

AUCTION DESIGN AND AUCTION OUTCOMES

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We study the impact of spectrum auction design on the prices paid by telecommunications operators for two decades across 85 countries. Our empirical strategy combines information about competition in the local market, the level of adoption and a wide range of socio-economic indicators and process specific variables. Using a micro dataset of almost every mobile spectrum auction performed so far—both regional and national—we show that auction design affects final prices paid. Two designs (SMRA with augmented switching and CCA with core pricing) result in auctions with systematically higher normalized returns. Further, we document that spectrum ownership appears to affect prices paid in subsequent auctions. We discuss the mechanisms of cost minimization and foreclosure faced by operators in different regulatory environments. Our findings have implications for policy-makers and regulators.

Keywords: Auction, Digital communications, Spectrum, Market power

JEL Classification: D44, C78, L96

The full working paper can be found [here](#).