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Ex-Post Assessment of Merger Remedies – Contribution from Japan

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More documentation related to this discussion can be found at: oe.cd/eamr.

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Ex-Post Assessment of Merger Remedies

- Contribution from Japan -

1. Introduction

1. The Japan Fair Trade Commission (JFTC) has long conducted ex-post evaluations of merger reviews. This is because the JFTC recognizes that it is important not only to conduct merger reviews, but also to evaluate the appropriateness of the review methods and the impact of mergers on the market after the transactions, in order to improve its merger reviews. For this purpose, the JFTC have done such reviews since around 2003.

2. While most of the ex-post evaluations verified the appropriateness of merger reviews themselves, those conducted in 2007 and 2021 are also related to the evaluation of remedies, and the results have been published as reports.

3. This note presents an overview of the "Report on Ex-post Evaluation of Merger Reviews" (2007) and the "CPRC Discussion Paper: Empirical Analysis of Mergers in Japan II" (2021).

2. "Report on Ex-post Evaluation of Merger Reviews" (2007)

4. In this report, the JFTC conducted an ex-post evaluation of the remedy of "Fuji Electric Co., Ltd.'s acquisition of shares in SANYO Electric Vending Machine Co. An overview of the case and the report is as follows.

2.1. Outlines of the case

5. In this case, the JFTC reviewed the merger, focusing on the market of beverage vending machines. In the course of the examination, the JFTC expressed its concern to the merging companies that, as a result of the merger, the technology for manufacturing beverage vending machines would be accumulated to a considerable extent in the merging companies, and that if the licensing of their patents to competitors were restricted after the merger, it might be difficult for competitors to manufacture products with the same functions as those of the merging companies, and this might weaken the users' ability to negotiate prices with the merging companies.

6. Ultimately, the JFTC concluded that this merger posed no problem under the Antimonopoly Law, provided that the merging companies would take a remedy they offered. The content of the remedy was that, if a competitor requests the licensing of the patents from the companies after the merger, the companies will meet the request under appropriate conditions.

2.2. Results of interviews in the ex-post evaluation

7. The JFTC, in the ex-post evaluation, conducted interviews with vending machine users and manufacturers other than the merged companies about the facts after, and opinions on, the merger.

8. As the result, the JFTC found that none of the competitors requested the licensing of the patents to the merged companies after the merger. Some of the competitors were aware of the existence of the remedy and the others were unaware. The reasons why the competitors aware of the remedy did not take advantage of it, according to the competitors, are as follows.

- There is no merit in entering the market for vending machines for large and medium-sized cups, for which the merged companies hold important patents, because demand is limited in the market, while other areas can be handled by the competitors' own technology.
- The merged companies did not hold any patents that the competitor wants to be licensed.
- There is a probability that licensing fee will be high.

9. Other major opinions and facts found in the ex-post evaluation are summarized below

Table 1.

Those suggesting the necessity for the remedy	Those suggesting unnecessity for the remedy
• Since the number of patents held by the merged companies had increased prominently due to the merger, competitors are having difficulty in conducting research and development of vending machines while avoiding their patents. • It is difficult to enter the market for "vending machines for large and medium-sized cups" without a patent license from the merged companies.	• The technology of vending machines is basically mature, and even if a new technology is developed, it is relatively easy to develop an alternative one. • The users have strong bargaining power and require manufacturers to open their technology to competitors, making it difficult for manufacturers to refuse licenses. • Some competitors can manufacture and sell "vending machines for large and medium-sized cups". • Demand for "vending machines for large and medium-sized cups" is declining, and no companies are considering entering the market.

2.3. Conclusion of the report

10. The report concluded as follows.

11. There may be some opinions that the remedy on licensing in this case was unnecessary because no application for licensing of patents had been made by the competitors to the merged companies after the merger. However, given the fact that there are patents held by the merged companies that are essential for entry into the market, and that there are opinions that competitors are having difficulty in conducting research and development while avoiding the patents held by the merged companies, it can be said that the remedy had a certain effect in terms of ensuring entry pressure.

12. Given that some of the competitors were unaware of the existence of the remedies, it is important in a case like this to take measures to ensure that the remedies are well known.

13. In cases with remedies in which the merging companies share their facilities and patent with others, it is desirable to clarify the conditions (including coverage and duration

of the sharing, and method of calculation of consideration) as much as possible. In addition, since the value and effectiveness of licenses change over time in fields where innovation is actively made, it may be appropriate to monitor the implementation status of the remedies and review their contents after the merger as necessary.

