The Existence and Rationale of Predatory Pricing Strategy in the Network Industry: An Experimental Approach

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ABSTRACT

This paper reports data from an experiment confirming the existence of predatory pricing in the presence of network externalities when the technology of competing firms are identical. An experiment was conducted at the University of South Carolina’s Beam Lab, based on a seven-period and one-market design. Twenty-two subjects were recruited and assigned a role as seller. They were paired together randomly and played the game for seven rounds. Pairs of subjects were re-matched between each round to avoid repeated game effects. Buyers were simulated and had different, pre-programmed preferences over the goods offered by two sellers. In each period, subjects had to make an entry decision and a price decision in a posted offer market institution. The sub-game perfect Nash equilibrium is for sellers to engage in predatory pricing during the first four periods and price higher during the last three periods of a round. The observations strongly support the presence of predatory pricing, especially in later rounds. Another finding is that price offers during the last three periods were lower than predicted by sub-game perfect Nash equilibrium due to the fact that the predatory pricing strategy was not effective in eliminating competitors.

Key words: Predatory pricing; Network externalities; Entry deterrence; Posted offer market

INTRODUCTION

Predatory pricing is defined as price cutting in the short run in order to eliminate competitors or deter potential entrants, in order to realize monopoly profits in the long run. Some economists reject the existence

1This definition is different from the legal definition proposed by Areeda and Turner (1975) which is pricing less than short-run marginal cost (or average variable cost when data on marginal cost is unavailable).