in US exists, but has been substantially weakened by recent cases.

(2)EU

Perhaps the most important case is the Magill TV Guide case⁸. The case involved litigation from a company that was trying to publish a comprehensive weekly TV guide and the major radio broadcasters, which at that time published their own guides. No one was publishing a comprehensive guide and the individual broadcasters refused to make their guides available to this company that wanted to supply the comprehensive guide. The refusal to license was held to be an abuse of a dominant position and showed three conditions to judge in this way. 1. it prevented the appearance of a new product for which there was potential demand, 2. there was no objective reason for the refusal, and 3. the copyright holder would be able to dominate the market of weekly television guides by excluding all competition in the market by not licensing. Furthermore, the IMS Health case⁹ and Microsoft case¹⁰ expressed negative opinions on unilateral refusals to deal.

Observing those cases, an essential facilities doctrine appears to have significant scope in the EU.

⁴ Image Technical Services v. Eastman Kodak Co., 125 F.3d 1195 (9th Cir. 1997)

⁵ Independent Service Organization v. Xerox, 203 F. 3d 1322 (Fed. Cir. 2000)

⁶ United States v. Microsoft Corp. 253 F.3d 34 (D.C. Cir. 2001)

⁷ Verizon Communications Inc. v. Olaw Office of Curtis C. Trinko, LLP, 124 S. Ct. 872 (2004)

⁸ RTE and ITP v. Commission (Magill TV Guide) [1995] I ECR 743 [1995] 4 CMLR 718

⁹ NDC Health/IMS Health, (Commission Decision, 2003)

¹⁰ Microsoft, Commimission Decision, 24 March 2004, COMP/C-3/37.792

2.Economics Model Analysis

Here is the case considered. We think of a system comprised of two components A and B. A system requires a unit of each component. There are two firms, firm 1 and firm 2. Firm 1 is a monopoly supplier of component A at predetermined price, w . That is, component A is essential for the system. Both firm 1 and firm 2 supply component B. Firm 1 and 2 compete to supply systems (alternatively, compete to supply component B). Hence two competitions occur, i.e. price competition with quality-differentiated systems and quality competition with R&D. There are two key assumptions. The first is that firm 2 is a more efficient supplier of systems than firm 1. The second is that the price of the essential component, w , is less than the pure monopoly price.

(1) Product Improvement Game

Each firm has an initial quality level γ_i (exogenous variables). Firms choose quality z_i by investing an amount r_i in product improvement. Investment raises the quality level to $q(r_i) = \gamma_i + z(r_i)$. There is a unique z^M that maximizes the net benefits from quality improvement $(\gamma_i + z)M - r(z)$ where M is the number of consumers.

Now we consider the following two-stage-game. In the first stage, the firms simultaneously and independently choose investments (r_1, r_2) , which determine the quality level (q_1, q_2) . In the second stage the firms simultaneously and independently set prices (P_1, P_2) . In this game, there are two equilibrium outcomes in pure strategies. There is an equilibrium in which firm 2 buys the essential component from firm 1, invests in quality improvement and sells systems to all customers. If R&D is sufficiently costly, there is a second equilibrium in which firm 1 invests in quality improvement and sells systems to all customers. Firm 2 does not invest at all. In any case, a winner takes all.

It is an effect on welfare that should be paid attention. Total economic surplus is always higher when the more efficient firm, firm 2 in this case, invests. Consumer welfare is higher when the less efficient firm, firm 1 in this case, invests if $w < \gamma_2$. This happens because when the less efficient firm invests, the other firm is still around to be a competitor to the less efficient firm and that keeps the price down.

(2)Technological Tying Game

The framework of the game is the same as the product improvement game (1), except that after firms invest to improve their products, firm 1 can take a (costless) action that degrades the quality of firm 2's system by an amount δ , which is large enough that

firm 2 cannot compete.

There are three equilibrium outcomes in this game, depending on the value of w . If w is small, firm 1 invests, forecloses firm 2 with a technological tie and serves the entire market. Firm 2 does not invest. If w is large, firm 2 invests and serves the entire market. Firm 1 does not invest and sells the essential component to Firm 2. An interesting case is for intermediate values of w . The component price forecloses firm 2 if it does not invest. Hence, firm 1 does not need to impose a technological tie, because firm 1 would impose a technological tie to foreclose competition from firm 2 if it does invest. Since firm 2 predicts what is going to happen, it does not invest, and technological tying is not observed. In this case, we do not observe a technological tying.

Talking about the welfare results, the ability of firm 1 to impose a technological tie lowers total economic welfare whenever the product improvement game yields an equilibrium in which the more efficient firm 2 invests. Consumer surplus is zero for all values of w .

Although technological tying lowers both consumer welfare and total welfare in this model, we should be very careful to reach the conclusion that technological tying should be prohibited. The welfare results can be different depending on the assumptions of the game. There can be other equilibria in which both firms invest with a probability less than one and if that is the case, technological tying can improve welfare, because then technological tying would avoid redundant investments. Another reason is that if technological tying were prohibited, firm 1 might choose a different price for the essential component, which would lead to different welfare results.

Once again, we should be very careful about how to deal with technological tying because it can be welfare-increasing or welfare-decreasing, depending on cases.