3. "CPRC Discussion Paper: Empirical Analysis of Mergers in Japan II" (2021)[1]

14. This paper analyzes, in its Appendix, the impact of the 1996 merger of two paper companies on the product prices, focusing on intermediate grade printing paper on which remedies were taken. This ex-post analysis does not focus solely on the remedies, but it is related to the evaluation of the effectiveness of the remedies.

15. An overview of the merger case and the discussion paper are as follows

3.1. Outlines of the merger case

16. The discussion paper analyzed the merger of two paper companies (New Oji Paper and Honshu Paper) conducted in 1996. The JFTC reviewed the merger, and pointed out that the merger was likely to result in a substantial restriction of competition (a violation of the Antimonopoly Act) in, among the relevant markets, the market of intermediate grade printing paper, considering the combined market share of the merged companies (33.4%) and the cumulative concentration of the top three companies (66.3%) in the market. In response, the merging companies offered to take remedies, such as shifting part of their production facilities for intermediate grade printing paper to the production of other types of products and reducing the production volume of intermediate grade printing paper. The JFTC found that the merger would not immediately violate the Antimonopoly Act, provided that the remedies would be taken.

17. In 1997, the JFTC published the results of its review of this case in its "Major Business Combinations in Fiscal Year 1996."

3.2. Summary of the ex-post evaluation

18. The discussion paper examined how the market price[2] of intermediate grade printing paper changed after the merger by using the Difference in Differences method. Market prices of lower grade printing paper were used for comparison. Lower grade printing paper was produced by both of the merged companies prior to the merger, but because one of them (Honshu Paper) had a low market share, market prices of lower grade printing papers were considered unlikely to be affected by the merger.

19. If the merger substantially restricted competition in the market of intermediate grade printing paper, and if the remedies were not effective, the market price of intermediate grade printing paper should increase.

20. The analysis covers the period from October 1993 to March 2001. This is because New Oji Paper, one of the merged companies, was launched in October 1993 through a

[1] https://www.jftc.go.jp/en/cprc/reports/discussionpapers/index_files/CPDP-80-J.pdf (Japanese)

[2] In the discussion paper, published statistical data on market prices were used rather than firm-specific price data to ascertain the feasibility of using publicly available data for ex-post evaluation.

merger of two paper companies, and the merger of two other major paper companies took place at the end of March 2001, which is considered to have had a significant impact on the market.

21. The explanatory variables in the regression equation used in this analysis include a dummy variable representing before or after the merger, a dummy variable representing whether the product is in the treated group or not, and their cross term, as well as the volume of publications that are thought to affect paper demand, and the main variable costs of paper companies: raw material, fuel, and chemicals costs. (See Appendix for details.) This means that it is possible to identify whether or not, for example, price increase after the merger is due to an increase in the volume of publications (demand) or variable costs.

22. The analysis revealed that, in the same conditions other than the existence of the merger, there was no significant change in the price of lower grade printing paper before and after the merger, while the price of intermediate grade printing paper was significantly lower after the merger than before.

23. As to the reasons for this, the discussion paper states that there could be a variety of factors, including:

- remedies worked effectively,
- the merger increased efficiency, and
- there was strong competitive pressure from other types of products and the merger did not have enough impact to change prices.

24. Since this analysis was conducted with the aim of identifying the impact of the merger on prices, it did not reveal whether the decrease in prices of intermediate grade printing paper was due to the effective functioning of the remedies or due to other causes.

Annex A. Regression Equation and Variables

The explanatory variables used in this analysis is as bellow.

$$P_{jt} = a + b_1 Mer_t + b_2 Tre_j + b_3 Mer_t \times Tre_j + cX_t + \sum_{k=2}^{12} d_k \times M_t^k + e_{jt}$$

Variable	Explanation
P_{jt}	Prices of intermediate and lower grade printing paper in each month（j: goods、t: month）
Mer_t	Dummy variable (before merger: 0, after merger: 1)
Tre_j	Dummy variable (lower grade printing paper: 0, intermediate: 1)
M_t^k	Dummy variable (taking 1 only in the k-th month of each year)
X_t	Other factors affecting paper prices consisting of: Magazine circulation (demand for paper) Price of imported chips (raw material cost) Price of C fuel oil (fuel cost) Price of Caustic soda (cost of chemicals)
e_{jt}	Error term