

Strategic Technology Adoption and Entry Deterrence in the U.S. Local Broadband Markets*

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Abstract

How does strategic investment affect entry of new technologies and market structure? I present a model of strategic entry deterrence and study how internet service providers' interactions affect their technology deployment at local markets. The goal is to capture an important trade-off: cable firms adopt a new cable system to provide higher speeds, but the adoption has a preemptive effect on fiber firms' entry. I collect and combine unique firm-level data on broadband technology deployment for New York State. I provide evidence of strategic investment by cable incumbents to deter fiber entry. Counterfactual scenarios suggest that the industry has experienced 16% excessive investment in cable adoption and 12% underinvestment in fiber entry both of which are explained by these deterrence strategies. In addition, subsidies to cable incumbents in small markets reduce fiber entry rate by 50%. I also find that policies that promote statewide entry mitigate the effects from these deterrence strategies and increase fiber entry rate by 30%. These results have wide implications for technology diffusion, quality provision and optimal subsidy policy in markets under entry threat.

Keywords: Broadband, Strategic Investment, Technology Adoption, Entry Threat, Deterrence

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