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# ANALYSIS ON LOCK-IN EFFECTS BY ESTIMATING FOR THE SWITCHING COSTS IN TELECOMMUNICATIONS BUNDLES.

#### Abstract:

As digital convergence is spreading more than ever, the lock-in effects of bundled services in the broadcasting and telecommunication market are receiving considerable attention. Antitrust authorities have questioned whether lock-in effects impede competition in telecommunications markets. However, the answer to this question remains indecisive because few studies have attempted to quantify the switching costs in bundles. We use novel consumer level data to examine switching costs of bundled products. We use the mixed logit model to estimate the demand for bundled packages, which include mobile, Internet, and paid-TV services. We measure switching cost by the decrease in utility when consumers change their service providers from period t-1 to period t. The results show that consumers experience additional costs when they switch from bundles. Our estimates indicate that consumers pay 3,238 KRW (about 3 USD) per month for changing from Double Play Service (paid TV with Internet) to other services and 3,510 KRW for Triple Play Service. The estimates of switching costs are smaller for the bundles without any commitment period requirement. This implies that stipulated service period and penalty intensify the lock-in effects. In the counterfactuals where we remove the penalty for switching from bundles, we find that consumer surplus increases by 3,714 KRW per month. We proposed policies which reduce penalties for cancellations or shorter stipulated service periods in order to reduce switching costs.

## **Keywords:**

Switching costs, Lock-in, Bundles, Mixed logit model