ESSAYS ON TELECOMMUNICATION MARKET FORMATION
Nedko Yordanov

ABSTRACT
This dissertation empirically examines market structure formation in the telecommunication industry. The first chapter investigates the effect potential competitors have on rival’s entry decision. Any firm which holds a spectrum license but has no transmission infrastructure is considered a potential market entrant. When such a company builds the antennas necessary to provide service it becomes an entrant. Utilizing this differentiation between market participants I reach the conclusion that when potential competition is present companies are more likely to perform a pre-emptive entry. Furthermore, as the number of potential rivals increases the entry likelihood grows though at a diminishing rate. This implies that increasing the number of future competitors in the telecommunication markets may increase the competitiveness of the current market structure. The second chapter of my dissertation explores the effect of large firm affiliates manipulating eligibility for the designated entity subsidies in the FCC spectrum auctions. The bid discount program targeted exclusively at small companies is compromised by firms exploiting legal loopholes in the qualification criteria. Applying a non-parametric estimation methodology to recover the auction value distribution enables me to create counterfactual paradigms where no firms receive the subsidy, or access to the subsidy is limited to truly small firms. Through this approach I approximate how revenues and number of small firms winning the auctioned licenses are affected by the subsidy program and manipulations to gain access to the program. My findings suggest that the bid discounts indeed benefit small firms but without decreasing the FCC auction receipts. Additionally, when bid discount eligibility is limited to only the program’s intended recipients small firms win even more licenses, but it also reduces FCC revenues. Thus, keeping the program active increases the number of companies holding spectrum licenses, which may result in more competitive telecommunication markets.