

# Merger Effects with Product Complementarity: Evidence from Colombia's Telecommunications

Borrador número 1018 Keep in mind

The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHOR OR EDITOR Juan Vélez AUTHORS AND/OR EDITORS Juan Vélez

Mergers of firms producing complementary products have ambiguous effects on consumer welfare. Consumers benefit if the firm, motivated by the internalized profits created by the complementarity, lowers prices. Consumers are hurt if the firm uses bundles to exert price discrimination, making standalone products more expensive. To assess which effect dominates, I use an administrative dataset, which records prices, market shares, and plan attributes of the universe of Colombia's telecom carriers. I estimate a random coefficients discrete choice model of demand for bundled and standalone telecom products, in which the degree of substitutability or complementarity among products is an essential parameter of interest. I find that major telecom products display a mix of substitutability and complementarity, but in general hardwired and mobile services are complements. Counterfactual experiments using the estimated model indicate positive net effects of mergers with complements: despite a small increase in the price of standalone goods, consumer surplus increased by around 11 million dollars per quarter after the Claro merger. On the other hand I find evidence that mergers between ISPs and mobile carriers reduce the likelihood of poorer households adopting faster broadband.

The series Borradores de Economía is published by the Economic Studies Department at the Banco de la República (Central Bank of Colombia). The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.